

MIDANPIRG/23 & RASG-MID/13-REPORT



INTERNATIONAL CIVIL AVIATION ORGANIZATION

**Report of the Twenty-Third Meeting of the
Middle East Air Navigation Planning and Implementation Regional Group
and Thirteenth Meeting of the
Regional Aviation Safety Group-Middle East**

MIDANPIRG/23 & RASG-MID/13

(Cairo, Egypt, 14 – 18 June 2026)

The views expressed in this Report should be taken as those of the Regional Planning and Implementation Group and not of the Organization. This Report will, however, be submitted to the ICAO Council 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

1. PLACE AND DURATION

1.1 The Twenty-Third Meeting of the Middle East Air Navigation Planning and Implementation Regional Group and the Thirteenth Meeting of the Regional Aviation Safety Group-Middle East (MIDANPIRG/23 & RASG-MID/13) were successfully held in Cairo, Egypt, from 14 to 18 June 2026.

2. OPENING

2.1 The meeting was opened by General Ahmed Abdel-Fattah Sokkar, Vice Chairman of the Egyptian Civil Aviation Authority for Airports and Air Navigation, on behalf of His Excellency Dr. Sameh El-Hefny, Minister of Civil Aviation of Egypt, and Mr. Sameh Fawzy, Chairman of the Egyptian Civil Aviation Authority. General Sokkar welcomed the participants to the Twenty-Third Meeting of the Middle East Air Navigation Planning and Implementation Regional Group (MIDANPIRG/23) and the Thirteenth Meeting of the Regional Aviation Safety Group – Middle East (RASG-MID/13). He emphasized the pivotal role of MIDANPIRG and RASG-MID in advancing air navigation planning, strengthening aviation safety, and shaping the future of civil aviation in the Middle East Region.

2.2 General Sokkar reaffirmed Egypt's steadfast commitment to supporting all initiatives aimed at the effective implementation of ICAO provisions, policies, and regional plans. He noted that the Middle East Region continues to face a range of evolving challenges, including geopolitical developments, rapid technological advancements, environmental concerns, and the growing impacts of climate change on aviation operations. In this context, he stressed that achieving the shared objectives of aviation safety, operational efficiency, capacity, resilience, and environmental sustainability requires strengthened cooperation, close coordination, and sustained collaboration among States, ICAO, and all aviation stakeholders.

2.3 On behalf of ICAO, Mr. Mohamed Rahma, Director of the Air Transport Bureau at ICAO Headquarters and Officer-in-Charge of the ICAO Middle East Office, expressed his sincere appreciation to the Arab Republic of Egypt, in particular the Ministry of Civil Aviation, the Egyptian Civil Aviation Authority (ECAA), and their dedicated support teams, for hosting the MIDANPIRG/23 and RASG-MID/13 meetings in Cairo. He also conveyed his gratitude for the warm welcome, outstanding hospitality, and excellent organization of the meetings, which once again reflected Egypt's unwavering commitment to the advancement of civil aviation and its continued support for the work programme of the ICAO Middle East Office.

2.4 Mr. Rahma highlighted that air transport demand in the Middle East Region has continued to grow significantly, reaching record levels and with further sustained growth projected in the coming years. He noted that this trend will place increasing pressure on airspace and aerodrome capacity, requiring the optimization of available airspace and airport infrastructure through the implementation of modern, efficient, and innovative systems to accommodate traffic growth while maintaining the highest levels of safety, efficiency, and sustainability. He further observed that the continuing conflicts affecting parts of the Region remain a major challenge to the safety and efficiency of international air traffic operations. In this regard, he commended States and stakeholders for their exceptional efforts in managing traffic flows in and around conflict-affected areas, implementing contingency measures, coordinating closely with military authorities, and providing safe and efficient alternative routing options. He also underlined the international recognition received by the ICAO Middle East Contingency Coordination Team (CCT) framework as an effective model for regional cooperation and coordination and expressed his appreciation to all those who have contributed to its success.

2.5 In concluding his remarks, Mr. Rahma encouraged all States and stakeholders to maintain their strong commitment to the implementation of ICAO Standards and Recommended Practices (SARPs), regional air navigation plans, and aviation safety initiatives. He emphasized that continued cooperation, coordination, and partnership among all stakeholders are essential to ensuring that air transport in the Middle East Region remains safe, secure, efficient, resilient, and environmentally sustainable for the benefit of all.

3. ATTENDANCE

3.1 The meeting was attended by a total of One Hundred and Sixty Five (165) participants from twelve (12) MID States (Bahrain, Egypt, Iraq, Kuwait, Lebanon, Libya, Oman, Qatar, Saudi Arabia, Sudan, UAE, Yemen) and one (1) State from outside the Region (USA), and nine (9) International Organizations/Industries (ACAO, ACI, CANSO, IATA, IFAIMA, IFALPA, IFATCA, IFATSEA and MIDRMA). The list of participants is at **Attachment A**.

4. OFFICERS AND SECRETARIAT

4.1 Mr. Ahmed Al Jallaf, Chairperson of MIDANPIRG, and Mrs. Rawya Nasser Al Adawi, First Vice-Chairperson of RASG-MID, chaired the meetings.

4.2 Mr. Mohamed Khalifa Rahma, Officer in Charge of the ICAO Middle East Office, acted as the Secretary of the meetings, supported by Mr. Mohamed Smaoui, Deputy Regional Director and the following Regional/Technical Officers:

From the ICAO MID Office, Cairo:

Mr. Mashhor Alblowi	Regional Officer, Flight Safety
Mr. Mohamed Chakib	Regional Officer, Safety Implementation
Mr. Mohamed Iheb Hamdi	Regional Officer, Aerodromes and Ground Aids
Mr. Radhouan Aissaoui	Regional Officer, Information Management
Mr. Ahmad Amireh	Regional Officer, Air Traffic Management and Search and Rescue
Mr. Ahmad Kaveh	Regional Officer, Air Traffic Management

The meeting was also supported by the following team from ICAO Headquarters:

Mr. Pascal Lucini	Deputy Director, Air Navigation and Aviation Safety, ANB
Ms. Muna AlNadaf	Technical Officer, CNS, ANB

The meeting was also supported by Mrs. Nino Gelovani, Regional Officer, ANS Implementation/MET, EUR/NAT Office who participated online. Mr. Mazen Ghattas, Field Operations Officer, CDI attended the meeting.

5. LANGUAGE

5.1 The discussions were conducted in English. Documentation was issued in English.

6. AGENDA

6.1 The following Agenda was adopted:

- Agenda Item 1:** Adoption of the Provisional Agenda (*Plenary*)
- Agenda Item 2:** Global and Regional Developments (*Plenary*)
- 2.1 Review of the ANC report on MIDANPIRG/22 and RASG-MID/12 Meetings
 - 2.2 ICAO Global and Regional Aviation Safety and Air Navigation developments
 - 2.3 Update from States and International Organizations
- Agenda Item 3:** Coordination between MIDANPIRG and RASG-MID (*Plenary*)
- 3.1 Follow-up on the PIRG/RASG MID Conclusions and Decisions
 - 3.2 Safety Subjects of interest to MIDANPIRG
 - 3.3 Air Navigation Subjects of interest to RASG-MID
 - 3.4 MID Region Aerodromes Priorities and Challenges
- Agenda Item 4:** RASG-MID Work Programme (*RASG-MID/13*)
- 4.1 Follow-up on the RASG-MID/12 Conclusions and Decisions
 - 4.2 Outcomes of the RASG-MID Groups (ASRG, SEIG, SPIG and AIIG)
 - 4.3 Other Emerging Safety Matters
 - 4.4 USOAP SSP/SMS Workshop
- Agenda Item 5:** MIDANPIRG Work Programme (*MIDANPIRG/23*)
- 5.1 Follow-up on MIDANPIRG/22 Conclusions and Decisions
 - 5.2 Global, Regional and National Air Navigation Plans (GANP, MID ANP and NANPs)
 - 5.3 AIM
 - 5.4 PBN
 - 5.5 AGA-AOP
 - 5.6 ATM-SAR
 - 5.7 CNS
 - 5.8 MET
 - 5.9 Air Navigation Deficiencies
 - 5.10 States' bilateral coordination meetings
- Agenda Item 6:** MIDANPIRG & RASG-MID Working Arrangements (*Plenary*)
- 6.1 Working Arrangements of MIDANPIRG & RASG-MID
 - 6.2 MIDANPIRG & RASG-MID Future Work Programme
- Agenda Item 7:** Any other business (*Plenary*)

7. CONCLUSIONS AND DECISIONS – DEFINITION

7.1 The MIDANPIRG and RASG-MID record their 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 CONCLUSIONS AND DECISIONS

<i>RASG-MID CONCLUSION 13/1:</i>	<i>14TH ASR</i>
<i>RASG-MID CONCLUSION 13/2:</i>	<i>SHARING OF SAFETY DATA ANALYSIS</i>
<i>RASG-MID CONCLUSION 13/3:</i>	<i>IMPLEMENTATION PROGRESS ON THE SAFETY ENHANCEMENT INITIATIVES (SEI)</i>
<i>RASG-MID CONCLUSION 13/4:</i>	<i>ISSUANCE OF TEMPORARY EXEMPTIONS GUIDANCE MATERIAL</i>
<i>RASG-MID CONCLUSION 13/5:</i>	<i>REMOTE SAFETY OVERSIGHT GUIDANCE MATERIAL</i>
<i>RASG-MID CONCLUSION 13/6:</i>	<i>JUDICIAL ENFORCEMENT FOR AVIATION INSPECTORS GUIDANCE MATERIAL</i>
<i>RASG-MID CONCLUSION 13/7:</i>	<i>DEVELOPMENT OF NATIONAL AVIATION SAFETY PLAN (NASP) IN MID STATES</i>
<i>RASG-MID CONCLUSION 13/8:</i>	<i>MID-RASP 2026-2028 EDITION</i>
<i>RASG-MID CONCLUSION 13/9:</i>	<i>DEVELOPMENT OF SSP IN MID STATES</i>
<i>RASG-MID DECISION 13/10:</i>	<i>RASG-MID PROCEDURAL HANDBOOK</i>
<i>MIDANPIRG CONCLUSION 23/1:</i>	<i>NEW AIR NAVIGATION PLAN VOL III TEMPLATE</i>
<i>MIDANPIRG CONCLUSION 23/2:</i>	<i>NEW MID AIR NAVIGATION PLAN VOL III</i>
<i>MIDANPIRG CONCLUSION 23/3:</i>	<i>MID AIR NAVIGATION REPORT -2025</i>
<i>MIDANPIRG CONCLUSION 23/4:</i>	<i>MID AIR NAVIGATION REPORT -2026</i>
<i>MIDANPIRG CONCLUSION 23/5:</i>	<i>DEVELOPMENT OF ANS MONITORING DASHBOARD</i>
<i>MIDANPIRG DECISION 23/6:</i>	<i>AIR NAVIGATION INTEGRATED PLANNING SUB-GROUP</i>
<i>MIDANPIRG CONCLUSION 23/7:</i>	<i>MID REGIONAL SWIM FRAMEWORK</i>
<i>MIDANPIRG DECISION 23/8:</i>	<i>MIDAD PROJECT</i>
<i>MIDANPIRG CONCLUSION 23/9:</i>	<i>REGIONAL PLAN FOR THE PROVISION OF DIGITAL DATA SETS</i>

<i>MIDANPIRG CONCLUSION 23/10:</i>	<i>PBN AND CCO/CDO WORKSHOP</i>
<i>MIDANPIRG DECISION 23/11:</i>	<i>PBN SUB-GROUP TERMS OF REFERENCE</i>
<i>MIDANPIRG CONCLUSION 23/12:</i>	<i>UPDATE OF THE LIST OF AERODROMES IN THE MID AIR NAVIGATION PLAN AOP TABLE I-I</i>
<i>MIDANPIRG CONCLUSION 23/13:</i>	<i>MID RVSM SMR 2025</i>
<i>MIDANPIRG CONCLUSION 23/14:</i>	<i>MAINTAIN COMPLIANCE WITH MINIMUM MONITORING REQUIREMENTS (MMRS)</i>
<i>MIDANPIRG CONCLUSION 23/15:</i>	<i>MID RVSM SMR 2026</i>
<i>MIDANPIRG DECISION 23/16:</i>	<i>PROCEDURE OF HANDING THE ARCHIVED ADS-B DATA FOR RVSM HEIGHT MONITORING</i>
<i>MIDANPIRG CONCLUSION 23/17:</i>	<i>MID ADS-B HEIGHT MONITORING SYSTEM (MID AHMS)</i>
<i>MIDANPIRG CONCLUSION 23/18:</i>	<i>IMPLEMENTATION OF REDUCED LONGITUDINAL SEPARATION IN THE MID REGION</i>
<i>MIDANPIRG CONCLUSION 23/19:</i>	<i>CROSS REGIONAL COORDINATION</i>
<i>MIDANPIRG CONCLUSION 23/20:</i>	<i>MID ATFM PLAN WITH APPLICABILITY AREA</i>
<i>MIDANPIRG CONCLUSION 23/21:</i>	<i>EFFICIENCY OF THE AMHS NETWORK OPERATION IN THE MID REGION</i>
<i>MIDANPIRG CONCLUSION 23/22:</i>	<i>AFS INTER-REGIONAL COORDINATION</i>
<i>MIDANPIRG CONCLUSION 23/23:</i>	<i>CAPACITY BUILDING ACTIVITIES ON AMHS/AMC</i>
<i>MIDANPIRG DECISION 23/24:</i>	<i>MIDAMC STG AMENDED TERMS OF REFERENCE</i>
<i>MIDANPIRG DECISION 23/25:</i>	<i>MID IP Network Action Group</i>
<i>MIDANPIRG CONCLUSION 23/26:</i>	<i>FREQUENCY CONGESTION</i>
<i>MIDANPIRG CONCLUSION 23/27:</i>	<i>MITIGATING INTERFERENCE THROUGH EFFECTIVE SPECTRUM REGULATORY MEASURES AND ENFORCEMENT</i>
<i>MIDANPIRG CONCLUSION 23/28:</i>	<i>COORDINATION AND ADVOCACY FOR THE PROTECTION OF THE RADIO ALTIMETER BAND IN WRC-27</i>
<i>MIDANPIRG CONCLUSION 23/29:</i>	<i>STRENGTHENING REGIONAL PREPAREDNESS AGAINST GNSS RFI DISRUPTIONS</i>
<i>MIDANPIRG CONCLUSION 23/30:</i>	<i>REVISION OF THE GNSS-RELATED DOCUMENTS IN THE MID REGION</i>

<i>MIDANPIRG DECISION 23/31:</i>	<i>NAVIGATIONAL OPERATIONAL NETWORKS-NAV MON ACTION GROUP</i>
<i>MIDANPIRG CONCLUSION 23/32:</i>	<i>ENHANCING MODE S INTERROGATOR CODES MANAGEMENT PROCESS</i>
<i>MIDANPIRG CONCLUSION 23/33:</i>	<i>MID REGION SURVEILLANCE PLAN</i>
<i>MIDANPIRG DECISION 23/34:</i>	<i>DISSOLUTION OF ACS WG</i>
<i>MIDANPIRG CONCLUSION 23/35:</i>	<i>STRENGTHENING IMPLEMENTATION AND OPERATIONAL USE OF GLOBAL ADVISORIES IN THE MID REGION</i>
<i>MIDANPIRG CONCLUSION 23/36:</i>	<i>SADIS FOCAL POINT INFORMATION</i>
<i>MIDANPIRG CONCLUSION 23/37:</i>	<i>STRENGTHENING SIGMET AND VOLCANIC ASH SIGMET ISSUANCE IN THE MID REGION</i>
<i>MIDANPIRG CONCLUSION 23/38:</i>	<i>MID REGION IWXXM IMPLEMENTATION STATUS</i>
<i>MIDANPIRG DECISION 23/39:</i>	<i>AIR NAVIGATION DEFICIENCIES</i>
<i>MIDANPIRG CONCLUSION 23/40:</i>	<i>AIR NAVIGATION DEFICIENCIES POLICY AND METHODOLOGY</i>
<i>MIDANPIRG DECISION 23/41:</i>	<i>MIDANPIRG PROCEDURAL HANDBOOK</i>

PART II: REPORT ON AGENDA ITEMS

REPORT ON AGENDA ITEM 1: ADOPTION OF THE PROVISIONAL AGENDA

1.1 The meeting reviewed and adopted the Provisional Agenda as at paragraph 6 of the History of the Meeting.

REPORT ON AGENDA ITEM 2: GLOBAL AND REGIONAL DEVELOPMENTS
2.1 *Review of the ANC Report on MIDANPIRG/22 and RASG-MID/12 Meetings*

2.1.1 The subject was addressed in WP/2 presented by the Secretariat. The meeting was apprised of the outcomes of the ANC review of the MIDANPIRG/22 and RASG-MID/12 report. The Secretariat highlighted the quality of the report and the congratulations of the President of the ANC for the achievements in the region, as well the appreciation expressed in the ANC report for the global increase in Effective Implementation throughout the region, for the establishment of the MENA RSOO, and for the successful efforts in planning towards the implementation of FF-ICE. The Secretariat also mentioned the challenges reviewed in the ANC report, including the cross-region ones - conflict zones and unrest, GNSS radiofrequency interference and airspace issues contributing in some cases to Large Height Deviations (LHD) – and the more specific issues – NASP and SSP coordination, insufficient human and financial resources in some of the States of the region, and the financial challenges of the MID Flight Procedures Programme (MID FPP). The Secretariat reiterated the interest of the ANC in receiving the MIDANPIRG's proposals for working arrangements.

2.1.2 The Secretariat presented the Consolidated Report to the Council on PIRGs and RASGs 2024-2025. In particular, this report highlighted the need to work on accurate and complete safety data beyond AIG, the vigilance to be observed as regards the participation to PIRGs and RASGs meetings at the appropriate level by Member States, the initiative of the ANC to identify the root causes of the global challenges and the encouragement to the Regions to share their respective working arrangements.

2.2 *ICAO GLOBAL AND REGIONAL AVIATION SAFETY AND AIR NAVIGATION DEVELOPMENTS****Global Air Navigation and Safety Developments – Outcomes of A42***

2.2.1 The subject was addressed in PPT/3 presented by the Secretariat. The meeting was apprised of the outcomes of the 42nd ICAO Assembly (A42) including inter alia:

- Global Plans (GASP and GANP), with the latest editions of both plans adopted during the 42nd Assembly;
- The question of whether the Pilot Age Limit should be raised, to be based on solid medical data ;
- Air Traffic Management particularly the need for cross-regional airspace optimization strategy over high seas and globally harmonized approach for FF-ICE implementation;
- Search and Rescue, with a particular focus on cross-border emergency response and efforts to be undertaken to mitigate non-distress activations of ELT(DT)s;
- MET & SWIM, with the need for mitigation of safety risks from hazardous meteorological events (HMEs) and challenges related to SWIM;
- Communication, Navigation and Surveillance (CNS);
- GNSS RFI, including the need for ICAO to expedite efforts to standardize GNSS RFI related solutions
- Halon Replacement to ensure the continued availability of fire extinguishers for aircraft;
- USOAP CMA;
- Conflict Zones.

Enhancing Regional Collaboration to provide better Implementation Support to States with Highest Needs

2.2.2 The subject was addressed in PPT/4 presented by the Secretariat. The meeting was briefed by Mr. Mohamed Khalifa Rahma on MID Office vision for further enhancing regional collaboration and implementation support across the MID Region. The vision builds upon ICAO's global strategic goals and priorities and the MID Region NCLB Strategy, focusing on needs-based prioritization, regional solidarity, coordinated partnerships, practical implementation support, and sustainable capability development.

2.2.3 The meeting noted the importance of adapting regional support mechanisms to evolving operational realities and welcomed the proposed approach to strengthen coordinated implementation support and sustainable implementation outcomes across the Region, including the development and implementation of tailored action plans for States with the highest needs and the mobilization of support from ICAO, States, regional and international organizations, industry, donors, and other partners to better align regional capabilities with identified needs and enhance implementation effectiveness.

MID Region state of Air Transport

2.2.4 The subject was addressed in PPT/5 presented by the Secretariat. The meeting was apprised of the state of air transport in the MID Region. The following was highlighted:

- The global passenger and cargo traffic between 1970 and 2024, have demonstrated remarkable long-term growth, reflecting the resilience and strategic importance of the aviation sector to the global economy.
- By 2024, global aviation had not only recovered from the pandemic but surpassed pre-crisis levels. Compared with 2019, passenger traffic increased by 5.0 per cent, while air cargo traffic grew by 6.8 per cent.
- With regard to the traffic performed in the MID Region, both passenger and freight traffic have maintained positive growth trajectories since the post-pandemic recovery period.
- In relation with flight operations in the MID Region between late February and the end of May 2026, at the onset of the disruption, daily traffic fell dramatically from approximately 5,100 flights per day to 1,677 flights, representing a reduction of nearly 67 per cent. Following the initial shock, flight operations began a gradual recovery. By the end of May 2026, daily traffic had recovered to approximately 3,700 flights per day. Although this represents a substantial improvement from the lowest point observed during the crisis, traffic levels remained well below the pre-disruption baseline of over 5,000 daily flights. The upward trend line nevertheless suggests that recovery is ongoing and that the region is gradually rebuilding connectivity and operational activity.
- The MID Region has been one of the fastest-growing aviation markets in the world. Between 1995 and 2018, passenger traffic expanded at an average annual growth rate of 9.9 per cent, driven by rapid economic development, strategic geographic positioning, and the emergence of major global hub carriers. During this period, the region transformed into a critical gateway connecting Asia, Europe and Africa. Although the pandemic caused an unprecedented decline in traffic during 2020, the recovery was rapid and traffic returned to its long-term growth trajectory within a few years. Looking ahead, ICAO forecasts continued expansion through 2050 under all scenarios. Even under the conservative scenario, passenger traffic is projected to grow by 3.5 per cent annually, while the medium and high scenarios project growth rates of 4.3 per cent and 5.0 per cent, respectively.

- The pandemic caused a sharp decline in departures in 2020, but the market recovered in the following years. Looking ahead, passenger departures are projected to continue increasing through 2050, although at a more moderate pace, with an average annual growth rate of 3.2 per cent between 2018 and 2050.

USOAP SSP/SMS Update

2.2.5 The subject was addressed in PPT/6 presented by the Secretariat. The meeting was briefed on recent developments related to the integration of State Safety Programme (SSP) and Safety Management System (SMS) elements into the ICAO Universal Safety Oversight Audit Programme (USOAP) Continuous Monitoring Approach (CMA). Additional information on the implementation aspects and related requirements was provided through the SSP/SMS Workshop conducted under the RASG-MID/13 meeting agenda.

Regional Cooperation

2.2.6 The subject was addressed in PPT/7 presented by ACAO. It was highlighted that ACAO and ICAO MID coordination continued through, in particular, the conduct of joint activities, in accordance with the Regional Coordination Programme for 2022 – 2025, which contributed to the achievement of the GASP, MID-RASP, GANP and MID ANP goals and objectives. The meeting was apprised of the outcomes of the ACAO/ICAO MID ANS Safety Oversight Workshop (Rabat, Morocco, 18-22 May 2026). The presentation highlighted also some of the achievements of the Middle East and North Africa AIG Regional Coordination Mechanism (MENA ARCM); and emphasized on the importance of cooperation between all International and Regional Organizations for the benefit of States.

MID Region Contingency Coordination situation – Briefing and Lessons Learned

2.2.7 The subject was addressed in PPT/8 presented by the Secretariat. The meeting recalled the ICAO SARPs related to contingency planning, civil military coordination and safety measures relating to military activities potentially hazardous to civil aircraft operations. In addition, the MID Regional ATM Contingency Plan (MID Doc 003). The meeting was briefed about the ongoing work, content and methodology of the new Regional ATM Contingency Framework (RACF). The meeting reiterated that the objective of the new RACF aiming for across regional collaboration and harmonization, considering that the impact of any contingency event on international traffic flows is, in most cases, inter-regional.

2.2.8 The meeting was briefed on the situation of the current contingency situations in the MID Region, Khartoum FIR ATM Contingency, and the MID Region Political Tension Contingency.

2.2.9 The meeting appreciated the efforts by MID States in managing the contingency situation within the Region; and the swift coordination and cooperation with the MID Contingency Coordination Team (MID CCT), which enabled the swift exchange of operation data between States and ANSPs.

2.2.10 The meeting reviewed the lessons learned and challenges related to the contingency management, based on the experience gained from the frequent situations occurring within the Region. The meeting noted that the advance sharing of plans would support the success and efficiency of the contingency measures' implementation and invited all the stakeholders to share ahead plans related to the implementation of any contingency measures, including States/ANSPs and Air Operators.

2.3 UPDATE FROM STATES AND INTERNATIONAL ORGANIZATIONS

Cairo FIR Challenges

2.3.1 The subject was addressed in PPT/9 presented by Egypt. The meeting noted the contingency measures implemented during the MID Region Tension within Cairo FIR. The meeting noted that Cairo ACC handled about 226% of the regular traffic at the extreme of the crisis in a professional and safe manner, in coordination with the relevant neighbouring States in the MID and EUR/NAT Regions, and with the ICAO MID Office through the CCT process. The meeting appreciated the efforts made by Egypt during several contingency situations occurred in the Region.

The Modern Evolution of Air Traffic Management and New Air Routes

2.3.2 The subject was addressed in PPT/10 presented by Egypt, which highlighted the need for modern of Air Traffic Management and new ATS routes network to support the growing demand on Cairo FIR; to improve efficiency, protecting the environment, and ensuring safety. The meeting noted with appreciation the new route network implemented within Cairo FIR to support the initiative to reduce crossing points and develop a strategically separated network, to reduce ATC workload while supporting the international traffic flow.

From ATM Concepts to Operational Implementing

2.3.3 The subject was addressed in PPT/58 presented by Egypt. Egypt presented a strategic vision for the transition to ATM, including collaborative planning, ICAO GANP Alignment, Dynamic routes management, and active management of airspace capacity and traffic flow, planned to be implemented by the National Airspace Management Centre (NASMC), in coordination with Military and civil airspace users, Air Navigation Service provider, and other ATFM Stakeholders. To support the implementation of FUA, RAD, information management and other enablers towards the implementation of Trajectory Based Operations (TBO) and FF-ICE.

Update from Sudan

2.3.4 The subject was addressed in PPT/12 presented by Sudan. The meeting recalled that the contingency situation in Sudan and the activities of the Khartoum ATM Contingency Coordination Team (CCT) have started since April 2023; and reported that the traffic operating on the established contingency routes continued growing and reached 1747 overfly traffic during March 2026. While the arrivals and departures of Port Sudan airport reached 700 movements during April 2026. Additionally, Sudan reported that Khartoum airport resumed operations beginning of the 2026 and reached 252 domestic flight movements during April 2026.

2.3.5 The meeting was apprised of the current development of the civil aviation system recovery, including the availability of technical human resources, training and capacity building, and the restoration of the facilities particularly related to CNS and AIS. Sudan informed the meeting on the restoration of Khartoum Airport for international flights (ref. Sudan AIP SUPP 01/26, effective 11 June 2026), and the ongoing progress on completing the operational requirements to connect the airport with the ATS route structure within Khartoum FIR and the adjacent FIRs.

2.3.6 Additionally, Sudan updated the meeting on the status of drafting the Proposal for Amendment (PfA) to the AFI and MID ANPs for the delineation of Khartoum FIR and establishment of new Juba FIR, jointly developed with South Sudan.

State of Civil Aviation System in Lebanon

2.3.7 The subject was addressed in PPT/53 presented by Lebanon. The meeting was apprised of recent developments in the civil aviation sector in Lebanon following the establishment of the Lebanese Civil Aviation Authority (LCAA) in February 2026. The presentation highlighted progress achieved in strengthening the regulatory and institutional framework, including the modernization of national aviation regulations, enhancement of safety oversight capabilities, implementation of SSP-related initiatives, environmental programmes, and the development of aviation training capacity through the reactivation of the Civil Aviation Safety Center (CASC) in Beirut. The meeting further noted the training of Air Traffic Controllers and ongoing efforts to position CASC as a sustainable national and regional aviation training Centre.

2.3.8 The meeting noted Lebanon's request for continued ICAO support through the planned multidisciplinary gap analysis mission, capacity-building activities, regulatory modernization initiatives, safety management implementation, and digital transformation programmes. The meeting encouraged partners and stakeholders to support Lebanon's efforts aimed at strengthening institutional capacity, enhancing safety oversight effectiveness, and achieving sustainable compliance with ICAO requirements.

Update by Libya: Air Navigation Developments (2023-2026): Progress, Achievements, and Future Plans

2.3.9 The subject was addressed in PPT/52 presented by Libya. The meeting noted recent developments in Libya's air navigation services and infrastructure. Libya highlighted the strategic importance of the Tripoli FIR as a key regional air corridor linking the EUR, AFI and MID Regions, supporting growing overflight traffic and regional connectivity. Significant achievements during 2023–2026 included the implementation of the AMHS system, restructuring of ATS routes, enhancement of communication infrastructure, establishment of contingency arrangements, updating of regulatory frameworks, and strengthening coordination with neighbouring States.

2.3.10 The meeting further noted ongoing initiatives related to radar and ADS-B deployment, VHF network expansion, navigation aid upgrades, PBN implementation, aerodrome surveys, and the transition from AIS to AIM. Future plans include further modernization of air navigation systems, advancement of digital transformation and SWIM readiness, enhancement of surveillance coverage, and continued alignment with ICAO provisions and regional air navigation priorities.

2.3.11 The meeting noted that continuing airspace restrictions affecting portions of Libyan airspace remain a significant challenge, impacting traffic growth, operational recovery, and the full realization of the State's air navigation potential. The need for specialized technical training and capacity-building in advanced ANS domains was also identified as a priority.

2.3.12 The meeting commended Libya for the progress achieved despite the challenges faced and encouraged continued cooperation with ICAO and neighbouring States in support of the implementation of its development programmes.

Strengthening Pre-Flight Information Service in Yemen

2.3.13 The subject was addressed in PPT/70 presented by Yemen. The meeting was apprised of Yemen's experience in addressing a deficiency related to the provision of Pre-Flight Information Services (PFIS) at international airports. The presentation highlighted the measures implemented to strengthen AIS operational capability, including the recruitment and training of AIS personnel, deployment of staff to support PFIS functions, and implementation of structured on-the-job training programmes.

Effective SAR Coordination and Evidence Based Assessment in the MID Region

2.3.14 The subject was addressed in WP/54 presented by UAE. The meeting emphasized that the Annex 12 requirements should be the basis of the SAR system implementation. The meeting recalled the discussion during the ICAO Assembly 42 on the same subject and noted that the ICAO/IMO Joint Working Group on Harmonization of Aeronautical and Maritime Search and Rescue (JWG-SAR) were considering the matter with a view to IAMSAR amendments. The meeting further recalled the A42 recognition of the need to review the evidence used in assessing effective implementation related to coordination between SAR Organizations. The meeting noted that the next JWG-SAR is planned in November 2026, in Malmo, Sweden; additionally, the meeting deferred the relevant discussion to the MID ATM SG.

Harnessing Artificial Intelligence to enhance aviation safety and efficiency

2.3.15 The subject was addressed in WP/61 presented by USA. The meeting noted the FAA approach to harnessing Artificial Intelligence (AI) as a strategic enabler to enhance aviation safety and efficiency through improved data fusion, advanced analytics, anomaly detection and predictive safety intelligence. The meeting was informed that AI provides an opportunity to support the evolution of aviation safety management from a reactive model based on accident and incident investigation towards a proactive, predictive and progressively prognostic approach, enabling earlier identification of hazards and precursor conditions. The meeting was also apprised of the development of the Aviation Safety Intelligence Platform (ASIP), which uses shared AI/ML infrastructure to generate timely and actionable safety intelligence while supporting collaboration between the FAA and industry stakeholders.

2.3.16 The meeting emphasized that AI should be deployed in a safe, ethical, transparent, secure and reliable manner, and should support, rather than replace, expert human judgement. The meeting highlighted the importance of a use-case driven approach, supported by high-quality and well-governed data, appropriate technical infrastructure, AI-ready workforce capabilities, and robust oversight and accountability mechanisms. The meeting further encouraged States and stakeholders to consider the application of AI in safety management and operational efficiency, while promoting a positive reporting culture, protection and de-identification of safety data, transparency of analytics, and cooperation on common frameworks for the testing, validation and verification of AI systems.

REPORT ON AGENDA ITEM 3: COORDINATION BETWEEN MIDANPIRG AND RASG-MID**3.1 *Follow-up on the PIRG/RASG MID Conclusions and Decisions***

3.1.1 The subject was addressed in WP/13 presented by the Secretariat. The meeting reviewed the progress made for the implementation of the PIRG-RASG Conclusions and Decisions as at **Appendix 3.1A**.

3.2 *Safety Subjects of interest to MIDANPIRG****MID Region Safety priorities and Status of Safety Performance***

3.2.1 The subject was addressed in PPT/14 presented by the Secretariat.

3.2.2 Based on the analysis of the reactive and proactive safety information for the period 2020-2024, the safety priorities defined for the MID Region are:

Regional Operational Safety Risks

- a. Runway Excursion (RE) and Abnormal Runway Contact (ARC) during landing;
- b. Loss of Control Inflight - (LOC-I);
- c. Mid Air Collision- (MAC)
- d. Controlled Flight into Terrain- (CFIT); and
- e. Runway Incursion- (RI).

3.2.3 In line with GASP 2026-2028 Edition, the meeting noted that SCF-NP and TURB are considered as other regional occurrence categories. In addition, the meeting noted that safety issues have been identified and mapped to their respective potential accident outcomes.

Organizational issues

- a. States' Safety Oversight Capabilities;
- b. Safety management;
- c. Human Factors & Human Performance;
- d. Competence of personnel; and
- e. Risk interdependencies.
 - Cybersecurity risks
 - GNSS Interference Risks
 - aviation health safety (AHS) risks
 - Risks arising from conflict zones, and
 - Security risks with an impact on aviation safety.

Emerging Safety Issues

3.2.4 The meeting noted that the following have been identified as Emerging Safety Issues: Advanced Air Mobility (AAM) and New Entrants including UAS and EVTOL.

3.2.5 The meeting was apprised of the status of the MID Region Safety performance.

MID-RASP 2026-2028: IMPLICATIONS FOR AIR NAVIGATION

3.2.6 The subject was addressed in PPT/15 presented by the Secretariat. The meeting was apprised of the development of RASP-MID 2026-2028 Edition including the Safety Enhancement initiatives (SEIs) and the MID Region Safety Performance Measurement and Monitoring (SPMM).

3.2.7 The meeting was briefed that the MID Regional Aviation Safety Plan (MID-RASP) presents the strategic direction for the management of aviation safety at the regional level. It constitutes the regional safety plan for the MID Region, setting out the strategic priorities, main risks affecting the regional aviation system, and the necessary actions to mitigate those risks to further improve aviation safety.

3.2.8 The meeting noted that, in order to effectively address regional operational risks, organizational safety challenges, and emerging aviation safety issues, a total of 18 Safety Enhancement Initiatives (SEIs) comprising 58 associated safety actions have been developed.

3.2.9 The meeting further noted that the SEIs provide a structured framework for coordinated action by States, industry stakeholders, and regional safety partners to address the MID Region's key safety priorities.

3.2.10 The meeting encouraged States and stakeholders to actively support the implementation and monitoring of the MID-RASP to achieve the region's safety objectives and targets.

CAPACITY DEVELOPMENT FOR ADVANCED AIR MOBILITY AND EMERGING TECHNOLOGIES

3.2.11 The subject was addressed in WP/55 presented by UAE. The meeting noted with appreciation the UAE's experience in supporting capacity development and regulatory preparedness for Advanced Air Mobility (AAM) and emerging technologies, in response to RASG-MID Conclusion 12/6. The meeting was informed that the UAE programme, conducted in cooperation between the GCAA, Technology Innovation Institute (TII), ASPIRE, industry and research organizations, addresses regulatory frameworks, operational concepts, data governance, interoperability considerations and stakeholder engagement.

3.2.12 The meeting recognized that MID States are at different levels of preparedness for AAM implementation and emphasized the importance of early regulatory readiness, safety risk management, performance-based and technology-neutral approaches, and close coordination among regulators, ANSPs, airport operators, industry, academia and technology providers.

3.2.13 The meeting encouraged the periodic exchange of experiences, lessons learned and best practices among MID States and relevant stakeholders, with a view to avoiding duplication of effort, supporting capacity development, and promoting the safe and harmonized integration of AAM and other emerging technologies within the MID Region.

3.3 Air Navigation Subjects of interest to RASG-MID***SAFETY ISSUES IDENTIFIED IN THE RVSM SMR-2025***

3.3.1 The subject was addressed in PPT/16 presented by the Secretariat. The meeting was apprised of the results of the Safety Monitoring Report (SMR) 2025, particularly related to the opened safety protocols at the regional interfaces and the current list of Minimum Monitoring Requirement including the status of the RVSM approvals for the Aircraft registered within the MID Region. In this regard, the meeting noted that out of 2099, 98 Aircraft are yet to be monitored, in accordance with the MIDRMA MMR requirements.

3.3.2 The meeting invited all member States to review and adhere to their MMRs, which are accessible on the MIDRMA website (www.midrma.com).

GNSS RADIO FREQUENCY INTERFERENCE (RFI)

3.3.3 The subject was addressed in PPT/17 presented by the Secretariat. The meeting was apprised of the ICAO GNSS RFI roadmap comprising ICAO short-, medium-, and long-terms actions and activities.

3.3.4 It was highlighted that a regional GNSS RFI monitoring network with near real time capabilities could enhance aviation safety and security. The system would enable detection of interference events and deliver timely alerts to ATC and pilots, supporting faster responses and effective mitigation.

GNSS RFI IN EGYPT – CHALLENGES AND MITIGATION STRATEGIES

3.3.5 The subject was addressed in PPT/11 presented by Egypt. The meeting acknowledged the challenges and operational impact associated with the GNSS RFI and noted Egypt's efforts to establish a backup conventional navigation network.

RADIO ALTIMETER

3.3.6 The subject was addressed in PPT/18 presented by the Secretariat. The meeting recalled the issue of 5G interference with radio altimeter, which in 2022 had a significant impact and disrupted aviation operations in several airports. This interference stemmed from 5G transmitters operating in spectrum bands adjacent to those used by radio altimeters.

3.3.7 The meeting noted with concern that the World Radiocommunication Conference in 2027 (WRC-27) will consider allocating additional spectrum adjacent to the radio altimeters' band for International Mobile Telecommunications (IMT), pending the outcome of ITU studies. However, these studies currently lack assessment of critical scenarios arising during abnormal or severe weather when aircraft may deviate below normal glide paths and operate dangerously close to terrain or obstacles. In these conditions, the radio altimeter serves as a vital lifesaving sensor. If interference corrupt radio altimeter data at the wrong moment, the consequences could be catastrophic.

3.4 MID Region Aerodromes Priorities and Challenges

3.4.1 The subject was addressed in PPT/19 presented by the Secretariat, which provided an overview of the future Aerodromes and Ground Aids/Aerodrome Operations (AGA-OPS) priorities and challenges for the MID Region. The meeting highlighted the need to maintain close coordination between MIDANPIRG and RASG-MID on matters of common interest related to aerodrome safety, operational efficiency, runway safety, aerodrome certification, surface movement safety, and implementation of emerging ICAO provisions and regional initiatives.

REPORT ON AGENDA ITEM 4: RASG-MID WORK PROGRAMME (*RASG-MID/13*)**4.1 Follow-up on the RASG-MID/12 Conclusions and Decisions**

4.1.1 The subject was addressed in WP/20 presented by the Secretariat. The meeting was apprised of the progress achieved in the implementation of the RASG-MID/12 Conclusions and Decisions as at **Appendix 4A**.

4.2 Outcomes of the RASG-MID Groups (*ASRG, SEIG, ASPIG and AIIG*)**ASRG Outcomes**

4.2.1 The subject was addressed in WP/22 and PPT/23 presented by the Secretariat. The meeting noted that Eng. Moaz Hezzi, Airworthiness Inspector / Aviation Safety and Quality expert, Oman, and Eng. Mohamed El-Tobgy, Lead Safety Investigator, Egypt, were unanimously elected as the Chairperson and Vice-Chairperson of the Annual Safety Report Group (ASRG), respectively.

4.2.2 The meeting was apprised of the MID Region safety priorities.

4.2.3 Based on the analysis of the reactive and proactive safety information for the period 2020-2024, the safety priorities defined for the MID Region are:

Regional Operational Safety Risks

1. Runway Excursion (RE) and Abnormal Runway Contact (ARC) during landing;
2. loss of Control Inflight - (LOC-I);
3. MID Air Collision- (MAC)
4. controlled Flight into Terrain- (CFIT); and
5. runway Incursion- (RI).

4.2.4 In line with GASP 2026-2028 Edition, other considered regional occurrence categories: SCF-NP and TURB

4.2.5 In addition to this, safety issues have been identified and mapped to their respective potential accident outcomes.

Regional Organizational issues**States' Safety Oversight Capabilities**

4.2.6 USOAP-CMA audits had identified that State's inability to effectively oversee aviation operations remains a global concern. In respect of the MID Region, the regional average overall Effective Implementation (EI) (13 out of 15 States have been audited) is approx. 77.36 %, which is above the world average 70.41% (as of 8 June 2026). Three (3) States are currently below EI 60.

4.2.7 The MID Office continues to support States in strengthening their safety oversight capabilities through capacity-building activities and technical assistance missions.

4.2.8 Moreover, the effective implementation in certification, surveillance, and resolution of Safety concerns needs to be improved.

Safety Management

4.2.9 States should build upon fundamental safety oversight systems to fully implement SSPs according to Annex 19; States shall require that applicable service providers under their authority implement an SMS. The average EI for SSP foundation PQs for States in the MID Region is approximately 79%.

4.2.10 An SSP requires increased collaboration across operational domains to identify hazards and manage risks. Aviation authorities and organizations should anticipate new emerging threats and associated challenges by developing SRM principles. Implementation of SSP is one of the main challenges faced by the State in the MID Region. The RASG-MID addresses the improvement of SSP implementation in the MID Region as one of the top Safety Enhancement Initiatives (SEIs). In connection with this, the RASG-MID supported the establishment and activation of the MENA RSOO, with a primary objective to assist member States to develop and implement SSP. Recognizing the challenges faced by States in developing their SSPs, the MID Office has organized various workshops and activities focused on SSP implementation, including Safety Risk Management (SRM), safety performance management, developing a Safety Intelligence.

4.2.11 The Collaborative Approach to Managing and Enhancing Aviation Safety in the MID Region, 5th Safety Summit was held in Kuwait from 25th –27th November 2024, bringing together over 100 participants from States, international organizations, and industry stakeholders. The Summit served as a platform to foster collaboration in Aviation Safety by aligning strategies, sharing experiences, addressing emerging challenges, and supporting States with SSP development.

The following actions were recommended to support the SSP implementation in the MID Region:

- Enhance State Commitment: Secure high-level commitment and adequate resources for effective SSP implementation.
- Strengthen Governance: Establish clear governance and coordination mechanisms at the State level.
- Capacity Building: Provide targeted training, Workshops, and technical assistance to develop SSP expertise.
- Establish a robust safety risk management framework at the State level
- Promote Data-Driven Oversight: Improve safety data collection, sharing, and analysis to support proactive risk management.
- Develop Regional Safety Performance Measurement and Monitoring: Harmonize SPIs across States to enable effective monitoring and benchmarking.
- Foster Collaboration: Encourage sharing of best practices and lessons learned among States and stakeholders

4.2.12 In addition, the development of the National Aviation Safety Plan (NASP) is one of the MID region safety priorities, and eight (8) States had published their NASPs in the ICAO website, and one State developed and did not yet publish it.

4.2.13 In line with the Safety Strategic Objective of the International Civil Aviation Organization (ICAO), the 2023-2025 edition of the Global Aviation Safety Plan (GASP, Doc 10004) presents the global strategy for the continuous improvement of aviation safety. It also provides a framework in which regional and National Aviation Safety Plans (RASPs and NASPs) are developed and implemented.

4.2.14 The State's NASP should be developed in alignment with the GASP and the MID-RASP. However, priority should be given to national safety issues. Moreover, the NASP should also be aligned and coordinated with the MID-RASP (as appropriate).

4.2.15 Recognizing the challenges facing the States in the development of their NASPs, the ICAO MID Office conducted NASP workshops and assistance Missions dedicated to NASP to support States with NASP development.

Human Factors and Human Performance

4.2.16 As new technologies emerge on the market and the complexity of the system continues increasing, it is of key importance to have the right competencies and adapt training methods to cope with new challenges.

Competence of Personnel

4.2.17 Availability of well-trained and competent aviation personnel is paramount to the safety and resilience of the aviation industry. Some of States in the MID Region have a mature and detailed regulatory framework in place to ensure proper training, licensing, adequacy of training devices, and oversight. Nevertheless, several factors are challenging this mature framework: new technologies and increasing automation are changing the safety needs for aviation personnel, and new training devices are emerging. New aircraft types and technological advancements in virtual reality/artificial intelligence are revolutionizing pilot training altogether.

Manage Risk Interdependencies

4.2.18 The COVID-19 crisis demonstrated that safety, security, health safety and other risks can no longer be managed in isolation. The aviation community has realized that continuing to develop tools and specific guidance for each situation and for each domain affected by transversal risks may delay not only the implementation of mitigation measures, but also the development of an enabling framework to support integrated, collaborative risk management.

Cybersecurity Risks

4.2.19 The Global Civil Aviation Ecosystem is accelerating towards more digitalization. This implies that any exchange of information within any digital workflow of the aviation community needs to be resilient to information security threats which have consequences on the safety of flight or the availability of airspace and beyond. Aware of the complexity of the aviation system and the need to manage cybersecurity risk, the MID Region needs to consider and address information security risks in a comprehensive and standardized manner across all aviation domains. In addition, it is essential that the aviation industry and civil aviation authorities share knowledge and learn from experience to ensure systems are secure from individuals/organizations with malicious intent.

Security Risks with an impact on Aviation Safety

4.2.20 The implementation of aviation security measures can have a direct impact on safety aspects of aerodrome or aircraft operations. Airport security, aircraft security or in-flight security are the areas where the interdependencies are highly visible and where any security requirements should also consider potential impacts on aviation safety. States should consider where interdependencies between civil aviation safety and security exist.

4.2.21 Therefore, an integrated approach to the management of safety and security risks across the spectrum of aviation activities would bring benefits such as a complete overview of risks, a better sharing of security information and the closure of gaps in the security system while focusing on increasing the overall level of safety. Consequently, this would allow ensuring synergies where security measures can have an impact on safety and vice versa; thereby avoiding incompatible actions and strengthening the overall safety and security of civil aviation.

Risks arising from conflict zones

4.2.22 Some fatal accidents in conflicted zones raised the question why the aeroplane was flying over an area where there was an ongoing armed conflict. This is why it's important for states, aircraft operators, and other airspace users such as air navigation service providers (ANSPs), to work together to share the most up-to-date conflict zone risk-based information possible to assure the safety of civil flights.

Aviation Health Safety (AHS) Risks

4.2.23 The COVID-19 pandemic has shown that the harmonization of health policies affecting aviation, and in particular in the CAT domain, has become an important topic to help overcome the pandemic. The objective is to minimize the impact of health safety threats in CAT. Health safety threats should be included in the management of risk interdependencies.

4.2.24 COVID-19 is unlikely to be the last pandemic we will be faced with. It is crucial to continue supporting the MID Region aviation industry competitiveness by offering the safest aircraft interior environment to reduce the risk of disease transmission between continents and States, restore public trust and facilitate future responses to events of similar nature.

GNSS Interference Risks

4.2.25 IATA presented statistical evidence covering over 36,000 reported events, highlighting sharp increases in spoofing (375%) and jamming (58%) from January 2023 to September 2024, with Egypt, Iraq, and Türkiye identified among the most affected States.

4.2.26 To bring attention to the critical issue of GNSS interference and spoofing, and to foster discussions on the management of GNSS vulnerabilities and potential mitigation measures against GNSS RFI, ICAO convened the ICAO EUR/MID Radio Navigation Symposium from 6 to 8 February 2024 in Turkey, and several recommendations have been adopted by the meeting.

Emerging Safety Issues

4.2.27 Emerging issues are risks that might impact Safety in the future, these may include a possible new technology, a potential public policy, a new concept, business model or idea that, while

perhaps an outlier today, could mature and develop into a critical mainstream issue in the future or become a major trend in its own right.

- Advanced Air Mobility (AAM) and New Entrants including UAS and EVTOL

4.2.28 The meeting reviewed and endorsed the 14th MID-ASR and agreed to the following RASG-MID Conclusion:

RASG-MID CONCLUSION 13/1: 14TH ASR

That, the Fourteenth MID Annual Safety Report is endorsed and be posted on the ICAO MID Website

4.2.29 The MID Annual Safety Reports (ASRs) are available at the following link: [RASGMID-ASR](#).

4.2.30 The meeting noted the main challenge facing the ASRG for the development of the ASRs, in particular the limited sharing of safety information, including safety analysis by the States.

4.2.31 In connection with the above, the meeting reiterated the importance of sharing safety information for improved ASRs development and urged States to provide the ICAO MID Office by the end of July 2026 the safety data analysis and their associated safety recommendations for the period (2021 – 2025). Accordingly, the meeting agreed to the following RASG-MID Conclusion:

RASG-MID CONCLUSION 13/2: SHARING OF SAFETY DATA ANALYSIS

*In order to enable the development of the 15th Edition of the MID ASR, States are urged to provide necessary safety information and safety data analysis to the ICAO MID Office, by end of July 2026, related to each occurrence category in **Appendix 4B** for the past 5 years (2021– 2025) and using the templates in **Appendices 4C and 4D**. The Draft of the 15th edition of the MID ASR will be presented to the ASRG/8 meeting for review.*

Accidents Safety Status 2025 -IATA

4.2.32 The subject was addressed in PPT/24 presented by IATA. The meeting was apprised of the 2025 aviation accident safety statistics and expressed its appreciation to IATA for sharing the update.

SEIG Outcomes

4.2.33 The subject was addressed in WP/25, PPT/26, PPT/27, and WP/28 presented by the secretariat.

4.2.34 The meeting noted that Dr. Mohammad M. Hushki, Director Compliance Monitoring & NCMC of Jordan, Jordan Civil Aviation Regulatory Commission (CARC), and Mrs. Rawya Nasser Al-Adawi, Director General of Civil Aviation Regulations, Oman Civil Aviation Authority (CAA), were unanimously elected as the Chairperson and Vice-Chairperson of the Safety Enhancement Implementation Group (SEIG), respectively.

4.2.35 The meeting also noted that Dr. Mohammad M. Hushki has subsequently been appointed as Director of Aircraft Accident Investigation at Jordan Civil Aviation Regulatory Commission. Consequently, the position of SEIG Chairperson has become vacant. The meeting agreed that the election of a new Chairperson would be included on the agenda of the next SEIG meeting.

Outcome on the ICAO Assembly 42nd

4.2.36 Covered under Agenda item 2.2 “Global and regional safety and Air Navigation development”.

Update on the implementation Progress of the Safety Enhancement Initiatives (SEIs)

4.2.37 The meeting noted with appreciation the update on the implementation progress of the SEIs conducted by the Secretariat in coordination with all stakeholders.

4.2.38 The Middle East Regional Aviation Safety Plan (MID-RASP) 2023-2025 Edition presents the strategic direction for the management of aviation safety in the MID Region, to strengthen Member States Safety Oversight System, and risk-based approach to managing safety and support effective implementation of States’ Safety Programmes (SSP) and Safety Management System (SMS) including the development of NASP.

4.2.39 The tenth meeting of the Regional Aviation Safety Group – Middle East (RASG-MID/10) was held in Muscat, Oman, 14-17 May 2023; reviewed and endorsed the MID-RASP 2023-2025 Edition including 24 Safety Enhancement Initiatives (SEIs) and 62 safety actions through RASG-MID Conclusion 10/7.

4.2.40 The meeting was apprised with appreciation on the updated progress on SEIs and their respective safety actions and noted with appreciation that 49 safety actions out of 62 (Approx 80%) have been completed and implemented. Accordingly, the meeting endorsed the updated implementation progress of SEIs and safety actions and agreed to the following RASG-MID Conclusion:

***RASG-MID CONCLUSION 13/3: IMPLEMENTATION PROGRESS ON THE SAFETY
ENHANCEMENT INITIATIVES (SEI)***

*That the implementation progress of the Safety Enhancement Initiatives (SEIs) and safety actions included in the MID-RASP 2023-2025 Edition at **Appendix 4E** is endorsed*

SEIs Guidance material development

4.2.41 The meeting noted with appreciation the guidance material developed by Qatar on the issuance of temporary exemption. The issuance of temporary exemptions became critical during global disruptions such as the COVID-19 pandemic.

4.2.42 The meeting was informed that it outlines principles, processes, and risk-based methodologies for granting temporary deviations from ICAO SARPs while maintaining safety and compliance obligations.

4.2.43 The meeting also noted key challenges identified including limited technical expertise; inadequate data governance systems; regulatory fragmentation; and emergent risks associated with

algorithmic bias and system interoperability. Accordingly, the meeting endorsed the issuance of temporary exemptions guidance material and agreed to the following RASG-MID Conclusion:

RASG-MID CONCLUSION 13/4: ISSUANCE OF TEMPORARY EXEMPTIONS GUIDANCE MATERIAL

*That the guidance material on the issuance of temporary exemptions at **Appendix 4F** is endorsed.*

4.2.44 The meeting noted with appreciation the guidance material developed by Qatar on remote safety oversight.

4.2.45 The meeting was informed that the COVID-19 pandemic and other global disruptions highlighted the need for innovative approaches to safety oversight. Remote oversight emerged as a practical and effective method for maintaining regulatory compliance and safety performance when on-site activities were limited.

4.2.46 The meeting also noted that the guidance manual on remote safety oversight provides a framework for planning, conducting, and monitoring remote safety oversight activities. Accordingly, the meeting endorsed the remote safety oversight guidance material and agreed to the following RASG-MID Conclusion:

RASG-MID CONCLUSION 13/5: REMOTE SAFETY OVERSIGHT GUIDANCE MATERIAL

*That the guidance material on the remote safety oversight at **Appendix 4G** is endorsed.*

4.2.47 The meeting noted with appreciation the guidance material developed by Qatar on Judicial Enforcement for Aviation Inspectors.

4.2.48 The meeting was informed that it provides a standardized approach to differentiate administrative and judicial enforcement, align with ICAO provisions. Accordingly, the meeting endorsed the judicial Enforcement for Aviation Inspectors guidance material and agreed to the following RASG-MID Conclusion:

RASG-MID CONCLUSION 13/6: JUDICIAL ENFORCEMENT FOR AVIATION INSPECTORS GUIDANCE MATERIAL

*That the guidance material on the judicial Enforcement for Aviation Inspectors at **Appendix 4H** is endorsed.*

Progress Towards 2026-2028 GASP

4.2.49 The subject was addressed in PPT/21 by the Secretariat. The meeting noted the process undertaken by ICAO, through the GASP Study Group (GASP-SG), to develop the final version of the 2026-2028 edition of the GASP, presented for endorsement at the 42nd Session of the ICAO Assembly (A42).

4.2.50 The meeting was informed of the global safety issues presented in the GASP, including the main findings related to global operational safety risks and organizational challenges, and took note of the 2026-2028 GASP goals and targets.

4.2.51 The meeting was also informed on all the GASP-related documents and tools, which were being revised to coincide with the latest edition of the GASP, as well as the next steps to assist States in developing or revising their national aviation safety plans and actions by ICAO to address feedback on the GASP, received during A42.

MID States Progress on NASPs Development

4.2.52 The meeting recalled that ICAO issued States Letter to States on “the sharing/submission of the National Aviation Safety Plan (NASP)” through State Letter Ref.: ME 4 – 25/159 dated 7 July 2025. So far, nine (9) States have developed their NASPs and shared approved copies with the ICAO MID Office. Eight (8) have published their NASPs on the ICAO website (Egypt, Iran, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, and UAE).

4.2.53 In line with the Safety Strategic Objective of the International Civil Aviation Organization (ICAO), the 2026-2028 edition of the Global Aviation Safety Plan (GASP, Doc 10004) presents the global strategy for the continuous improvement of aviation safety. The purpose of the GASP is to continually reduce fatalities and the risk of fatalities associated with accidents by guiding the harmonized development and implementation of regional and national aviation safety plans. States, regions, and industry facilitate the implementation of the strategy presented in the GASP through RASPs and NASPs.

4.2.54 The meeting was informed that the States’ NASP should be developed in alignment with the GASP and the MID-RASP. However, priority should be given to national safety issues. Moreover, the NASP should be also aligned and coordinated with the MID-RASP (as appropriate).

4.2.55 The meeting noted that the GASP 2026-2028 Target 5.2 calls for all States to publish an updated NASP, taking into consideration the 2026–2028 edition of GASP and their corresponding RASP, by 2027.

4.2.56 The meeting was informed that States shared their safety strategies and challenges related to the development of their NASPs.

4.2.57 The meeting noted the challenges faced by States in developing their NASPs:

- Capacity building and training;
- senior management commitment
- limited resources including financial
- limited qualified personnel;
- safety data and safety information collection and analysis;
- emerging new technologies including UTM-ATM integration sandbox;
- limited collaboration, coordination, and communication amongst stakeholders including industry involvement from beginning;
- limited guidance to develop a robust safety risk management framework and processes; and
- geopolitical situation in the region.

4.2.58 The meeting recognized the challenges facing the States in the development of their NASPs. In this respect, the meeting was apprised about the MID Regional Office to conduct dedicated Assistance Missions to support States with NASP development and implementation. Accordingly, the meeting agreed to the following RASG-MID Conclusion:

RASG-MID CONCLUSION 13/7:**DEVELOPMENT OF NATIONAL
AVIATION SAFETY PLAN (NASP) IN MID
STATES**

That, States be:

- a) urged to develop and implement the NASP in line with the GASP and MID-RASP, if not yet done so;*
- b) encouraged to share the latest version of their NASPs with ICAO HQ and ICAO Regional MID office for posting on the GASP public website;*
- c) encouraged to continue to use existing ICAO guidance material and tools to implement their NASPs;*
- d) encouraged to request assistance from the ICAO MID Regional Office related to the development of their NASPs including the conduct of assistance missions and/or customized NASP Workshop for each State; and*
- e) encouraged to share their experiences related to the development of their NASPs during the SEIG meetings and/or Regional NASP Workshop to be organized by the ICAO MID Regional Office in 2026.*

MID RASP 2026-2028 Edition

4.2.59 The meeting noted with appreciation the development of RASP-MID 2026-2028 Edition including the Safety Enhancement Initiatives (SEIs) and the MID Region Safety Performance Measurement and Monitoring (SPMM).

4.2.60 The meeting was briefed that the MID Regional Aviation Safety Plan (MID-RASP) presents the strategic direction for the management of aviation safety at the regional level. It constitutes the regional safety plan for the MID Region, setting out the strategic priorities, main risks affecting the regional aviation system, and the necessary actions to mitigate those risks to further improve aviation safety.

4.2.61 The meeting was informed that the MID-RASP Edition 2026-2028 aims to enhance the MID Region's commitment to improving safety oversight capabilities, reducing operational risks, and establishing effective State Safety Programmes (SSP). It serves as a key framework for raising awareness of safety risks and their consequences among States, industry, and stakeholders. The MID-RASP encourages the allocation of financial, human, and technical resources to improve safety management, oversight, and operational performance. Additionally, it facilitates information sharing among relevant stakeholders to support timely action and collaborative problem-solving.

4.2.62 In respect of the Turbulence Encounter (TURB) occurrence category, the meeting was also informed that additional safety information should be collected to address the issue at the regional level. Accordingly, the meeting agreed that:

- IATA will explore the possibility of sharing the safety data analysis related to the TURB occurrence category to the ASRG;
- States are urged to share safety information and analysis related to TURB category with the ASRG for further processing; and

- A workshop on TURB occurrence data analysis will be organized to develop recommendations and identify appropriate safety actions for the next course of action

4.2.63 The meeting commended and expressed its appreciation to the ICAO MID Regional Office for the significant efforts and excellent work undertaken in the development of the MID Region Aviation Safety Plan (MID-RASP) 2026–2028 Edition. The meeting recognized the MID-RASP as a comprehensive and strategic framework that aligns regional safety priorities with the objectives of the Global Aviation Safety Plan (GASP) and addresses the MID Region’s key operational risks, organizational issues, and emerging issues.

4.2.64 The meeting further noted the extensive coordination, consultation, safety analysis, and stakeholder engagement conducted by the ICAO MID Regional Office throughout the development process, ensuring that the MID-RASP reflects regional needs, supports effective implementation of Safety Enhancement Initiatives (SEIs), and provides a clear roadmap for enhancing aviation safety performance across the MID Region during the 2026–2028 planning cycle.

4.2.65 The meeting noted that, in order to effectively address regional operational risks, organizational safety challenges, and emerging aviation safety issues, a total of 18 Safety Enhancement Initiatives (SEIs) comprising 58 associated safety actions have been identified, developed, and proposed.

4.2.66 The meeting was also informed that these SEIs are designed to support the implementation of targeted risk mitigation measures, strengthen State safety management capabilities, enhance regional safety performance, and contribute to the achievement of the safety objectives and targets established under the MID-RASP and the Global Aviation Safety Plan (GASP).

4.2.67 The meeting encouraged States and stakeholders to actively support the implementation and monitoring of the MID-RASP to achieve the region’s safety objectives and targets. Accordingly, the meeting agreed to the following RASG-MID Conclusion:

RASG-MID CONCLUSION 13/8: MID-RASP 2026-2028 EDITION

That,

- a) the MID-RASP 2026-2028 Edition including the Safety Enhancement Initiatives (SEIs) and the MID region Safety performance Measurement and Monitoring (SPMM) at Appendix 4J is endorsed; and*
- b) States, international organizations, and industry are urged to support the MID-RASP 2026-2028 Edition activities including the implementation of SEIs and safety actions*

State Safety Programme (SSP)

4.2.68 The meeting noted that States should build upon fundamental safety oversight systems to implement effective SSPs. As per Annex 19, States shall require that applicable service providers under their authority implement an SMS. The SMS enables service providers to capture and transmit safety information, which contributes to safety risk management. An SSP requires the implementation of a risk-based approach to measure and monitor the safety performance of the State’s civil aviation system and progress towards achieving the State’s safety objectives. In this context, the role of the State evolves to include the establishment and achievement of safety performance targets, as well as effective oversight of its service providers’ SMS.

4.2.69 The meeting also noted that the GASP 2026-2028 Edition Goal 3 is aimed at States individually and calls for the establishment and management of State Safety Programmes (SSPs), in accordance with Annex 19 – Safety Management.

4.2.70 The meeting was informed that the GASP 2026-2028 Edition Goal 3 Target 3.1 calls for all States to assess the level of implementation of their SSP, by 2026.

4.2.71 The meeting was also informed that the GASP 2026-2028 Edition Goal 3 Target 3.2 calls for all States to establish an SSP, by 2028.

4.2.72 The meeting noted with appreciation the updated status of Annex 19, Amendment 2 including the State safety policy, objectives, and resources (SSP Component 1), State Safety Risk Management (SSP Component 2), State safety assurance (SSP Component 3), and State safety promotion (SSP Component 4).

4.2.73 The meeting was informed on the delivered workshop related to the guidance on the development of Safety Intelligence including an overview on Safety Intelligence, establishment of Safety Data of Collection and Processing System (SDCPS), Governance and Management of Safety Data and Safety Information, Safety Data and Safety Information Analysis, Use of Analysis Results For Decision Making, and Sharing and Exchange of Safety Information and Safety Intelligence.

4.2.74 The meeting commended and expressed its appreciation to the ICAO MID Office for its valuable efforts in supporting States in the development of their SSPs through various capacity-building activities.

4.2.75 The meeting noted that states of Egypt, Jordan, Saudi Arabia, and the UAE for sharing their experiences and challenges related to the development of SSP.

4.2.76 The meeting noted the challenges faced by States in developing their SSP.

- Legislation amendments;
- capacity building and training;
- limited human and financial resources;
- limited guidance to establish and develop safety data and safety information collection and analysis;
- limited collaboration, coordination, and communication amongst SSP stakeholders;
- limited guidance to develop a robust safety risk management framework and processes;
- transition from a prescriptive approach to a more risk-based and performance-based approach; and
- geopolitical situation in the region

4.2.77 The meeting recognized the challenges facing the States on the development of SSP and the preparation for the upcoming SSP assessment. In this respect, the meeting was apprised about MID Regional Office to conduct Assistance Missions dedicated to SSP to support States with SSP development. Accordingly, the meeting agreed to the following RASG-MID Conclusion:

RASG-MID CONCLUSION 13/9: DEVELOPMENT OF SSP IN MID STATES

That, States be:

- a) urged to prioritize the timely establishment, implementation, and maintenance of State Safety Programmes (SSPs) and to strengthen Safety Management System (SMS) adoption across all aviation service providers, ensuring alignment with ICAO Annex 19 standards;*
- b) encouraged to request assistance from the ICAO MID Regional Office related to the development and implementation of their SSPs including the conduct of:*
 - i. Targeted SSP technical assistance missions to prepare States for upcoming ICAO SSP assessments*
 - ii. Tailored SSP implementation Workshops*
 - iii. State Safety Risk Management framework workshops to enhance risk-based decision-making capabilities.*
- c) invited to share lessons learned, challenges, and successes in SSP development during SEIG meetings, fostering peer-to-peer knowledge exchange and regional collaboration; and*
- d) encouraged to share their latest version of SSP manuals with ICAO MID Office.*

NCMCs Meeting

4.2.78 The subject was addressed by WP/28 presented by the Secretariat. The meeting reviewed the outcome of the NCMC meeting held during SEIG/7 and noted the common challenges faced by States in the implementation of the USOAP Continuous Monitoring Approach (CMA). The meeting supported the recommended actions and regional initiatives contained in **Appendix 4K** aimed at strengthening safety oversight capabilities, enhancing regional cooperation, and supporting the development of USOAP-CMA guidance material to assist States in the preparation for USOAP audits and ICAO Coordinated Validation Missions (ICVMs).

ASPIG Outcomes

4.2.79 The subject is covered in IP/3, submitted by the Secretariat.

4.2.80 The meeting noted the outcomes related to the Aerodrome Safety, Planning and Implementation Group (ASPIG), which recalled the Conclusions and Decisions endorsed by MIDANPIRG/22 & RASG-MID/12 aimed at strengthening aerodrome safety, operational efficiency and regional harmonization in the MID Region. The meeting further noted that the effective implementation of these outcomes would require continued commitment by States and stakeholders, as well as the allocation of adequate technical, human and financial resources.

4.2.81 The meeting recalled that aerodrome certification remains one of the fundamental pillars of the State safety oversight system and a key requirement for ensuring compliance with ICAO Annex 14, Volume I. The meeting noted that RASG-MID/12 Conclusion 12/11 established a harmonized regional monitoring mechanism for aerodrome certification implementation, with a view to supporting States in advancing certification activities, enhancing continuing surveillance and enabling the ICAO MID Office to provide targeted assistance, as required.

4.2.82 The meeting noted that runway incursions and runway excursions continue to represent significant operational safety risks at global and regional levels. In this regard, the meeting recalled the importance of Local Runway Safety Teams (LRSTs) as an effective mechanism for local hazard identification, risk assessment and implementation of mitigation measures. The meeting noted that RASG-MID/12 Conclusion 12/12 supports the monitoring of LRST implementation across the MID Region, in line with the ICAO Global Runway Safety Action Plan.

4.2.83 The meeting further recalled that Runway Safety Go-Team missions provide practical and performance-based support to aerodromes through the assessment of local runway safety arrangements, identification of operational challenges and sharing of best practices. The meeting noted that RASG-MID/12 Conclusion 12/13 was endorsed to facilitate the conduct of such missions within the MID Region, strengthen the effectiveness of LRSTs and support aerodrome operators in addressing identified safety concerns.

4.2.84 With regard to the Global Reporting Format (GRF), the meeting noted that GRF establishes a globally harmonized methodology for assessing and reporting runway surface conditions, thereby enhancing the quality and consistency of information provided to flight crews and air traffic services. The meeting noted that RASG-MID/12 Conclusion 12/14 supports the monitoring of GRF implementation in the MID Region and encourages States to ensure the availability of the necessary training, procedures, equipment and oversight arrangements.

4.2.85 The meeting was apprised of the importance of the transition to the Aircraft Classification Rating – Pavement Classification Rating (ACR-PCR) methodology, which replaces the legacy ACN-PCN system and provides a more performance-based approach to aircraft-pavement compatibility and pavement strength reporting. The meeting noted that RASG-MID/12 Conclusion 12/15 supports the monitoring of ACR-PCR implementation and facilitates a coordinated transition by States and aerodrome operators.

4.2.86 The meeting noted that wildlife strikes continue to pose a significant safety risk to aircraft operations and that reliable and timely reporting is essential to support risk assessment, trend analysis and the development of effective mitigation measures. The meeting recalled that RASG-MID/12 Conclusion 12/16 was endorsed to strengthen wildlife strike reporting in the MID Region and improve the quality, completeness and consistency of data submitted through ICAO reporting mechanisms.

4.2.87 The meeting further noted that RASG-MID/12 Decision 12/17 established the MID Wildlife Hazard Management Action Group (MID WHM AG) as a regional platform for coordination, information exchange, capacity building and the development of harmonized approaches to wildlife hazard management. The meeting recognized the importance of the Group's work, particularly in view of the MID Region's location along major migratory bird routes and the increasing complexity of wildlife-related safety challenges.

4.2.88 The meeting also noted the importance of aerodrome safety data sharing in supporting proactive safety management and data-driven decision-making. In this connection, the meeting recalled that RASG-MID/12 Conclusion 12/18 established the MID Aerodrome Safety Data Sharing Framework, with the objective of facilitating the collection and exchange of anonymized aerodrome safety information and promoting collaborative learning among States and aerodrome operators.

4.2.89 The meeting emphasized that the ASPIG-related Conclusions and Decisions provide an important framework for addressing aerodrome safety priorities in the MID Region, including aerodrome certification, LRST implementation, Runway Safety Go-Team missions, GRF, ACR-PCR, wildlife hazard

management and aerodrome safety data sharing. Accordingly, the meeting encouraged States, aerodrome operators and concerned stakeholders to continue supporting the implementation of these regional priorities and to coordinate with the ICAO MID Office, as required, to ensure effective follow-up.

AIIG Outcomes

MENA ARCM/7 MEETING

4.2.90 The subject was addressed in WP/29, presented by the Secretariat.

Update points from MENA ARCM Chairperson

4.2.91 The meeting was informed on the updates provided, which covered key areas including participation in meetings, the Terms of Reference (ToRs) and nomination mechanism for the MENA ARCM Coordinator, capacity-building activities and collaboration arrangements, strategic engagement, membership expansion, the establishment of the MENA ARCM Safety Recommendations Platform, as well as international engagement efforts.

4.2.92 The meeting was also informed on the ACAO mechanism for the “Coordination and Alliance of ACAO Positions During High-Level Events.” This initiative aims to facilitate the coordinated submission of WPs on behalf of ACAO Member States.

Updated Progress on MENA ARCM Areas of Cooperation & Technical Assistance

4.2.93 The meeting was informed about the work progress achieved on the MENA ARCM database management, Technical Assistance, and shared folder.

4.2.94 The meeting noted that MENA ARCM Member States were urged to submit their data to the MENA ARCM Coordinator if they had not already done so.

Proposed Amendment to Annex 13

4.2.95 The meeting was informed on the proposed Amendment to Annexes 13 and 6 from both AIGP/7 & AIGP/8 as well as the updates related to Protocol Questions (PQs) 6.003 and 6.101 in the 2024 Edition of the PQs.

Safety Recommendations reports

4.2.96 The meeting was informed that IATA shared an overview of accidents and the updated status of final accident investigation reports for the period 2020–2024.

4.2.97 The meeting was also informed of RASG-MID/12 Conclusion 12/19 on Adherence to ICAO Annex 13 – Accident Investigation Final Reports and noted that the MID Office circulated the conclusion to all MID States.

Proposed Agenda for MENA ARCM/8 meeting

4.2.98 The meeting was also informed on the proposed agenda for the MENA ARCM/8 meeting and the MENA ARCM Workshop on “Establishing an Accident Investigation Safety Recommendations Platform”.

MENA ARCM/8 Meeting

4.2.99 The meeting noted that Capt. Aysha Mohammed Al Hamili, Acting Assistant Director-General – Air Accident Investigations, United Arab Emirates, and Mr. Abdulelah Felemban, EVP Safety Investigation and Research, National Transport Safety Center (NTSC), Kingdom of Saudi Arabia, were unanimously re-elected as the Chairperson and Vice-Chairperson of the Middle East North Africa Aircraft Accident and Incident Investigation Regional Cooperation Mechanism (MENA ARCM), and Accident and Incident Investigation Group (AIIG), respectively.

MENA ARCM Coordinator ToRs and nomination mechanism of MENA ARCM Coordinator

4.2.100 The meeting reviewed and agreed to the MENA ARCM Coordinator Terms of References (ToRs) as at **Appendix 4L**.

4.2.101 The meeting noted that Eng. Albaraa Naser, National Transport Safety Center (NTSC), Saudi Arabia, was unanimously re-elected as the MENA ARCM Coordinator.

Outcome of the RASG-MID/12

4.2.102 The meeting was informed on the outcome of the RASG-MID/12.

Assembly 42nd Outcomes

4.2.103 Covered under Agenda item 2.2 “Global and regional safety and Air Navigation development”.

MID Region Safety Priorities and Performance

4.2.104 Covered under Agenda item 3.2 “Safety Subjects of interest to MIDANPIRG”

Updated Progress on MENA ARCM Areas of Cooperation & Technical Assistance

4.2.105 The meeting was informed of the work progress achieved on the MENA ARCM database management, Technical Assistance, and shared folder.

4.2.106 The meeting noted that MENA ARCM Member States were urged to submit their data to the MENA ARCM Coordinator if they had not already done so.

RASP-MID 2026-2028 Edition

4.2.107 Covered under Agenda item 4.2 “Outcomes of the SEIG/7”

Accident investigation final report

4.2.108 The meeting was informed that IATA presented an overview of accidents and an updated status on the completion and publication of final accident investigation reports for 2018–2024, with particular emphasis on the MENA region, recognizing the efforts undertaken by the MENA ARCM Committee.

4.2.109 To address the remaining final investigation reports, the following actions were agreed:

- a. IATA will provide the updated list of outstanding reports to the MENA ARCM Coordinator
- b. The MENA ARCM Coordinator will coordinate with each concerned AIA to obtain the current status of these reports.
- c. The MENA ARCM Coordinator will assess whether the reports will be submitted in accordance with the established procedure.

Lithium batteries

4.2.110 The meeting noted the concerns raised by IATA regarding the transport of lithium batteries by air.

Workshop: “Mechanism for establishing MENA ARCM Accident investigation Safety Recommendations Platform (MENA ARCM SRP).”

4.2.111 The meeting noted that the National Transport Safety Center (NTSC) of the Kingdom of Saudi Arabia has successfully organized “Mechanism for establishing MENA ARCM Accidents and serious incidents investigation Safety Recommendations Platform (MENA ARCM SRP)” Workshop in Riyadh, from 2 to 3 November 2025. The Workshop brought together accident investigation authorities, international organizations, and industry experts to share experiences and discuss challenges related to establishing and managing safety recommendations.

4.2.112 The meeting was informed that the second day of the Workshop focused on initiating the development of a draft roadmap for the establishment of the MENA ARCM Accident and Serious Incident Investigation Safety Recommendations Platform (MENA ARCM SRP), with emphasis on:

- i. Governance framework
- ii. Platform Design & Technical requirements
- iii. Data privacy & protection
- iv. Implementation Roadmap
- v. Drafting the Action Plan

4.2.113 The meeting noted with appreciation that the NTSC of Saudi Arabia generously offered to host the MENA ARCM SRP and develop its supporting software, including the maintenance required to ensure the Platform’s effective and sustainable operation.

4.2.114 The meeting reviewed and approved the MENA ARCM Accidents & Serious Incidents Investigation Safety Recommendation Platform (MENA ARCM SRP) Roadmap at **Appendix 4M**.

4.2.115 The meeting was also informed on the establishment of the Safety Recommendations Platform Working Group (SRPWG) and its composition.

Accident Investigation Reports- IATA

4.2.116 The subject was addressed in PPT/30 presented by IATA. The meeting expressed its appreciation to IATA for providing an updated status of final accident investigation reports for the period 2018–2025, particularly for the MID region.

4.2.117 IATA briefed the meeting about “Save a Life, Not a Bag” campaign. The campaign aimed

to raise the awareness of Passengers taking baggage during aircraft evacuations, which can block aisles and exits, slow other passengers, damage evacuation slides, and put lives at risk, followed the briefing a short video was played.

4.3 Other Emerging Safety Matters

Oversight of safety management systems for foreign approved maintenance organizations-UAE

4.3.1 The subject was addressed in WP/56 presented by UAE. The meeting noted with appreciation UAE experience related to overseeing SMS for foreign Approved Maintenance Organizations (AMOs) and that the UAE will take the lead in conducting a study on possible approaches for the proportional, risk-based, and harmonized implementation of SMS for foreign AMOs. The outcomes of the study will be presented at the next Safety Enhancement Initiatives Group (SEIG) meeting for further review, discussion, and a way forward.

Digital pilot licensing implementation experience and considerations for international interoperability-UAE

4.3.2 The subject was addressed in WP/57 presented by UAE. The meeting was apprised of the UAE's experience in implementing Digital Pilot Licensing (DPL), including the associated regulatory, technical, and operational considerations.

4.3.3 The meeting encouraged MID States to share their experiences, best practices, and challenges related to the implementation of digital licensing systems in support of harmonized and effective regional adoption.

NANSC Safety Implementation- Egypt

4.3.4 The subject was addressed in PPT/73 presented by Egypt. The meeting expressed its appreciation to Egypt for sharing the NANSC Safety Implementation including the NANSC safety performance-based operation.

Establishment of a MID regional network of analysts (MID-RNA) in support of RASG-MID – Saudi Arabia

4.3.5 The subject was addressed in WP/79 presented by Saudi Arabia. The meeting expressed its appreciation to Saudi Arabia for proposing the MID Regional Network of Analysts (MID-RNA) to support RASG-MID in fulfilling its mandate under the Global Aviation Safety Plan (GASP).

4.3.6 The meeting agreed that Saudi Arabia will develop and present a Working Paper (WP) on the proposed MID Regional Network of Analysts (MID-RNA) concept to the upcoming Safety Enhancement Initiatives Group (SEIG) to assess its feasibility and provide recommendations on the appropriate way forward.

Inclusion of the applicable TCDS reference on aircraft identification plates- Saudi Arabia

4.3.7 The subject was addressed in WP/80 presented by Saudi Arabia. The meeting noted with appreciation the proposal to enhance the aircraft identification plate to include the Type Certificate Data Sheet (TCDS) and that Saudi Arabia will kindly provide more data and information on the subject to be addressed by SEIG.

Aviation risk management and operational resilience - Saudi Arabia

4.3.8 The subject was addressed in WP/81 presented by Saudi Arabia. The meeting was apprised of Saudi Arabia's experience in implementing an Aviation Risk Management and Operational Resilience Framework based on the Safety Analytic Technique-led Scenario Risk Cycle (SAT/SRC).

4.3.9 The meeting encouraged States to consider similar mechanisms, as appropriate, to enhance stakeholder coordination, risk assessment, information sharing, and proactive safety risk management.

Sixth MID region safety summit and SSP/SMS regional workshop- UAE

4.3.10 The subject was addressed under IP/5 presented by UAE. The meeting noted that the Sixth MID Region Safety Summit and the SSP/SMS and USOAP CMA Regional Workshop, to be hosted in Dubai, United Arab Emirates, from 9 to 12 November 2026.

4.3.11 The meeting encouraged States, international organizations, regional safety organizations, and industry stakeholders to actively participate in the Sixth MID Region Safety Summit and the SSP/SMS Regional Workshop.

Promoting safety culture as a tool for sustainable aviation sector growth- Saudi Arabia

4.3.12 The subject was addressed under IP/8 presented by Saudi Arabia. The meeting was apprised of Saudi Arabia's experience in using a national safety promotion initiative to support safety culture, Just Culture, State Safety Programme (SSP) implementation, State Safety Risk Management, safety data and intelligence led learning, systems thinking, holistic aviation risk management, fatigue management, human error learning, integrated safety approaches and general aviation risk management.

Building sustainable aviation systems through positive safety culture and safety intelligence- Saudi Arabia

4.3.13 The subject was addressed under IP/9 presented by Saudi Arabia. The meeting was apprised of the importance of strengthening aviation sustainability through the promotion of a positive safety culture and the effective use of safety intelligence.

4.3.14 The meeting noted the need to evolve from proactive to predictive safety management approaches to better identify and mitigate emerging risks in an increasingly complex aviation environment.

Wildlife Hazard Management – Egypt

4.3.15 The subject was addressed under PPT/74 presented by Egypt. The meeting noted with appreciation Egypt's experience in Wildlife Hazard Management, including the regulatory framework, main bird and wildlife attractants around Egyptian airports, mitigation measures implemented by the Egyptian Civil Aviation Authority (ECAA), and case studies related to Hurghada International Airport and Cairo International Airport.

4.3.16 The meeting was informed of the measures taken by ECAA, including publication of bird migration information in the AIP, coordination with concerned authorities, and periodic and unannounced inspections of airport Wildlife Hazard Management Programmes. The meeting noted that bird migration and wildlife activity continue to pose safety risks to aircraft operations, particularly during seasonal migration periods and in areas affected by external attractants such as landfills, oxidation ponds, residential waste and attractive crops.

4.4 *USOAP SSP/SMS Workshop*

4.4.1 The subject was addressed under PPT/31 presented by the Secretariat. The meeting commended the ICAO MID Regional Office for successfully organizing and conducting the State Safety Programme (SSP) and SMS Workshop, which provided valuable guidance and practical insights to support States in the effective implementation of SSP in accordance with the requirements of Annex 19 and the Global Aviation Safety Plan (GASP).

4.4.2 The meeting noted that the USOAP teams have been working on integrating safety management PQs (SSP and SMS) into the legacy audit scheme.

4.4.3 The meeting was briefed that starting from August 2026, all audited states will be subjected to the new SSP and SMS PQs.

4.4.4 The meeting received a detailed briefing on the SSP and SMS Protocol Questions (PQs), including their intent, assessment criteria, evidence requirements, and common implementation challenges. The briefing highlighted practical approaches for addressing SSP-related PQs and emphasized the importance of establishing and implementing all SSP components in accordance with the provisions of International Civil Aviation Organization Annex 19.

4.4.5 The meeting noted that the guidance provided would support States in conducting self-assessments, identifying gaps, developing corrective action plans, and preparing for upcoming ICAO USOAP audit related to SSP and SMS PQs.

4.4.6 The meeting further emphasized the need for States to ensure the availability of objective evidence demonstrating the effective implementation of SSP requirements, including safety policy and objectives, State safety risk management, State safety assurance, and State safety promotion.

4.4.7 The meeting further acknowledged the continued efforts of the ICAO MID Regional Office in assisting MID Region States in strengthening their SSP implementation capabilities and advancing the achievement of regional and global aviation safety objectives.

REPORT ON AGENDA ITEM 5: MIDANPIRG WORK PROGRAMME (*MIDANPIRG/23*)**5.1 *Follow-up on MIDANPIRG/22 Conclusions and Decisions***

5.1.1 The subject was addressed in WP/32 presented by the Secretariat. The meeting reviewed the progress made in the implementation of MIDANPIRG/22 Conclusions and Decisions. The actions taken by States and the Secretariat on the above-mentioned Conclusions and Decisions were reviewed, and the updated list is provided at **Appendix 5.1A**.

5.2 Global, Regional and National Air Navigation Plans (GANP, MID ANP and NANPs)

GANP 8th Edition, New MID ANP Volume III and NANP

5.2.1 The subject was addressed in WP/33, WP/63 and WP/64 presented by the Secretariat and Saudi Arabia, respectively. The meeting was apprised of the outcomes of the RANP/NANP TF/3 and TF/4 meetings related to the endorsement of a new MID ANP Volume III.

5.2.2 The meeting recognized that further to the endorsement of the ANP Template (in 3 Volumes) by the Council in 2014, the GANP has gone through many amendments and additional Recommendations were formulated by the 13th and 14th Air Navigation Conference and the 39th, 40th, 41st and 42nd Assembly of ICAO endorsed a number of Assembly Resolutions, which have a direct impact on the regional planning and specifically on the ANP Volume III.

5.2.3 The meeting noted that the ICAO South American (SAM) Regional Office initiated an initiative in 2025 to address a longstanding challenge within the air navigation planning framework, namely, the lack of a standardized structure and methodology for ANP Volume III across ICAO Regions. The initiative consisted in a Mobility Assignment carried out by Mr. Mohamed Smaoui, Deputy Regional Director, MID Office, from 4 March to 5 June 2025 related to the Implementation and Harmonization of Volume III of the Air Navigation Plan. The main objective of the Mobility Assignment – SAM/1: Implementation and Harmonization of Volume III of the Air Navigation Plan was to carry out a benchmarking and comparative analysis of the existing Volume III of all ICAO Regional Air Navigation Plans. Based on this analysis, the project aimed to consolidate and validate, in coordination with all relevant stakeholders, a new harmonized Template for ANP Volume III that could be adopted across all ICAO Regions. This new Template would serve as a foundation for aligning regional and national air navigation planning and performance frameworks with the Global Air Navigation Plan (GANP) and could ultimately be submitted for consideration and approval by the ICAO Council.

5.2.4 The meeting reviewed and endorsed the MID ANP Volume III at **Appendix 5.2A**, available also at: [MID-eANP](#), developed based on the new Template and slightly amended by the RANP/NANP TF/3 and RANP/NANP TF/4 meetings and feedback from States. The meeting urged the different MIDANPIRG subsidiary bodies to further review and update the Global Priorities in Part II para. 1.3; the Regional Priorities at Part II para. 2.2 and the Regional Performance Objectives under Part II para. 2.4 of **Appendix 5.2A**.

5.2.5 The meeting agreed that coordinated regional action is needed to ensure that the MID-Air Navigation Plan (MID ANP) and the National Air Navigation Plans of MID States are aligned with the GANP 8th Edition.

5.2.6 The meeting underlined that States should apply a performance-based approach and a performance management process to identify national priorities and performance objectives, to report annually on the status of ASBU implementation and on the implementation of their performance objectives.

5.2.7 A structured programme of regional awareness, capacity-building, and coordination activities would support MID States in preparing their NANPs in line with the GANP 8th Edition and the MID ANP.

5.2.8 With regard to the measurement of and reporting on Air Navigation System Performance using KPIs (preferably ICAO KPIs), the meeting agreed that States should prioritize and limit the number of KPIs selected to those that are most relevant to their local and national operational contexts, considering the regional context.

5.2.9 Based on the above, the meeting agreed to the following Conclusions:

MIDANPIRG CONCLUSION 23/1: NEW AIR NAVIGATION PLAN VOL III TEMPLATE

That:

- a) *the MID Air Navigation Plan Volume III at **Appendix 5.2A** be used as the basis for the development of a new Air Navigation Plan Volume III Template to be presented to the ANC and Council for endorsement, in order to support harmonized planning and performance monitoring across ICAO Regions, streamline the implementation of the GANP and ASBUs, and foster the application of a Performance-Based Approach and development of NANPs by States; and*
- b) *ICAO HQ, in coordination with all Regional Offices, consider the organisation of Regional Workshops to foster harmonized implementation of the new ANP Volume III Template and development of NANPs by States.*

MIDANPIRG CONCLUSION 23/2: NEW MID AIR NAVIGATION PLAN VOL III

That:

- a) *the new MID ANP Volume III (Edition June 2026) at **Appendix 5.2A**, is endorsed;*
- b) *the MIDANPIRG subsidiary bodies further review the new MID ANP Volume III to ensure full alignment with the GANP 8th Edition; and provide inputs related, in particular to the Global Priorities; the Regional Priorities and the Regional Performance Objectives related to their technical areas; and*
- c) *the MID Air Navigation Strategy (ICAO MID DOC 002) is no longer in force and superseded by the new MID Air Navigation Plan Volume III (Edition June 2026).*

5.2.10 The meeting highlighted that, while the ICAO GANP and MID ANP provide the strategic planning frameworks at the global and regional levels, the responsibility for planning and implementation at the national level rests with individual States. Therefore, the meeting agreed that States should pursue the progressive modernization of their air navigation systems, guided by local operational needs and aligned with regional priorities. This modernization should be detailed in the National Air Navigation Plan (NANP) and coordinated with other national aviation plans—such as those related to safety, environment, security, and facilitation—within a broader, integrated National Civil Aviation Master Plan (CAMP).

5.2.11 The meeting agreed that NANP should serve as a strategic roadmap for the evolution of a State's air navigation system. It outlines specific performance objectives, timelines, and investment priorities. It enables national stakeholders—including regulators, air navigation service providers (ANSPs), and airport operators—to prioritize initiatives with the highest operational, economic, and environmental returns. Moreover, the NANP supports strategic decision-making by identifying key areas for improvement, setting measurable targets, and ensuring resources are allocated where they will have the greatest impact. It plays a critical role in justifying investments, attracting funding, and engaging with international partners, while promoting coordination among national institutions to support high-impact, non-duplicative projects. In this sense, the NANP is not only a technical planning document but a strategic enabler—a tool to influence decision-making, align stakeholders, and enhance a State's international credibility. For long-term success and global interoperability, the NANP must remain aligned with ICAO's GANP and MID ANP, ensuring that the national air navigation system remains scalable, resilient, and fully integrated into the global aviation ecosystem.

From vision to delivery: Industry support to ICAO priorities for future skies

5.2.12 The subject was addressed in WP/51 presented by CANSO. The meeting was provided with an update on the activities of the Complete Air Traffic System (CATS) Global Council. It was reiterated that the objective of CATS is to foster a shared understanding of future aviation needs and to provide coordinated industry input to ICAO and States, supporting the evolution of global frameworks in a coherent and harmonized manner. CANSO highlighted ongoing regional engagement activities aimed at supporting implementation readiness, capturing regional priorities, and strengthening alignment between global initiatives and regional implementation pathways.

5.2.13 The meeting was apprised of the CATS Concept of Operations (CONOPS) for Future Skies, and its Transformation Phases:

- Phase 1: Digital Information Sharing and Infrastructure Transformation;
- Phase 2: Advanced Automation and Performance-Based Operations; and
- Phase 3: Seamless Skies

5.2.14 Based on the above, the meeting:

- recognized the importance of coordinated implementation approaches to support the evolution of future ATM systems;
- encourage States and stakeholders within the MID Region to engage in relevant CATS Working Areas and regional implementation activities; and
- encouraged continued alignment between regional planning activities and the evolving ICAO GANP and Minimum Implementation Path (MIP).

MID Air Navigation Report - 2025

5.2.15 The subject was addressed in WP/34 presented by the Secretariat. The meeting reviewed the MID Air Navigation Report - 2025 (MID ANR-2025) in **Appendix 5.2B**, available also at: [Middle East Air Navigation Reports](#). The meeting noted that 14 out of 15 States submitted the required data for the MID ANR-2025, following MIDANPIRG Conclusion 22/4.

5.2.16 The meeting noted that the analysis is provided at two distinct levels of granularity, namely the State/FIR level and the aerodrome level, as applicable. The analysis shows a generally high level of implementation in the AMET, ACAS, SNET and ASUR Threads, demonstrating substantial progress in these areas. Lower levels of implementation were observed in DAIM, COMI, COMS, NAVS, FICE, SWIM, NOPS and OPFL Threads; however, State reports indicate that a significant number of related initiatives are currently in the planning or implementation phases.

5.2.17 The meeting noted that substantial progress has been achieved in the implementation of Block 0 Elements and that many Block 1 Elements have either been implemented or are currently under implementation. The high levels of implementation observed in several operational improvement areas demonstrate the Region's ability to successfully address established priorities and implement globally harmonized air navigation improvements. At the same time, the relatively low level of implementation of Block 2 Elements reflects both the longer-term implementation horizon and the increased complexity, resource requirements and operational dependencies associated with these advanced improvements.

5.2.18 The meeting noted with appreciation that the adoption of performance-based planning principles continues to evolve across the Region. While an increasing number of States have identified operational needs, implementation priorities and performance improvement objectives, further efforts are required to strengthen the systematic application of performance measurement and performance monitoring processes. In particular, the consistent use of ICAO Key Performance Indicators (KPIs),

benefit realization assessments and data-driven decision-making mechanisms will be essential to support future planning and investment decisions.

5.2.19 The meeting noted that significant differences in implementation maturity continue to exist among States, reflecting variations in operational requirements, institutional capacities, available resources and national priorities. Consequently, it was underlined that targeted assistance, capacity-building initiatives, technical cooperation and sharing of best practices will remain critical to supporting States facing implementation challenges and to promoting a more harmonized level of air navigation development across the Region.

5.2.20 With regard to National Air Navigation Plans (NANPs), the meeting noted with appreciation growing awareness among States of the importance of establishing structured national planning frameworks aligned with the GANP and MID ANP. Although the overall maturity of NANP development remains relatively low, encouraging progress has been observed through the preparation and continuous refinement of draft NANPs by a number of States.

5.2.21 The meeting commended the RANP/NANP TF and the Secretariat for the development of a very comprehensive Report, which serves as a key monitoring and assessment tool for the MIDANPIRG, providing a comprehensive overview of the status of air navigation implementation across the MID Region during the reporting period from January to December 2025. It was highlighted that the reporting and analysis process could be further enhanced through the use of advanced business intelligence tools, such as Power BI, to support dynamic data visualization, and enable more advanced analytics, interactive reporting, and deeper analysis of implementation trends and performance indicators.

5.2.22 The meeting agreed that, by sustaining current implementation efforts, accelerating the development of National Air Navigation Plans, strengthening performance-based planning practices and enhancing regional cooperation, MID States will be well positioned to achieve the objectives of the GANP and MID ANP and to ensure the continued evolution of a safe, efficient, interoperable and sustainable air navigation system for the benefit of all airspace users.

5.2.23 Based on the above, the meeting agreed to the following conclusion:

MIDANPIRG CONCLUSION 23/3: MID AIR NAVIGATION REPORT -2025

That, the MID Air Navigation Report-2025 at Appendix 5.2B is endorsed and be published by the ICAO MID Office.

5.2.24 The meeting also agreed to the following Conclusion regarding collection of data for the development of the MID Air Navigation Report – 2026.

MIDANPIRG CONCLUSION 23/4: MID AIR NAVIGATION REPORT -2026

That:

- a) *States be urged to provide the ICAO MID Office by 31 January 2027, with:*
- i. *an update on the status of implementation of ASBU Threads/Elements Block 0, 1 and 2;*
 - ii. *the progress achieved in the development of National Air Navigation Plan (NANP) and modernization of Air Navigation System;*
 - iii. *their success stories related to major achievements in the air navigation field in 2026; and*
 - iv. *a report on the Performance Objectives and Operational Improvements*

implemented in 2026 or planned with a tracking of the performance achieved through KPIs, and an estimate of the tangible benefits accrued from the implementation of these operational improvements.

b) the MID Air Navigation Report - 2026 be presented to the MIDANPIRG/24 for endorsement.

MID ANS Monitoring Dashboard

5.2.25 The subject was addressed in PPT/35 presented by the Secretariat. The meeting recalled the offer received from Saudi Arabia during the ATM SG/9 meeting to develop an ATM monitoring Dashboard to support the monitoring activities, and the progress presented to the ATM SG/10 and MIDNAPIRG/22 meetings on the subject. The meeting was updated with the benefits, expectations, and features of the dashboard.

5.2.26 The meeting appreciated the efforts of Saudi Arabia related to the development of the Dashboard. The meeting noted that the RANP/NANP TF commended Saudi Arabia for its support to the ICAO MID Office in the development of a Dashboard to facilitate the collection, verification, and presentation of ATM-related data, as well as the ASBU implementation report. In this respect, the meeting agreed that the title of the Dashboard should be “MID Region ANS Dashboard” and that the Dashboard should contain a part related to the implementation of ASBUs and the second part related to the status of implementation of other important non-ASBU ANS/ATM elements or subjects, such as Longitudinal separation, RVSM safety monitoring, etc. Accordingly, the meeting agreed to the following Conclusion:

MIDANPIRG CONCLUSION 23/5: DEVELOPMENT OF ANS MONITORING DASHBOARD

That, the MID Office coordinate with all States for the population of the ANS Monitoring Dashboard with relevant data; and present a progress report to MIDANPIRG/24.

5.2.27 The meeting highlighted the need for a general policy and governance guidance to maintain the integrity of the data, continued update and regular maintenance of the Dashboard, to allow consistent, accuracy, and timely input, validation, and management of monitoring data for all member States.

PfAs to MID ANP Vol I & II

5.2.28 The subject was addressed in WP/36 presented by the Secretariat. The meeting noted the progress of the following PfAs:

- Khartoum FIR/SRR-MID ANP Volume I;
- Cairo FIR optimization project, Phase III-MID ANP Volume II; and
- Egypt and Libya ATS route restructuring at common boundary-MID ANP Volume II.

5.2.29 The meeting also agreed on the following draft PfAs:

- TABLE GEN II-1 - Homogeneous ATM areas - MID ANP Volume II; and
- TABLE ATM II-MID-3 –AIDC/OLDI APPLICABILITY AREA - MID ANP Volume II.

Development of the MID Regional System-Wide Information Management (SWIM) Framework and Coordinated CNS/AIM and MET Approach to the Transition From the Aeronautical Fixed Service

5.2.30 The subject was addressed in WP/62 presented by Saudi Arabia. The meeting discussed a proposal from Saudi Arabia related to the development of a coordinated regional approach

for the implementation of System-Wide Information Management (SWIM), integrating AIM, MET, CNS and future FF-ICE-related activities. The meeting recognized the cross-domain nature of SWIM and the need for a harmonized regional framework addressing governance, interoperability, information management, digital transformation, and the transition towards service-oriented information exchange in support of the GANP and ASBU framework. The meeting also noted the increasing importance of coordinated planning across air navigation domains to support emerging initiatives related to SWIM, FF-ICE, digital AIM, MET information services, and regional interoperability.

5.2.31 The meeting agreed that SWIM should be included in the agenda of future MIDANPIRG meetings as a standing agenda item. The meeting agreed also that the cybersecurity matters will remain under the CNS SG.

5.2.32 The meeting agreed that the existing RANP/NANP Task Force should be elevated to the level of a Sub-Group and expanded to address multidisciplinary air navigation matters of common interest. Accordingly, the meeting agreed to establish the Air Navigation Integrated Planning Sub-Group (ANIP SG) as a strategic and cross-domain forum responsible for supporting the implementation of the GANP, MID ANP, NANPs and regional air navigation priorities, coordinating regional activities related to SWIM and FF-ICE, and promoting regional interoperability and digital transformation initiatives.

5.2.33 The meeting agreed that the ANIP SG, which would be the MID Region SWIM governing body, should develop the MID Regional SWIM Framework. The meeting agreed also that the Terms of Reference (TORs) of the ANIP SG should be finalized during its first meeting. The TORs should include also emerging multi-disciplinary subjects such as innovation.

5.2.34 Based on the above, the meeting agreed to the following Decision and Conclusion:

MIDANPIRG DECISION 23/6: AIR NAVIGATION INTEGRATED PLANNING SUB-GROUP

That:

- a) the Air Navigation Integrated Planning Sub-Group (ANIP SG) is established;*
- b) the Terms of Reference (TORs) of ANIP should include the following: GANP, MID ANP, NANP, SWIM, FICE, Innovation and ANS Monitoring Dashboard;*
- c) the Terms of Reference (TORs) of ANIP should be finalized during its first meeting for final endorsement by MIDANPIRG/24; and*
- d) the RANP/NANP Task Force is dissolved.*

MIDANPIRG CONCLUSION 23/7: MID REGIONAL SWIM FRAMEWORK

That:

- a) the ANIP SG is designated as the MID Region SWIM governing body;*
- b) the MID Regional SWIM Framework be developed by the ANIP SG, integrating inputs for the SWIM-supporting infrastructure workstream led by the CNS Sub-Group (through the MID AMC Steering Group) with two SWIM services workstreams led by the AIM and MET Sub-Groups; and*
- c) the MID Regional SWIM Framework be developed in accordance with the implementation guidance of the Manual on the SWIM Implementation (Doc 10203), including the development of regional SWIM governance bodies and roles and the development of regional SWIM policies, in particular a SWIM registry policy, an information-security policy and an information-service versioning policy.*

5.3 *AIM*

5.3.1 The subject was addressed in WP/37 presented by the Secretariat. The meeting was apprised of the outcomes of the Twelfth meeting of the Aeronautical Information Management Sub-Group (AIM SG/12), held virtually on 21 & 23 April 2026; and the Second Meeting of the AIM Digitalization and Planning Task Force (AIMDP TF/2), which was convened back-to-back with the AIM SG/12 meeting.

5.3.2 The meeting was apprised of the significant developments at the global level, including the outcomes of the recent meetings of the ICAO Information Management Panel. Key areas addressed included the Digital Operational Reporting Information Service (DORIS), digital aeronautical data sets, global AIM implementation support, the future of aeronautical charting, and consequential amendments to Annex 4, Annex 15, and PANS-AIM.

ACR/PCR PUBLICATION STATUS

5.3.3 The meeting recalled that the ACR-PCR method became mandatory on 28 November 2024, replacing ACN-PCN, pursuant to Amendment 15 to Annex 14, Volume I, and MIDANPIRG/22 Conclusion 22/22. An AIP review revealed that only Jordan, Kuwait, Qatar, Saudi Arabia and UAE have published PCR information in their AIP. Egypt has initiated the transition, with PCR data partially published. The remaining nine MID States have yet to publish PCR information, representing a 60% non-compliance rate across the Region.

5.3.4 The meeting urged the remaining States to provide a specific target AIRAC cycle for publication and notify the ICAO MID Office accordingly without further delay.

GNSS AND NAVAID AIP PUBLICATION

5.3.5 The meeting noted inconsistencies identified in some MID States' AIPs, including missing technical details, discrepancies between published NAVAIDs and their actual operational use, and inconsistencies between GEN 2.5 and AD 2.19 entries. It was underscored that the publication of harmonized and accurate information on NAVAIDs in the AIPs is crucial for facilitating the implementation of Performance-Based Navigation (PBN), planning for GNSS contingencies, and optimizing navigation infrastructure.

5.3.6 The meeting urged States to review and harmonize their AIPs, particularly Sections GEN 2.5, ENR 4.1, AD 2.19, and ENR 4.3 (GNSS), to ensure full alignment with ICAO SARPs and associated guidance, and tasked the Secretariat to monitor States' progress and provide the necessary implementation support.

THE MIDAD PROJECT

5.3.7 The meeting recalled that the MID Region AIM Database (MIDAD) Project was established in 2013 under a Memorandum of Agreement, designed to support the regional AIS-to-AIM transition through a three-phase architecture (EAD migration, MIDAD Manager, MIDAD system deployment).

5.3.8 The meeting noted that after more than twelve years, progress under Phase A has remained critically limited: only one State has completed EAD migration, with one additional State under ongoing migration. The prerequisite threshold of seven (7) States required to trigger Phase B activation has not been met, and there is no realistic prospect of this threshold being achieved in the foreseeable future.

5.3.9 In light of the above, the meeting agreed that concluding the MIDAD Project in its current form is the appropriate and necessary course of action, and that regional efforts and resources should be reallocated toward the development of a MID Regional SWIM Framework for aeronautical information management. Therefore, the meeting agreed to the following Decision:

MIDANPIRG DECISION 23/8: MIDAD PROJECT

That the MID Region AIM Database (MIDAD) Project be concluded and the MIDAD Task Force be dissolved.

ADVANCING DIGITAL AIM AND SWIM IN THE MID REGION

5.3.10 The meeting agreed with the AIM SG on the following overarching Vision for the transition towards a trusted, digital, interoperable, and service-oriented AIM environment in the MID Region by 2034, supported by quality-assured digital datasets and SWIM-enabled information services: *"By 2034, the MID Region will have transitioned from a product-centric Aeronautical Information Service (AIS) to a trusted, digital, interoperable, and service-oriented AIM environment, in which aeronautical information is produced, managed, and exchanged as quality-assured, structured digital datasets encoded in ICAO-standard formats across SWIM-enabled information services, supporting seamless, reliable, secure, and efficient exchange of ATM-related information throughout the Region and beyond."*

5.3.11 The meeting further recognized System-Wide Information Management (SWIM) as a key enabler for the seamless exchange of ATM-related information and services and emphasized the importance of interoperability among SWIM implementations through standardized interfaces and harmonized technical infrastructure. In this regard, the meeting stressed the need to identify, develop, and endorse MID Region SWIM Technical Infrastructure (TI) Profiles as a regional priority.

MID REGION IMPLEMENTATION PLAN FOR DIGITAL DATA SETS

5.3.12 The meeting noted that the AIM SG/12 reviewed the MID Region Implementation Plan for Digital Data Sets (First Edition, 2026) at **Appendix 5.3A**, developed by the AIMDP TF under the co-leadership of Saudi Arabia and UAE. The Plan constitutes the authoritative regional framework for the structured, harmonized, and timely provision of five categories of aeronautical digital datasets in full compliance with ICAO SARPs.

5.3.13 The Plan addresses five digital data set categories, Terrain, Obstacle, AIP, Aerodrome Mapping (AMDB), and Instrument Flight Procedure (IFP) data sets, specifying what digital aeronautical data sets are required, how they should be produced and encoded, and when they should be made available. The meeting endorsed the plan and agreed to the following Conclusion:

MIDANPIRG CONCLUSION 23/9: REGIONAL PLAN FOR THE PROVISION OF DIGITAL DATA SETS

That:

- a) the MID Region Implementation Plan for the Provision of Digital Data Sets (First Edition, 2026) at **Appendix 5.3A** be endorsed and published on the ICAO MID Office website; and*
- b) MID States be urged to develop and submit a National Digital Data Set Implementation Plan (NDIP), to the ICAO MID Office no later than 31 December 2026, and to submit annual progress updates thereafter.*

AIM-ing FOR EXCELLENCE WORKSHOP

5.3.14 The meeting noted the successful outcomes of the Joint ICAO/IATA/Jeppesen AIM-ing for Excellence Workshop held in Cairo, 10 – 12 November 2025, which brought together AIM professionals, data originators, and industry partners to advance the regional AIS-to-AIM transition. Building on this momentum, the meeting was informed that a follow-on Joint ICAO/IATA/Data Houses AIM-ing for Excellence Workshop is scheduled to be held in Cairo, 4 – 7 October 2026.

5.3.15 The meeting strongly encouraged States to ensure the participation of relevant multi-disciplinary AIM professionals, including regulatory authorities, ANSPs, and data originators, recognizing that broad and diverse stakeholder engagement is essential to translating workshop outcomes into concrete national AIM implementation actions.

Development of AIXM-Based AIP Digital Dataset Implementation Guidance in the MID Region

5.3.16 The subject was addressed in WP/82 presented by Saudi Arabia. The meeting reviewed the progress achieved by the AIM Digital Products Task Force (AIMDP TF) in developing regional implementation guidance for Digital Aeronautical Information Products and Services. The meeting noted that AIMDP TF Workstream 3, under the co-leadership of Saudi Arabia and the United Arab Emirates, had developed an AIP Digital Dataset Mapping Specification based on AIXM 5.1/5.1.1 covering key aeronautical information domains, including airspace, routes, waypoints, aerodromes, runways, and navigation aids. The meeting further noted that the specification was developed through a comprehensive analysis of ICAO Annex 15 and PANS-AIM requirements, regional gap assessments, and a review of international implementation practices.

5.3.17 The meeting welcomed the significant progress achieved by the AIMDP TF in establishing a practical foundation for the implementation of digital aeronautical datasets within the MID Region. The meeting recognized the importance of harmonized technical specifications, common data modelling approaches, and globally consistent guidance material to support the transition towards a fully digital aeronautical information environment and future SWIM-enabled information exchange. The meeting further noted the ongoing ICAO work on the development of Doc 8126, Part IV – Digital Aeronautical Information Products and Related Services, which is expected to provide additional implementation guidance to States.

5.3.18 The meeting encouraged States to utilize the AIP Digital Dataset Mapping Specification as a regional reference for the implementation of digital datasets and to continue contributing to regional initiatives aimed at enhancing interoperability and Digital AIM implementation. The meeting also requested ICAO to continue the development of guidance material related to Digital Aeronautical data sets, including the publication of ICAO Doc 8126, Part IV.

Clarification of Roles in Pre-Flight Information Services in the AIM Environment - UAE Pre-Flight service provision practice

5.3.19 The subject was addressed in WP/59 presented by UAE. The meeting reviewed a proposal presented by the UAE regarding the provision of pre-flight information services in a modern AIM environment. The meeting noted that the transition from traditional AIS to data-centric AIM, supported by digital information exchange and evolving airline operational systems, has shifted the role of AIS providers towards ensuring the availability, quality, integrity, and timely dissemination of aeronautical information, while aircraft operators increasingly perform operational briefing functions through integrated flight planning and dispatch systems.

5.3.20 The meeting recognized the need to clarify the respective roles and responsibilities of States, AIS providers, aircraft operators, and other stakeholders in the provision of pre-flight information services. The meeting further noted the importance of maintaining access to pre-flight information for all users, including through appropriate contingency arrangements, while supporting AIM modernization and avoiding duplication of functions.

5.3.21 The meeting tasked the AIM Sub-Group (AIM SG) to further explore the subject through consultation with AIM service providers and users, with the support of IATA and in coordination with the relevant ICAO expert panel(s). The objective would be to develop harmonized guidance on the roles and responsibilities associated with the provision of pre-flight information services within the evolving AIM environment, taking into account digital information exchange, operational practices, and applicable ICAO provisions.

Artificial Intelligence Bot Implementation for the Aeronautical Information Publication (AIP)

5.3.22 The subject was addressed in WP/77 presented by UAE. The meeting was apprised of the UAE's experience in developing and deploying an Artificial Intelligence (AI) BOT to facilitate access to Aeronautical Information Publication (AIP) content through natural language queries. The meeting noted that the solution enables rapid retrieval of aeronautical information, supports version-specific access to current and future AIRAC cycles, and enhances information accessibility while maintaining links to official AIP sources.

5.3.23 The meeting noted the potential benefits of AI-enabled tools in improving access to aeronautical information, reducing search time, supporting operational efficiency, and contributing to the digital transformation of AIM services. The meeting further recognized that such tools complement, but do not replace, official aeronautical information publications and that users remain responsible for verifying operationally critical information against official sources.

5.3.24 The meeting welcomed the UAE's willingness to share its experience, lessons learned, and best practices with interested States and encouraged the exploration of similar AI-based initiatives to enhance accessibility and usability of aeronautical information within the AIM environment.

From AIS to AIM success Story

5.3.25 The subject was addressed in WP/72 presented by Egypt. The meeting was apprised of Egypt's successful implementation of an Electronic Aeronautical Information Publication (eAIP) as part of its ongoing transition from a product-centric AIS environment to a data-centric Digital AIM framework. The presentation highlighted the modernization of aeronautical information management processes through the implementation of an AIXM-compliant aeronautical information database, automated data processing and publication capabilities, and the deployment of an eAIP platform providing enhanced accessibility, efficiency, and interoperability. The meeting noted that the initiative supports compliance with ICAO Annex 15 and PANS-AIM provisions and represents a significant milestone in Egypt's digital transformation journey.

5.3.26 The meeting welcomed the progress achieved by Egypt in advancing the digitalization of AIM services and noted the successful operational deployment of the eAIP platform. The meeting further noted Egypt's roadmap towards full AIM integration, including the implementation of core digital datasets, integrated charting capabilities, instrument flight procedure datasets, terrain and obstacle datasets, and future SWIM-enabled information services.

5.4 *PBN*

Outcomes of the Tenth Meeting of the Performance-Based Navigation Sub-Group (PBN SG/10)

5.4.1 The subject was addressed in WP/38 presented by the Secretariat. The meeting noted the outcomes of the Tenth Meeting of the Performance-Based Navigation Sub-Group (PBN SG/10), held in Amman, Jordan, on 10–11 December 2025.

5.4.2 The meeting reviewed the status of PBN implementation in the MID Region and noted that regional compliance with the targets of ICAO Assembly Resolution A37-11 remains below the global average and that the implementation status of the relevant APTA Block 0 elements is still below expectation, with significant variations among States. Key challenges include institutional, technical, operational, financial, and training constraints, particularly affecting the implementation of CCO/CDO and PBAOM. To address these gaps, the meeting emphasized the need for targeted Workshop on PBAOM and CCO/CDO implementation and agreed to the following Conclusion:

MIDANPIRG CONCLUSION 23/10: PBN AND CCO/CDO WORKSHOP

That,

- a) a PBN and CCO/CDO Workshop be organized in 2026; and*
- b) MID States and stakeholders are encouraged to actively participate in the Workshop to exchange experiences, address challenges, and foster collaboration.*

5.4.3 The meeting noted the successful conduct of the IFP Provision and Safety Oversight Workshop in Amman, Jordan, from 7 to 9 December 2025. Key outcomes highlighted the States' responsibility for the provision, approval, and oversight of IFPs, the need for robust regulatory, competency, and quality management frameworks, and the importance of dedicated IFP safeguarding processes to address obstacle impacts. The meeting also noted that MID FPP can support States through technical reviews, validation activities, IFP approval assistance, and capacity-building initiatives.

5.4.4 The meeting reviewed the updated PBN SG Terms of Reference and noted that they include expanded provisions on GNSS contingency and resilience. Accordingly, the meeting agreed to the following Decision:

MIDANPIRG DECISION 23/11: PBN SUB-GROUP TERMS OF REFERENCE

That the Terms of Reference of the Performance-Based Navigation Sub-Group (PBN SG), at Appendix 5.4A are endorsed.

MID FPP

5.4.5 The subject was addressed in WP/39 presented by the MID FPP. The meeting noted the outcomes of the Eighth and Ninth meetings of the MID FPP Steering Committee (SC/8 and SC/9), held virtually on 18 September 2025 and 25 May 2026, respectively.

5.4.6 The meeting noted that the Eighth meeting of the MID FPP Steering Committee (SC/8) reviewed options to ensure the long-term sustainability of the Programme and reaffirmed the Host State

Model as the preferred solution. While a call for Expressions of Interest was issued to MID States in accordance with MID FPP SC/8 Conclusion 8/1, no formal commitment to host the Programme had been received as of May 2026. Accordingly, the MID FPP SC/9 meeting adopted Conclusion 9/1, renewing the call and extending the deadline for Expressions of Interest to **1 September 2026**, while providing additional clarification on the associated responsibilities and benefits. The meeting further noted that the ICAO MID Office will submit a comprehensive report to the DGCA-MID/8 meeting to support a final decision on the future governance and sustainability of the MID FPP, including alternative arrangements, should no host State be identified.

5.4.7 The meeting strongly encouraged States to consider hosting the MID FPP, noting that the deadline of 1st September 2026 represents the final opportunity to establish the Host State Model before DGCA-MID/8 takes a definitive decision on the future governance and sustainability of the Programme.

5.4.8 The meeting noted that the MID FPP, capacity-building activities conducted in coordination with the APAC FPP, AFI FPP, and ENAC under existing cooperation arrangements. The 2026 training programme was made available to States, with nominations received from several MID States for PANS-OPS, airspace design, and PBN oversight courses. The meeting also noted that the MID FPP continued to support States through regulatory oversight reviews of IFP design packages and remains available to provide similar technical assistance upon request.

5.5 AGA-AOP

5.5.1 The subject was covered by IP/4 submitted by the Secretariat. The meeting noted the information related to MID Region Aerodromes Priorities and Challenges related to AGA-AOP, including the follow-up to the relevant Conclusions endorsed by MIDANPIRG/22 in support of airport operations, capacity, efficiency and regional harmonization, addressing in particular, Airport Operations Basic Building Blocks (AOP BBB), A-SMGCS/SURF Thread, Airport Collaborative Decision-Making (A-CDM), and ICAO AOP Go-Team Missions.

5.5.2 The meeting emphasized the importance of maintaining effective coordination between MIDANPIRG and RASG-MID, recognizing that AOP BBB, A-SMGCS, A-CDM and AOP Go-Team Missions provide safety benefits in addition to their capacity and efficiency advantages. The meeting encouraged States and concerned stakeholders to continue supporting the implementation of the endorsed Conclusions.

5.5.3 The meeting noted that, in connection with the need to maintain accurate monitoring of the implementation of GANP/RANP ASBU AOP Threads, the list of International Aerodrome should be updated to reflect the current planned/operational international Aerodromes in the MID Region. Therefore, the AOP Table I-1 should be amended to facilitate the definition of the applicability Area for each AOP Thread. Accordingly, the meeting agreed to the following Draft Conclusion:

MIDANPIRG CONCLUSION 23/12: UPDATE OF THE LIST OF AERODROMES IN THE MID AIR NAVIGATION PLAN AOP TABLE I-1

That, in order to ensure the accuracy and completeness of the MID Air Navigation Plan AOP Table I-1, and to enable the finalization of the related Draft Proposal for Amendment (PfA), in accordance with the applicable PfA procedure:

- a) States that have introduced, or plan to introduce, changes to the list of their international aerodromes are urged to notify the ICAO MID Office by the third quarter of 2026 and provide the information required for the processing of the amendment of the MID Air Navigation Plan (MID ANP) AOP Table I-1; and*
- b) The ICAO MID Office consolidates the information received from States and processes the Proposal for Amendment (PFA) to the MID Air Navigation Plan (MID ANP) AOP Table I-1, in accordance with the established procedure.*

ASMGCS UPGRADE IN CAIRO INTERNATIONAL AIRPORT

5.5.4 The subject was addressed in PPT/71 presented by Egypt. which provided an overview of the roadmap for the upgrade of the Advanced Surface Movement Guidance and Control System (A-SMGCS) at Cairo International Airport (HECA) towards A-SMGCS implementation.

5.5.5 The meeting noted that the existing A-SMGCS implementation at Cairo International Airport is supported by key surveillance enablers, including Surface Movement Radar (SMR), Multilateration (MLAT) and ADS-B, and includes alerting functions such as Stop Bar Violation Monitoring, Area Penetration Monitoring, Taxiway Collision Monitoring and Runway Incursion Monitoring.

5.5.6 The meeting was apprised that the planned upgrade includes the replacement of the existing SMR with a new solid-state radar system, the installation of HD, thermal and PTZ surveillance cameras, and the enhancement of the fusion system through the integration of operational inputs such as AODB, AFL, VDGS, AWOS, FDPS, SMR, MLAT and ADS-B.

5.5.7 The meeting further noted that the transition towards A-SMGCS would enable advanced routing and guidance services, including the Follow-the-Greens (FTG) concept, thereby enhancing surface movement safety, supporting low visibility operations, reducing taxi route errors, improving operational efficiency and reducing controller workload. The meeting noted with appreciation Egypt initiative for sharing its experience that is aligned with the ICAO ASBU SURF thread and MIDANPIRG/22 Conclusion 22/16 on A-SMGCS implementation

5.6 *ATM-SAR*

MID RVSM Monitoring Report (SMR) 2025

5.6.1 The subject was addressed in WP/41, presented by the Secretariat. The meeting reviewed the outcomes of the MID RVSM Safety Monitoring Report (SMR) 2025, prepared by the Middle East Regional Monitoring Agency (MIDRMA). The meeting noted that the results confirmed that RVSM operations within the ICAO Middle East (MID) Region continue to operate safely and in compliance with ICAO safety objectives. Both the technical risk and the overall collision risk remain well below the applicable ICAO Target Levels of Safety (TLS).

5.6.2 Additionally, the meeting discussed the challenges related to incomplete Traffic Data Sample (TDS) and data format, inadequate submissions of Large Height Deviation (LHD) by several Member States, which continued to limit confidence in the operational risk assessment. Accordingly, the meeting requested MIDRMA to conduct additional training and awareness campaign regarding the MIDRMA requirements, activities and new tools; including the categories for the LHD, TDS format and the integration of ADS-B Height Monitoring System, including presentation and live demonstration of MIDRAS to the ATM SG and ASM WG.

5.6.3 The meeting reviewed and endorsed the MID RVSM Safety Monitoring Report (SMR) 2025, at **Appendix 5.6A**, and agreed to the following MIDANPIRG Conclusion:

MIDANPIRG CONCLUSION 23/13: MID RVSM SMR 2025

*That, the MID RVSM Safety Monitoring Report (SMR) 2025, at **Appendix 5.6A**, is endorsed.*

MID RVSM Minimum Monitoring Requirements MMR

5.6.4 The meeting noted that the MID RVSM Minimum Monitoring Requirements (MMRs) for the Aircraft registered in the MID States reached 96% of compliance. The meeting reviewed the updated MMR Table in the SMR2025 report, and urged States to ensure that all registered aircraft are complying with the MMR requirements on a continuous basis.

5.6.5 Based on the above, the meeting agreed to the following Conclusion:

MIDANPIRG CONCLUSION 23/14: MAINTAIN COMPLIANCE WITH MINIMUM MONITORING REQUIREMENTS (MMRs)

That Iraq, Libya, Sudan, and Syria be urged to ensure that all aircraft subject to monitoring obligations are complying with the RVSM minimum monitoring requirements.

Development of SMR2026

5.6.6 The meeting noted that Traffic Data Sample (TDS) period for the RVSM cycle for the year 2026 was proposed by the MIDRMA Board/21meeting to be during the period of 15 April to 15 May 2026 (during the Hajj season); However, due to the unrest/political tension in the MID Region, the meeting agreed on the following Conclusion:

MIDANPIRG CONCLUSION 23/15: MID RVSM SMR 2026

That,

- a) the FPL/traffic data for the period 1 – 31 August 2026 be used for the development of the MID RVSM Safety Monitoring Report (SMR 2026);*
- b) all member States are required to submit the required Traffic Data Sample (TDS), the LHD Reports and the FIR waypoints and the routing options valid for the same period of the TDS in a), in a timely manner;*
- c) 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*
- d) the final version of the MID RVSM SMR 2026 be ready for presentation to and endorsement by MIDANPIRG/24 meeting.*

MID Region ADS-B Height Monitoring System (AHMS)

5.6.7 The meeting recalled MIDANPIRG Decision 21/16 related to the implementation plan of the MID ADS-B height Monitoring System (MID AHMS). The meeting was apprised of the progress made by the MIDRMA related to the implementation of the AHMS requirements, particularly the technical validation of AHMS methodology in cooperation with Civil Aviation Authorities (CAAs) in Bahrain, Kuwait and Oman. The meeting noted that the results of the validation demonstrated that the system capability to generate reliable and repeatable height-monitoring results across a wide range of aircraft types and operational environments, which supported the effectiveness of ADS-B data in monitoring aircraft height-keeping performance and aligns with the ICAO global safety objectives.

5.6.8 The meeting noted the challenges of requesting, transferring, and handling archived ADS-B data submitted by the States, including the data ownership, protection, and the lack of legal framework. In some cases, administrative delays and differing national data-handling regulations have hindered the timely receipt of data required for analysis.

5.6.9 The meeting underlined the need to establish a common understanding and formal agreement among all MIDRMA Member States regarding the use of archived ADS-B data. Accordingly, it was agreed that the same terms and conditions applicable to the Traffic Data Sample (TDS) submitted by the States for the use of RVSM risk analysis be applicable for the use of ADS-B data, to ensure that the ADS-B data is used solely for RVSM height monitoring, safety and risk analysis purposes, under the same data-handling and confidentiality provisions currently applied for TDS.

5.6.10 Based on all the above, the meeting agreed to the following Decision:

MIDANPIRG DECISION 23/16: PROCEDURE OF HANDING THE ARCHIVED ADS-B DATA FOR RVSM HEIGHT MONITORING

That,

- a) archived ADS-B data provided to the MIDRMA be used under the same terms and conditions applicable to the RVSM Traffic Data Samples (TDS) for the purpose of RVSM risk and safety analysis, solely;*
- b) such data shall be used exclusively for MIDRMA analytical purposes and shall not be shared with any third party unless prior written approval is obtained by the concerned Civil Aviation Authority (CAA); and*

- c) *the MIDRMA shall ensure the confidentiality and secure handling of all received data.*

Establishment of a regional criteria for valid Height Monitoring using the ADS-B Height Monitoring System (AHMS)

5.6.11 The meeting noted that the MIDRMA was requested to establish its own regional operational criteria specifying the minimum number of valid AHMS monitoring observations/records necessary for an aircraft to be formally recognized as successfully height-monitored for RVSM purposes, to ensure consistency, reliability, and transparency in the application of AHMS. The meeting noted that the proposed criteria is based on MIDRMA technical studies, operational experience, and statistical analysis, and agreed to the following Conclusion, to supersede the MIDANPIRG Decision 21/16:

MIDANPIRG CONCLUSION 23/17: MID ADS-B HEIGHT MONITORING SYSTEM (MID AHMS)

That, AHMS be implemented by the MIDRMA for RVSM Height Monitoring of Aircraft, using the ADS-B data submitted by the States, considering the following Criteria:

- a) *minimum of five (5) valid AHMS observations meeting ASE and TVE validation thresholds should be established during a maximum period of ninety (90) days; and*
- b) *MIDRMA to:*
 - i. *coordinate with Member States for the collection of the available archived ADS-B data from their CNS/ATM systems, in accordance with the procedure of handing archived ADS-B data;*
 - ii. *maintain active record keeping system of the aircraft registered within the MID Region;*
 - iii. *provide the required training to the ATM/CNS personnel on the extract and submission of the data; and*
 - iv. *provide the required briefing to the responsible CAA airworthiness inspectors and aircraft operators*
- c) *MIDRMA member States be:*
 - i. *encouraged to regularly submit the archived ADS-B data to the MIDRMA; and*
 - ii. *inform the concerned aircraft operators of the standard criteria and its application for RVSM height-monitoring recognition using AHMS.*

Middle East Risk Assessment Software with ADS-B Integration and Response (MIDRAS AIR)

5.6.12 The meeting received updates on the enhancement project of the Middle East Risk Assessment Software (MIDRAS) through the integration of Automatic Dependent Surveillance–Broadcast (ADS-B) technology, resulting in the upgraded system referred to as ADS-B Integration and Response (MIDRAS AIR). The integration of ADS-B would enable the use of high frequency, four-dimensional (4D) trajectory data, providing a more accurate and operationally representative basis for

collision risk assessment in RVSM airspace. consequently, for the effective implementation of the new tool, the meeting highlighted that the States should be committed to the submission of ADS-B data for analysis. While the conventional TDS would remain available.

Airspace Management and Air Traffic Flow Management

5.6.13 The subject was addressed in WP/40 presented by the Secretariat.

Optimization of MID Region ATS route designators

5.6.14 The meeting recalled MIDANPIRG Conclusion 21/5 on ATS route designator optimization and noted that ASM WG developed draft proposals using MIDRMA data, to be finalized at ATM SG/12 before submission to MIDANPIRG/24.

MID Region ATS Route Designator related to approved PfA

5.6.15 The meeting recalled MIDANPIRG Conclusions 19/13 and 20/27, which resulted in the PfAs “MID.II.22/01-ATM” and “MID.II.23/02-ATM” aimed at addressing the identified issues related to the ATS route network. The meeting was informed that, following the completion of the PfA process, States have taken the necessary actions to update their respective AIPs.

Removal of ATS Route prefix “U”

5.6.16 The meeting recalled MSG/6 Conclusion 6/9 regarding the removal of the prefix “U” from ATS route designators. Accordingly, the meeting was informed that the deletion of the prefix “U” has been completed by all MID States, with the exception of Lebanon.

Project 30/10 roadmap and implementation

5.6.17 The meeting recalled MIDANPIRG Conclusions 22/10 and 22/11 related to the development of the Project 30/10 roadmap and the implementation of reduced longitudinal separation. The meeting noted that the ATM SG, through the ASM WG, has worked on the subject by collecting the required information from States and MIDRAM, defining criteria to prioritize challenges, conducting a gap analysis, and developing a draft Roadmap, as presented in **Appendix 5.6B**, for further review by the ATM SG/12 meeting prior to its submission to MIDANPIRG/24.

5.6.18 Based on the outcomes of the analysis, the main issues related to the reduction of longitudinal separation are primarily concentrated at the interfaces between the MID Region and adjacent Regions. In addition, the analysis indicated that the reduction of longitudinal separation has already been implemented within the Region, particularly in FIRs accommodating the main traffic flows. However, further improvements in capacity within the Region could be achieved through other initiatives, such as the establishment of additional ATS routes.

5.6.19 The meeting also agreed on the following Conclusion to supersede MIDANPIRG Conclusion 22/11 for better clarity:

MIDANPIRG CONCLUSION 23/18: 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:*
 - i. *monitors the progress of implementation and undertakes necessary measures to promote its advancement.*
 - ii. *develops 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.*
 - iii. *explore initiatives, incentives or implementation arrangements to expedite the regional implementation of the longitudinal separation reduction.*

Inter-regional Coordination

5.6.20 The meeting was informed of the outcomes of the Special Coordination Meeting between India and Oman, held in Bangkok, Thailand, from 3 to 4 June 2026, to address the issues raised by Oman regarding the implementation of the airspace optimization project at the interface between the Muscat and Mumbai FIRs, as well as the AIDC connection. The main outcomes of the meeting are as follows:

- Agreement to establish an inter-regional APAC–MID Interface Task Force (AMI TF); and
- Development of an action plan with clearly defined actions and timelines for implementation.

5.6.21 The meeting noted a continued increase in issues at regional interfaces, including those related to LHDs, route structure, ATFM, and the implementation of Project 30/10. Particular concern was expressed regarding the interfaces between the Muscat–Mumbai and Karachi FIRs, Sanaa and the FIRs in the vicinity of the Horn of Africa, as well as Cairo and neighboring FIRs across the Mediterranean Sea. While coordination is being conducted directly between the relevant States with the support of the respective ICAO Regional Offices, many of these issues have persisted for an extended period, resulting in the imposition of flow measures and restrictions affecting multiple adjacent FIRs.

5.6.22 The meeting supported the decision to establish an Inter-Regional Task Force to address subjects at the interface area between Asia-Pacific and the MID Regions.

MIDANPIRG CONCLUSION 23/19: CROSS REGIONAL COORDINATION

That, in order to support ANS enhancement in the MID Region, in view of the cross-regional challenges, ICAO MID is invited to facilitate cross-regional coordination activities between concerned MID States with the relevant States from adjacent Regions, in coordination with relevant ICAO Regional Offices.

FF-ICE implementation Roadmap

5.6.23 The meeting noted that a FF-ICE Workshop was held during ATM SG/11 and CNS SG/14 meetings, with the aim of enhancing shared awareness and addressing implementation challenges related to the development of a regional transition plan.

5.6.24 The meeting further noted that the ASM WG conducted a study, based on Air Navigation Report-2025, to assess the current status of ASBU FF-ICE elements, particularly Block 1 and 2, as well as their interdependencies with SWIM, AMET, DAIM, and COMI. The report available at **Appendix 5.6C** highlights the following:

- FICE elements in Blocks 1 and 2 are predominantly reported as either “Not Identified as a Priority” or “Planned/Ongoing”; and
- interdependency elements including DAIM and COMI elements fall within an acceptable range. In contrast, the implementation status of SWIM elements related to FICE is predominantly reported as “Planned/Ongoing” or “Not Identified as a Priority”.

Delineation of FIR/SRR description in MID ANP Volume I

5.6.25 The meeting recalled MIDANPIRG Conclusion 20/13 on amending ANP Volume I to incorporate the delineation of MID FIR/SRRs through the PfA process. It noted that the Khartoum FIR/SRR PfA was submitted on the ANB online platform for further process. The meeting also noted the agreement between Egypt and Saudi Arabia on a common FIR/SRR boundary, thanked both States, and encouraged them to conduct similar exercises with all adjacent FIRs before submitting PfAs.

ASM-Regional ATM Contingency Framework (RACF)

5.6.26 The meeting noted that the RACF provides guidelines to ensure the safe and orderly flow of international air traffic across the ICAO MID Region during ATS or support service disruptions, while maintaining the availability of major routes. The draft was reviewed at the ICAO APAC/MID ATM Contingency Planning Workshop (Bangkok, 25–28 June 2024) and the MID ATM Contingency Framework Workshop (Muscat, 1–5 February 2026), with States’ feedback submitted to ICAO. The framework is intended to replace the MID ATM Contingency Plan (MID Doc 003), subject to further review by the ATM SG/12 meeting.

Air Traffic Flow Management (ATFM)

5.6.27 The meeting noted that, based on the latest ATFM Task Force survey, Phase 1A implementation in the MID Region has reached 65%. It also noted that, according to the Air Navigation Report 2025, ASBU interdependency threads such as AMET and APTA are largely implemented or ongoing, while RSEQ, SURF, and ACDM are mostly “not identified as priorities” by States.

5.6.28 The meeting tasked the ATFM Task Force to place greater emphasis on the implementation phase and recommended establishing clear criteria for classifying ATFM implementation across States. Accordingly, the meeting agreed to the following conclusion:

MIDANPIRG CONCLUSION 23/20: MID ATFM PLAN WITH APPLICABILITY AREA

That, the ATFM Task Force:

- a) *revise the current MID ATFM Plan (ICAO MID Doc 014) to be in line with ICAO latest provisions;*
- b) *define applicability area in the MID region;*
- c) *develop draft PfA to the MID ANP Volume II, to include implementation of ATFM as a requirement in the MID Region per applicability area, with minimum implementation measures; and*
- d) *place greater emphasis on the implementation phase and recommend establishing clear criteria for classifying ATFM implementation across States and Regions.*

Enhancement Initiative Between Sultanate of Oman and the Republic of Yemen

5.6.29 The subject was addressed in WP/86 presented by Oman, summarizing the outcomes of the Oman–Yemen meeting held in Muscat on 6–7 April 2026, aimed at enhancing ANS and optimizing the airspace over high seas between the MID, APAC, and AFI regions.

Oman update related to ATM/SAR

5.6.30 The subject was addressed under PPT/87 presented by Oman. Through this PPT, Oman provided an update on the progress of the Airspace Optimization Project, including the transition plan, conceptual design, feasibility and transition studies (FTS), and stakeholder engagement activities. Oman also sought the support of all stakeholders to facilitate the effective implementation of the project across the affected FIRs and to strengthen coordination among the APAC, MID and AFI Regions, ensuring that the concerned FIRs implement the necessary airspace enhancements to safely and efficiently accommodate the forecasted regional and interregional traffic demand.

Concept to Practice Transforming ATS to ATM

5.6.31 The subject was addressed in PPT/58 presented by Egypt. In this presentation, the meeting noted that Egypt has established the National Airspace Management Centre (NASMC), which acts as the national Airspace Management (ASM) authority. Its core mandate is to coordinate multiple stakeholders to enable the Flexible Use of Airspace (FUA). In this context, NASMC deploys a suite of integrated operational enablers designed for real-time synchronization, including the development of a RAD portal and dynamic RAD solutions to address existing challenges such as airspace users planning, NOTAMs, AUP/UUP, etc.

Update on the implementation of the RAD portal

5.6.32 The subject was addressed in WP/88 presented by Saudi Arabia. This paper provided a comprehensive progress report on the Route Availability Document (RAD) Portal Project for the MID Region to enhance regional airspace efficiency, digital integration, and cross border coordination.

5.6.33 The meeting noted with appreciation the efforts of Egypt and Saudi Arabia in developing RAD portals and requested the concerned States to avoid duplication of efforts and to submit their proposals to the ATM SG for further review and integration.

Current contingency planning and management in the MID Region

5.6.34 The meeting recalled the outcomes of the MID ATM Contingency Framework Workshop conducted in Muscat during the period 1 – 5 February 2026. The meeting noted with appreciation that the recommendations and guidance provided during the workshop were used to successfully manage the MID Region contingency broke on 28 February 2026.

5.6.35 During the meeting, updates were received on the political agreement to end the situation in the MID Region. Accordingly, ICAO MID reached out to all concerned States to ensure the readiness for the resumption, including updating the ICAO MID Recovery checklist circulated earlier to all concerned States in the MID Region; and requested States to provide any limitations on resumption of full operations. The meeting was informed that the closure NOTAMs of Airspaces within the MID Region are being amended or cancelled, towards the resumption of normal operations. The meeting appreciated the efforts of the CCT members and all Stakeholders in handling the situation, and requested the Secretariat to include the lessons learned, challenges and successes in the future amendments of the Regional ATM Contingency planning (MID Doc 003).

Development of Muscat FIR ATM Contingency Procedure and Arrangements

5.6.36 The subject was addressed in WP/60 presented by Oman, which presented the development of the ATM Contingency Procedure and associated operational arrangements to support continuity of ATS and ensure the safe and orderly flow of international air traffic during contingency situations affecting Muscat FIR. The paper highlights the Muscat FIR ATM Contingency Procedure, developed as the principal operational guideline based on the outcomes of the Regional ATM Contingency Framework workshop. The paper further outlined the contingency coordination structure, escalation arrangements, ATM Operational Contingency Centre (AOCC), and the contingency playbooks and operational arrangements established to support tactical response and operational continuity during ATM disruptions.

Operational Impact of the Current Regional Airspace Crisis on Muscat FIR ATM Operations

5.6.37 The subject was addressed in WP/75 presented by Oman. This paper presents Oman's experience in managing the operational impact of the current Middle East airspace crisis on Muscat FIR. Although Muscat FIR remained operational, airspace closures, restrictions, and uncertainty in neighboring FIRs significantly affected traffic flow patterns, routing structures, coordination requirements, diversion handling, airborne holding, tactical flow management, and ATS unit workload. The paper also highlights the redistribution of traffic across key interface points, the contingency actions taken by Oman, lessons learned, and proposed measures to strengthen regional contingency coordination and ATM system resilience.

Lessons Learned from Managing Airspace Operations During Regional Geopolitical Disruptions

5.6.38 The subject was addressed in PPT/76 presented by UAE. The meeting was apprised of the activities conducted for the planning and implementation of the contingency measures started in February 2026 within Emirates FIR; in coordination with regional and national stakeholders including the military authorities, national carrier and the ICAO MID CCT team. The meeting noted with appreciation the rapid response and mitigation of the identified risks that led to the development of alternate routing availability. In addition, the Traffic Daily Plan (TDP) Portal and airspace slot management to ensure balance between capacity and demand in close coordination with the airspace users. The meeting noted the lessons learned and recommendations that could be used to further enhance the contingency planning.

Role of the General Directorate of Aviation Operation and Services during the Regional Crisis situation

5.6.39 The subject was addressed in WP/84, presented by Qatar. The meeting noted the operational measures and the contingency arrangements implemented by Qatar in coordination with the relevant stakeholders to ensure preparedness, continuity and resilience of aviation operations during the crisis, in compliance with the national standards. Additionally, the meeting was apprised of the responses to the ICAO MID Region Recovery Checklist (Part B) regarding Letters of Agreement, separation minima, and ATFM arrangements with adjacent FIRs, as well as QCAA's active participation in the Crisis Coordination Team (CCT) meetings for regional contingency alignment, and the activities for consultation with the national stakeholders to ensure safe and orderly operations.

Role of the QCAA through the General Directorate of Aviation Operation and Services

5.6.40 The subject was addressed in PPT/84 presented by Qatar, outlining QCAA actions during regional security developments. QCAA activated a crisis framework to ensure safe and resilient Doha FIR operations through contingency ATM, ESCAT, emergency ATS, enhanced rescue readiness, NCC coordination, and cooperation with regional and industry stakeholders.

5.7 CNS**COMMUNICATIONS MATTERS**

5.7.1 The subject was addressed in WP/42 presented by the Secretariat. The meeting recalled that the Regional OPMET Center (ROC) plan has been developed to facilitate the exchange of IWXXM messages via the AMHS network, given that the legacy AFTN network does not support XML-based communication. It was further reported that all required actions have been completed, except for two outstanding items: the assessment of inter-regional connection bandwidth and the transition of the Beirut–Nicosia link from CIDIN to AMHS, as reflected in the ROC plan at **Appendix 5.7A**.

5.7.2 The meeting agreed that the ROC plan can be considered fully implemented, as the remaining items do not affect the operational exchange of ROC data. In addition, the meeting encouraged States to evaluate the need for increased connection bandwidth to ensure the efficient exchange of messages.

5.7.3 The meeting was informed of the existence of several bilateral interregional connections within the MID Region, which may affect the efficiency and organisation of AFS traffic exchange. In this context, the meeting recalled that MIDANPIRG/20, through Conclusion 20/37, urged States to rationalize bilateral interregional connections, considering the regional requirements identified in the MID ANP, Volume II. The meeting further reiterated that States should refrain from establishing additional interregional connections, to maintain the efficiency and reliability of inter-regional message exchange.

5.7.4 The meeting noted with concern that configuration mismatches and routing errors may result in message loops and delivery failures, especially with the traffic exchanged with SITA Network. Accordingly, the meeting agreed to the following Conclusion:

**MIDANPIRG CONCLUSION 23/21: EFFICIENCY OF THE AMHS NETWORK
OPERATION IN THE MID REGION**

That, in order to enhance the efficiency and ensure consistency of the AFTN/AMHS network operations in the MID Region, States be urged to:

- a) refrain from establishing new bilateral inter-regional connections and rationalize existing ones, ensuring that operational requirements, overall network efficiency, and the regional provisions specified in MID ANP Volume II are fully considered;*
- b) update the AMC data, including AFTN/AMHS Routing directories, on a regular basis in close collaboration with the MIDAMC team; and*
- c) ensure that the AMHS system operates in full alignment with the AMC data, including proper configuration of AMHS parameters and timely update of P3/P7 user agents' addressee information*

5.7.5 The meeting noted that certain MID States are facing operational challenges related to the Inter-Regional communications. Consequently, the meeting requested ICAO to organize a meeting with the concerned States to address Inter-Regional aeronautical fixed services (AFS) issues. Accordingly, the meeting agreed to the following Conclusion:

MIDANPIRG CONCLUSION 23/22: AFS INTER-REGIONAL COORDINATION

That, in order to enhance coordination and facilitate resolution of outstanding Inter-Regional issues, ICAO MID Office is to organize an AFS inter-regional coordination meeting with AFI, APAC, and EUR/NAT Regions and States involved.

5.7.6 The meeting noted the successful conduct of the MIDAMC Workshop held in April 2026, which provided participants with essential knowledge and practical skills. The meeting agreed that an advanced workshop should be organized in 2027 to further strengthen operator competencies and enhance the efficiency and reliability of the AFTN/AMHS network. The meeting also acknowledged requests from Libya, Syria, and Yemen to organize MIDAMC workshops at the national level, to enable broader participation and support AMHS implementation within their States. Accordingly, the meeting agreed to the following Conclusion:

MIDANPIRG CONCLUSION 23/23: CAPACITY BUILDING ACTIVITIES ON AMHS/AMC

That, in order to strengthen AMHS operator competencies and enable the smooth and efficient AMHS operation in the MID Region:

- a) an Advanced AMHS/AMC Workshop be organized in 2027; and*
- b) States interested to organise AMHS/AMC Workshop at National level send official requests to the ICAO MID Office.*

5.7.7 The meeting agreed to the updated MIDAMC STG Terms of Reference (ToRs) as at **Appendix 5.7B**, considering the AIM SG's ToRs and the withdrawal of the MIDAMC Platform and the transition to the use of the AMC. Accordingly, the meeting agreed to the following Decision:

MIDANPIRG DECISION 23/24: MIDAMC STG AMENDED TERMS OF REFERENCE

*That the MID AMC Steering Group Terms of Reference be amended as at **Appendix 5.7B**.*

MID IP NETWORK PROJECT

5.7.8 The meeting recalled previous initiatives to join other Regions' IP Network projects, such as the APAC-CRV and EUROCONTROL's New PENS projects. The meeting agreed on the need to establish a clear direction for the MID IP Project, whether to take no further action, to join another Region's network, or to develop a dedicated network established and operated by a Middle East telecommunications provider. Therefore, the meeting agreed on the need to establish an Action Group to reassess all available options and provide recommendations to the CNS SG/16 and MIDANPIRG/24 meetings. Accordingly, the meeting agreed to the following Decision:

MIDANPIRG DECISION 23/25: MID IP Network Action Group

That,

- a) the MID IP Network Action Group is established to reassess all options and scenarios related to the MID IP project and to provide guidance on the most appropriate course of action; and*
- b) the MID IP Network Action Group is composed of:*
 - i. Mohamed Sultan (Egypt)*

- ii. *Yasser Zayyad (Jordan)*
- iii. *Ahmed El-Amari (Libya)*
- iv. *Said Albalushi (Oman)*
- v. *Sheikha Al-Temais (Qatar)*
- vi. *Faisal Alzahrani (Saudi Arabia)*
- vii. *Ayham Alkilani (Syria)*
- viii. *Rashed Al-Shehi (UAE)*
- ix. *Ezat Faiq (Yemen)*
- x. *ICAO Secretariat*

MIGRATION TO AN IP-BASED AERONAUTICAL COMMUNICATION NETWORK

5.7.9 The subject was addressed in WP/67 presented by Saudi Arabia. The meeting was apprised of the modernization of Saudi Arabia's air navigation services network through the deployment of an IP-based Aeronautical Communication Network over private terrestrial and satellite circuits. The upgrade spans over sixty-three (63) CNS sites and enables ATS voice over IP (VOIP). The project replaced a legacy single-provider system with a modern, centrally managed network, enhancing reliability and performance for safety-critical services.

5.7.10 The meeting encouraged States to share their experience regarding the implementation of VOIP and emphasized the importance that the CNS SG remains informed about VOIP implementation and any challenges that may arise at regional level.

SPECTRUM ISSUES

5.7.11 The subject was addressed in WP/43 presented by the Secretariat. The meeting recalled the issue of frequency congestion in the MID Region and discussed a set of actions to mitigate it. These actions include revising the MID Region allotment plan, enhancing the quality of the ICAO frequency database to support more accurate frequency assignment, and exploring additional measures to expand available spectrum capacity, including the implementation of 8.33 kHz channel spacing and various approaches to optimize the use of the DME spectrum.

5.7.12 IATA expressed its support for the implementation of 8.33 channel spacing and confirmed that all airlines have been fully equipped with the necessary 8.33 receivers.

5.7.13 The meeting requested CNS SG to initiate work on CPDLC, recognizing its potential to alleviate frequency congestion in the Region. However, it was noted that the current equipage rate within the Region remains limited.

5.7.14 Accordingly, the meeting agreed to the following Conclusion:

MIDANPIRG CONCLUSION 23/26: FREQUENCY CONGESTION

That, in order to reduce COM and NAV frequency congestion and enhance frequency availability in the MID Region, States are required to complete the following actions by the end of 2026:

- a) *complete the review and update of their frequency assignment data in the current ICAO database;*
- b) *provide their projected frequency requirements up to 2034 using the questionnaire provided in **Appendix 5.7C**, to enable ICAO conduct the necessary simulations and assess with States the need for implementing reduced channel spacing (8.33 kHz); and*

- c) *complete the review of the MID Region allotment plan for processing by ICAO and inclusion in the relevant ICAO documents.*

5.7.15 The meeting was apprised of the review conducted by the CNS SG/15 related to the provisions and recommendations for enhancing interference detection and resolution through effective spectrum regulatory measures and enforcement. Given the importance and criticality of the issue, the meeting agreed that ICAO would provide a survey listing the required actions along with their references and monitor implementation using the matrix at **Appendix 5.7D**. Accordingly, the meeting agreed to the following Conclusion:

MIDANPIRG CONCLUSION 23/27: MITIGATING INTERFERENCE THROUGH EFFECTIVE SPECTRUM REGULATORY MEASURES AND ENFORCEMENT

*That, in order to implement Assembly Resolutions and ICAO provisions related to the mitigation of interference through effective spectrum regulatory measures and enforcement, States are urged to implement the actions listed in **Appendix 5.7D** and provide feedback to the CNS SG/16 meeting, for monitoring and appropriate action.*

5.7.16 The meeting recalled that the ITU WRC-27 does not include agenda items specifically dedicated to aviation safety frequency allocations; however, several items under consideration may still affect aeronautical safety services, including the spectrum used by the Radio Altimeter. Furthermore, the meeting noted with concern that WRC-27 is studying the identification of additional spectrum for the IMT in one or more frequency bands, including a band which is immediately adjacent to the Radio Altimeter band.

5.7.17 The meeting stressed the need to actively advocate for the ICAO WRC-27's position and to engage with States and relevant International Organizations to ensure the protection of aviation safety. Accordingly, the meeting agreed to the following Conclusion:

MIDANPIRG CONCLUSION 23/28: COORDINATION AND ADVOCACY FOR THE PROTECTION OF THE RADIO ALTIMETER BAND IN WRC-27

That, in order to strengthen regional and international coordination in support of the ICAO position on radio altimeter spectrum protection, and to ensure effective engagement with relevant stakeholders during WRC-27:

a) ICAO MID Office to:

- i. conduct Workshops and/or meetings in 2026/2027 with the Arab Spectrum Management Group (ASMG) in support of WRC-27 preparations, with particular emphasis on radio altimeter issue; and*
- ii. coordinate with States as well as other International and Regional Organizations, to strengthen collaboration and advocate for the protection of the radio altimeter band.*

b) States to:

- i. participate actively in the Regional WRC27 preparatory events;*
- ii. coordinate with their national radio regulator to support ICAO WRC-27 position; and*
- iii. send their representatives within the State's delegates to the WRC-27.*

NAVIGATION MATTERS

5.7.18 The subject was addressed in WP/44 presented by the Secretariat. The meeting recalled the AN-Conf/14 Recommendation 2.2/2 related to addressing GNSS interference and contingency planning, and the Assembly Resolution A42-8/c new and updated operative clauses related to NAV RON, C-PNT and illegal transmitters.

5.7.19 The meeting noted that the GNSS RFI can have a significant impact on operational safety, potentially contributing to three global high-risk categories of occurrence (G-HRC): Mid-Air Collision (MAC), Controlled Flight Into Terrain (CFIT), and Loss of Control In-flight (LOC-I).

5.7.20 The meeting was informed that there is no short-term solution for the GNSS RFI. States encountering implementation challenges may utilize the implementation Package (iPack) for the mitigation of GNSS RFI enabling them to deploy both preventive and reactive mitigation measures, as necessary.

5.7.21 The meeting recalled that MIDANPIRG/20, through Decision 20/47, requested the ICAO MID Office to collaborate with ACAO to assess the feasibility of establishing a Regional GNSS RFI monitoring System. The meeting also recalled the AN-Conf/14 Recommendation 2.2/2(b), which urged States to develop a GNSS reporting mechanism, using the PRIG framework.

5.7.22 The meeting was informed that the CNS SG/15 meeting had received several industry briefs on GNSS RFI monitoring solutions. In this regard, States were encouraged to consider establishing a GNSS RFI monitoring system. Furthermore, the meeting agreed that the feasibility of establishing a regional or sub-regional central RFI information repository, should be explored once States have developed sufficient national capabilities. Accordingly, the meeting agreed to the following Conclusion to replace and supersede the MIDANPIRG/22&RASG-MID/12 Conclusion 2 and MIDANPIRG Conclusion 20/47:

**MIDANPIRG CONCLUSION 23/29: STRENGTHENING REGIONAL PREPAREDNESS
AGAINST GNSS RFI DISRUPTIONS**

That, in order to strengthen regional preparedness for responding to disruptions caused by GNSS RFI, States are urged to:

- a) implement Assembly Resolution A42-8 Appendix C to ensure timely and effective measures are taken; and*
- b) consider establishing a GNSS RFI monitoring system to enhance situational awareness and mitigate safety and security risks.*

5.7.23 The meeting was informed that the RSA-14 (GNSS Vulnerability) requires a substantial update to remain aligned with ongoing developments, given the evolving nature of GNSS jamming and spoofing, as well as ICAO's recent publications and provisions on the subject. The meeting noted that Oman will lead the review process, with support from Egypt and the ICAO Secretariat.

5.7.24 The meeting recalled that the ICAO MID DOC 11 "Guidance on GNSS implementation in the MID REGION" includes mitigation strategies to GNSS vulnerabilities and agreed on the need to revise and update it to take into account, inter alia, the followings:

- i) the latest amendment to ICAO Annex 10, Volume I;

- ii) Assembly Resolution 42-8 Appendix C;
- iii) AN-Conf/14 Recommendation 2.2/2;
- iv) the most recent revision of RASG-MID Safety Advisory 14 (RSA-14); and
- v) the outcomes of ICAO events, including the 1st and 2nd Radio Navigation Symposia.

5.7.25 Based on the above, the meeting agreed to the following Conclusion:

MIDANPIRG CONCLUSION 23/30: REVISION OF THE GNSS-RELATED DOCUMENTS IN THE MID REGION

That, in order to ensure alignment of regional guidance with global developments, emerging threats, and ongoing international and regional efforts, the ICAO MID DOC 11 & RSA14 on GNSS Vulnerabilities, be updated and presented to the CNS SG/16 meeting for review, before presentation to MIDANPIRG/24 for endorsement.

5.7.26 The meeting recalled the discussion during the 42nd Session of the ICAO Assembly related to the development of GNSS RFI related ATC phraseology; and noted that the subject is still under consideration by the relevant Panel (ATMOPS).

5.7.27 The meeting recalled that MIDANPIRG/18, through Decision 18/42, established the NAV-MON Action Group to develop a Template for a NAV-MON Plan. Consequently, the Action Group held several virtual meetings with four volunteering States (Egypt, Jordan, Oman, and the UAE) and produced the initial draft of the NAV-MON Template. Feedback was requested from the ATM SG and PBN SG through MIDANPIRG Conclusion 21/26.

5.7.28 The meeting was informed that a new concept, the Resilient Navigation Operational Network (NAV RON), is being developed. The meeting agreed on the need to maintain and verify the continued implementation of NAV-MON until the forthcoming concept is developed. Accordingly, the meeting updated the objective and the composition of the NAV-MON Action Group and agreed to the following Decision to supersede MIDANPIRG Conclusion 21/26 and Decision 22/20:

MIDANPIRG DECISION 23/31: NAVIGATIONAL OPERATIONAL NETWORKS-NAV MON ACTION GROUP

That, in order to assist States with the implementation of the required conventional infrastructure, NAV-MON and the forthcoming, NAV-RON, the NAV MON Action Group:

a) undertake the necessary actions to assist States with the NAV-MON and NAV-RON implementation, and facilitate the sharing of resources and best practices among States;

b) is composed of:

- Mr. Waheed Sulieman (Egypt)
- Ms. Neveen Askar (Jordan)
- Mr. Abdullah AlFarsi (Oman)
- Mr. Sadiq Al-Laweaiti (Oman)
- Ms. Wadha Almalki (Qatar)
- Mr. Khaled Al-Harby (Saudi Arabia)
- Mr. Hussam Alsaïd Ali (Syria)
- Mr. Jacob Avis (UAE)
- Ms. Lindi Kirkman (IATA)
- Mr. Arnaud Du Bédât (IFALPA)
- The ICAO MID Secretariat

5.7.29 The meeting noted the discussions held during the CNS SG/15 meeting concerning the extension of periodic flight inspection intervals for ground-based navigation aids and the criteria applied to determine such extensions. In this regard, States were invited to share their experiences, best practices, and lessons learned related to flight inspection intervals and monitoring strategies. The meeting also encouraged the exchange of information on regulatory frameworks, safety assessments, and monitoring arrangements to support the harmonized and safe implementation of extended flight inspection intervals within the MID Region, as appropriate.

5.7.30 The meeting was informed that the planned ICAO MID PBN/GNSS Workshop (Cairo, 29 September-1 October 2026) will address, inter-alia, matters related to radio navigation flight inspection. The meeting encouraged States to participate actively in the Workshop to ensure broad engagement and the effective exchange of expertise.

GNSS MONITORING AND DME-TO-DME OPTIMIZATION SUPPORTING THE RESILIENT NAVIGATION OPERATIONAL NETWORK (RON)

5.7.31 The subject was addressed in WP/66 presented by Saudi Arabia. The meeting was informed of the integrated, two-layered approach to NAV MON resilience within the Jeddah FIR, which comprises a GNSS RFI Monitoring System designed to enhance situational awareness for ATCOs, ATSEPs, and flight crew, alongside the optimization of ground radio navigation infrastructure. This optimization is achieved through DME-to-DME coverage and the adoption of omnidirectional antennas, providing a resilient terrestrial reversion capability to ensure continuous and safe Positioning, Navigation, and Timing (PNT).

5.7.32 The meeting encouraged States to adopt layered, multi-source strategies that integrate GNSS monitoring with resilient conventional navigation aids. It further urged the conduct of comprehensive DME-to-DME coverage analyses, including potential extensions to neighboring MID States to strengthen regional resilience and mitigate frequency congestion arising from increased demands on DME channels. Furthermore, the meeting supported enhanced regional collaboration and data sharing for GNSS interference detection and mitigation.

SURVEILLANCE MATTERS

5.7.33 The subject was addressed in WP/45 and WP/65, presented by the Secretariat and Saudi Arabia, respectively.

5.7.34 The meeting was informed that improper Mode S Interrogator Code Allocation (MICA) can significantly disrupt ATC operations by degrading radar track stability. The meeting further noted that an assessment of MICA system usage by MID Region stakeholders identified several activities that were not being performed in a timely or consistent manner, including the following:

- i. Conflict reports were not being processed by MID users in a timely manner.
- ii. Several assigned codes have not been confirmed as implemented.
- iii. Assigned codes are required to be revalidated every five years; however, this process was not always completed by States within the required timeframe.

5.7.35 The meeting was informed that several MID MICA users have been utilizing the MICA platform without prior training on its functions and tools. It was recalled that a MICA workshop had previously been conducted. The meeting agreed on the need to organize training sessions for new users and refresher training for those who have already been trained. Accordingly, the meeting agreed to the following MIDANPIRG Conclusion:

MIDANPIRG CONCLUSION 23/32: ENHANCING MODE S INTERROGATOR CODES MANAGEMENT PROCESS

That, in order to enhance the MICA management process and the use of the MICA Platform in the MID Region:

- a) a Surveillance Workshop including MICA training be organized in 2027; and*
- b) MID MICA Focal Points be urged to:

 - i) carry out the necessary actions in a timely manner, including confirmation of implementation, and where applicable, revalidation of assigned codes;*
 - ii) respond to conflict reports, where involved, and take the necessary corrective action without delay; and*
 - iii) indicate any challenges encountered in using the MICA platform or following the associated processes.**

5.7.36 The meeting was apprised of obsolete elements within the current version of the MID Region Surveillance Plan (ICAO MID 013) including, inter-alia:

- i. the GANP Surveillance Plan, which no longer exists in the current version of the online GANP;
- ii. the baseline of surveillance infrastructure in the MID Region, which is dated December 2020;
- iii. the medium- and long-term actions need to be updated;
- iv. the timeline for DFMC GNSS is inaccurate;
- v. the plan for ADS-B implementation in the MID Region is no longer relevant in light of prevailing GNSS RFI conditions; and
- vi. the implementation of ADS-B/IN

5.7.37 The meeting was informed of the deployment of the ADS-B network as a second layer of ATS surveillance serving the Jeddah FIR. The meeting noted the lessons learned during implementation, as well as a summary of the principal capabilities to be introduced by ADS-B Version 3. It was further noted that these capabilities will be incorporated in Amendment 92 to Annex 10, Volume IV, which will become applicable on 26 November 2026. The meeting agreed that the CNS SG should monitor the development and implementation of ADS-B Version 3, and identify operational use cases and regional needs that may justify future ATM system enhancements; and

5.7.38 The meeting agreed that the MID Region Surveillance Plan should be updated, and tasked the Secretariat, with the support of Egypt and Qatar, to prepare the first draft of the revised version.

5.7.39 Based on the above, the meeting agreed to the following Conclusion:

MIDANPIRG CONCLUSION 23/33: MID REGION SURVEILLANCE PLAN

That, in order to strengthen Surveillance Planning, Implementation, and Operations in the MID Region:

- a) States are invited to share information on the deployment of ATS Surveillance including ADS-B, Multilateration, and the related lessons learned; and*
- b) the MID Region Surveillance Plan be reviewed and updated, taking into account the outcome of the Surveillance Workshop, and submitted to CNS SG/16 and MIDANPIRG/24 meetings for review and endorsement.*

Cybersecurity

5.7.40 The subject was addressed in WP/46 and WP/78, presented by the Secretariat and UAE, respectively.

5.7.41 The meeting was briefed on the actions undertaken by the MID Regional Aviation Security and Facilitation Group (MID-RASFG) regarding cybersecurity. These included the development and analysis of the Cybersecurity Action Plan (CyAP) questionnaire, as well as the adoption of a Conclusion proposing the establishment of a Regional multidisciplinary Aviation Cybersecurity Task Force.

5.7.42 The meeting noted that Five (5) States replied to the Questionnaire. The analysis of the questionnaire responses from five States highlights a concern regarding cybersecurity capacity-building programmes, particularly the limited availability of aviation-specific cybersecurity training and the effectiveness of current cybersecurity awareness initiatives.

5.7.43 The meeting supported the establishment of Aviation Cybersecurity Ad-hoc Working Group, with the objective of avoiding duplication of efforts and optimizing the use of States' resources. Consequently, the meeting agreed to dissolve the ANS Cybersecurity Working Group (ACS WG). Accordingly, the meeting adopted the following Decision:

MIDANPIRG DECISION 23/34: DISSOLUTION OF ACS WG

That, in order to address Cybersecurity and Resilience through a multidisciplinary approach, ANS Cybersecurity Working group (ACS WG) is dissolved.

5.7.44 The meeting noted the UAE's proposal to establish proportionate, risk-based, and operationally informed cybersecurity governance for Air Navigation Services (ANS) systems. It further acknowledged the importance of applying such governance in a manner that balances proportionality, operational realities, and risk considerations, with particular attention to potential consequences and impacts on service continuity.

5.7.45 The meeting encouraged enhanced coordination among civil aviation authorities, national cybersecurity agencies, Air Navigation Service Providers (ANSPs), and industry stakeholders to advance an integrated assurance approach to cybersecurity governance. Furthermore, the meeting agreed to refer the UAE's paper to the CNS SG for further review and appropriate action.

5.7.46 The meeting noted that ACAO has established a Cybersecurity Committee and invited ACAO to report the outcomes of this Committee to the CNS SG and MIDANPIRG.

5.8 MET

Outcomes of the MET SG/13

5.8.1 The subject was addressed in WP/47 presented by the Secretariat, and WP/68, presented by Saudi Arabia. The meeting reviewed the outcomes of the Thirteenth Meeting of the Meteorology Sub-Group (MET SG/13), held in Cairo, Egypt, from 16 to 17 December 2025. The meeting noted that the MET SG/13 discussed a number of global and regional developments related to meteorological services, including the outcomes of METP/6, WAFS developments, IWXXM implementation, SIGMET issuance, and the results of the MID Regional MET Implementation. Survey.

5.8.2 The MET SG/13 meeting noted the outcomes of METP/6, including developments related to the transition towards SWIM-enabled meteorological service provision, Quantitative Volcanic Ash (QVA), Space Weather Information Service (SWIS), Hazardous Weather Information Services (HWIS), and enhancements to the World Area Forecast System (WAFS). The meeting further noted the importance of preparing for the future transition towards digital information exchange and SWIM-enabled meteorological services.

5.8.3 The meeting reviewed the results of the ICAO MID Regional MET Implementation Survey conducted pursuant to MIDANPIRG Conclusion 22/32. The meeting noted that responses were received from eleven out of the fifteen MID States and that, while the fundamental MET service infrastructure is generally established throughout the Region, implementation gaps remain in several areas, including IWXXM implementation, cross-border SIGMET coordination, reception and operational use of Space Weather advisories, and reception of WAFS products.

5.8.4 The meeting recognized that these gaps represent important areas requiring continued regional attention, particularly in the context of increasing reliance on digital information exchange, SWIM-enabled services, and global advisory information. Accordingly, the meeting agreed to the following MIDANPIRG Conclusion:

MIDANPIRG CONCLUSION 23/35: STRENGTHENING IMPLEMENTATION AND OPERATIONAL USE OF GLOBAL ADVISORIES IN THE MID REGION

That,

a) States be urged to:

- i. fully implement Annex 3 (including latest amendments) and PANS-MET (Doc 10157) by 31 December 2026;*
- ii. strengthen national capabilities for receiving and using global advisory information, including WAFS, VAAC/VONA, SWX, and TAAC products;*
- iii. improve cross-border SIGMET coordination through regular drills, harmonized procedures, and monitoring activities; and*
- iv. nominate national focal points for IWXXM and SWX matters to support regional coordination and identify capacity-building needs;*

b) the ICAO MID Office continue monitoring MET implementation through periodic surveys and report progress to MET SG and MIDANPIRG.

5.8.5 The meeting reviewed developments related to WAFS and SADIS, including the implementation of automated T+24 SIGWX forecasts, the introduction of multi-timestep SIGWX products in IWXXM format via the SADIS API, the implementation of automated WAFS backup arrangements, and the planned retirement of the SADIS FTP service by November 2028. The meeting noted that maintaining up-to-date SADIS Focal Point information is essential for effective regional coordination and service continuity. Accordingly, the meeting agreed to the following MIDANPIRG Conclusion:

MIDANPIRG CONCLUSION 23/36: SADIS FOCAL POINT INFORMATION

That States are urged to send updated contact details of their SADIS Focal Point to SADISManager@metoffice.gov.uk, with a copy to the ICAO MID Office (icaomid@icao.int).

5.8.6 The meeting reviewed an analysis of Volcanic Ash SIGMET issuance associated with the Hayli Gubbi eruption in November 2025. The meeting noted deficiencies in coding practices, descriptor usage, polygon construction, consistency with volcanic ash advisory information, and cross-border coordination among adjacent MWOs. The meeting recognized the need for enhanced training, harmonized procedures, and regional coordination in support of SIGMET and VA SIGMET issuance. Accordingly, the meeting agreed to the following MIDANPIRG Conclusion:

MIDANPIRG CONCLUSION 23/37: STRENGTHENING SIGMET AND VOLCANIC ASH SIGMET ISSUANCE IN THE MID REGION

That MID States, in coordination with ROC Jeddah:

- a) review and update national regulatory frameworks, operational procedures, and guidance material for SIGMET issuance, ensuring alignment with Amendment 82 to Annex 3 and PANS-MET (Doc 10157), including correct use of descriptors, polygon formats, and integration of VAA/VAG and future QVA information;*
- b) conduct refresher training for MWO personnel on SIGMET preparation and coding, with dedicated modules for VA SIGMET issuance;*
- c) formalize cross-border coordination among adjacent MWOs to ensure consistency and avoid gaps or overlaps during volcanic ash events; and*
- d) initiate regional SIGMET test exercises in coordination with VAAC Toulouse, WAFC London, and ROC Jeddah, covering WS, TC, and VA SIGMET types, to validate compliance with Annex 3 and PANS-MET, and compile quality monitoring reports for MET SG review.*

5.8.7 The meeting reviewed the status of IWXXM implementation in the MID Region as at **Appendix 5.8A**. The meeting noted that progress remains uneven among States and that the information contained in **Appendix 5.8A** was outdated. Accordingly, the meeting tasked the MET SG to review and update the regional status and urged States to regularly report progress to the ICAO MID Office.

5.8.8 The meeting emphasized the importance of accelerating implementation efforts in support of future SWIM-enabled meteorological services and agreed to the following MIDANPIRG Conclusion:

MIDANPIRG CONCLUSION 23/38: MID REGION IWXXM IMPLEMENTATION STATUS

That the ICAO MID Office conduct a survey to collect up-to-date information from MID States (with particular attention to States using ROC-provided IWXXM translation services) on the national status and planned implementation dates for:

- (a) IWXXM provision via the AMHS network; and*
- (b) METAR/SPECI; TAF; and SIGMET in IWXXM.*

5.8.9 The meeting noted with concern the limited participation of MID States in MET SG/13 and emphasized that active and sustained engagement by States is critical to the effective implementation of meteorological provisions, regional performance monitoring, identification and resolution of deficiencies, and the successful execution of the MET SG work programme. The meeting, therefore, encouraged MID States to ensure consistent representation at future MET SG meetings by nominating appropriate experts from both Civil Aviation Authorities and Meteorological Service Providers.

Competency framework for aeronautical meteorological personnel

5.8.10 The subject was addressed in WP/69, presented by Saudi Arabia. The meeting reviewed the proposal to develop a common regional competency framework for aeronautical meteorological personnel in the MID Region.

5.8.11 The meeting noted that ICAO and WMO have already established comprehensive global provisions governing the qualification, competency assessment, and competency assurance of aeronautical meteorological personnel. These provisions include the competency requirements contained in ICAO Annex 3 — Meteorological Service for International Air Navigation, the WMO Competency Framework for Aeronautical Meteorological Personnel, the Manual on the Implementation of Education and Training Standards in Meteorology and Hydrology (WMO-No. 1083), and the Guidelines for Competency Assessment and Qualification of Aeronautical Meteorological Personnel (WMO-No. 1205).

5.8.12 The meeting agreed that the proposal to develop a common regional competency framework for aeronautical meteorological personnel in the MID Region should be referred back to the MET Sub-Group (MET SG) for review, clarification and assessing the need for any additional guidance or enhancements of the global ICAO and WMO) provisions.

5.9 *Air Navigation Deficiencies*

5.9.1 The subject was addressed in WP/48 presented by the secretariat. The meeting noted that in accordance with MIDANPIRG Conclusion 22/33, ICAO MID issued State Letter AN 2/2-26/050 dated 9 March 2026, emphasizing the use of MANDD for managing air navigation deficiencies, including the submission of requests for their addition, update, or elimination, supported by a specific corrective action plan (CAP) and target completion date for each case. Also, for security purposes, States were requested to nominate designated MANDD Focal Points and provide their contact details to ICAO MID to obtain access for submitting and maintaining all related updates and CAPs on behalf of the State. The meeting was informed that Bahrain, Jordan, Oman, and Saudi Arabia have officially nominated their MANDD focal points to the ICAO MID Office.

5.9.2 The meeting reviewed and updated the list of deficiencies in the AIM, AOP, ATM, CNS, SAR and MET fields as reflected in the MID Air Navigation Deficiency Database (MANDD) at: <https://mandd.icao.int>. The meeting noted that the total number of air navigation deficiencies recorded in MANDD was 102 deficiencies compared to 97 deficiencies in MIDANPIRG/22.

5.9.3 A quantitative analysis of the MID States' Air Navigation Deficiencies is shown in the Tables and Graphs presented at **Appendix 5.9A**.

5.9.4 The meeting reviewed the current status of deficiencies:

- In the AOP field: the total number of AOP deficiencies is nine (9) priority "A". Seven (7) deficiencies related to aerodrome certification; one (1) related to runway physical characteristics; and one (1) related to apron lighting. The lack of implementation of aerodromes' certification represents 78% of these deficiencies.
- In the AIM field: based on documents provided by Jordan, the meeting agreed to remove the deficiencies reported against Jordan related to terrain and obstacle data sets; the total number of AIM deficiencies is forty-one (41); thirty-seven (35) priority "A" and six (6) priority "B". Eighteen (18) deficiencies related to eTOD (based on the agreement to include new deficiencies related to the non-provision of TOD for Area 2a/TOFP and OLS); five (5) related to QMS; four (4) related to AIXM; six (6) related to WAC; three (3) related to pre-flight information services; one (1) related to AIP and aeronautical charts; three (3) related to AIRAC adherence; and one (1) related to WGS-84.
- In the ATM field: based on documents provided by Jordan and Iraq, the meeting agreed to remove the deficiency these States respectively related to lack of contingency agreement with Syria and interruption of ATS route A424; the total number of deficiencies is twelve (12); five (5) priority "A" and seven (7) priority "B". Six (6) related to the uncompleted signature of contingency agreements and six (6) related to the non-implementation of planned regional ATS Routes.
- 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.
- In the MET field: the total number of MET deficiencies was twenty-four (24) priority "A" deficiencies. five (5) related to QMS, eight (8) related to METAR, TAF, SIGMET and WAFS, ten (10) related to IWXXM and one (1) related to SADIS.
- In the SAR field: based on documents provided by Kuwait, the meeting agreed to remove the deficiency against Kuwait related to non-compliance with carriage of ELT; the total number

of deficiencies was seven (7) priority “A”. Four (4) related to the lack of implementation of SAR provisions; and three (3) related to non-compliance with the carriage of Emergency Locator Transmitter (ELT) requirements.

5.9.5 The meeting urged States to use MANDD for the submission of requests for addition, update, and elimination of Air Navigation Deficiencies, including the submission of a specific CAP for each deficiency. The meeting reiterated that a deficiency would be eliminated only when a State submits a formal notification to the ICAO MID Office containing the evidence(s) that mitigation measures have been implemented for the elimination of this deficiency.

5.9.6 Given that some deficiencies recorded in the MANDD date back several years and may no longer be valid in light of the current status of the MID ANP, the MIDANPIRG meeting tasked its subsidiary bodies with reviewing the status of these recorded deficiencies. The meeting also raised concern about the definition of an air navigation deficiency as contained in the “*Uniform Methodology for the Identification, Assessment and Reporting of Air Navigation Deficiencies*” approved by the Council of ICAO on 30 November 2001. Accordingly, the meeting agreed to the following Decision and Conclusion:

MIDANPIRG DECISION 23/39: AIR NAVIGATION DEFICIENCIES

That, the MIDANPIRG subsidiary bodies are urged to review the validity of old deficiencies recorded in MANDD and propose required action to MIDANPIRG/24.

MIDANPIRG CONCLUSION 23/40: AIR NAVIGATION DEFICIENCIES POLICY AND METHODOLOGY

That, ICAO is invited to review and update the policy and methodology for the identification, assessment and reporting of air navigation deficiencies.

5.10 *States' Bilateral Coordination Meetings*

5.10.1 The following side meetings were conducted to discuss subjects of common interest and explore opportunities for collaboration:

- 1) IATA – Sudan
- 2) UAE – United ATS
- 3) SWIN Multidisciplinary Group
- 4) UAE – FAA
- 5) UAE – Oman
- 6) Oman – ICAO HQ
- 7) Oman – Sudan
- 8) Saudi Arabia – Egypt – Oman
- 9) Sudan – ICAO MID
- 10) Qatar – Bahrain – Kuwait – Iraq
- 11) Saudi Arabia – Iraq
- 12) Sudan – ICAO MID
- 13) Iraq – ICAO MID
- 14) IATA – Lebanon
- 15) Oman – UATS
- 16) Oman - CANSO

REPORT ON AGENDA ITEM 6: MIDANPIRG & RASG-MID WORKING ARRANGEMENTS**6.1 *Working Arrangements of MIDANPIRG & RASG-MID***

6.1.1 The subject was addressed in WP/49 presented by the Secretariat. The meeting reviewed the Terms of Reference of the MIDANPIRG and RASG-MID.

6.1.2 The meeting recalled that the President of the ICAO Council approved new generic Terms of Reference of PIRGs and RASGs on 25 July 2019, in order to clarify the roles of stakeholders and promote partnership among them, harmonize the methods of work and improve regional reporting through more frequent meetings. The meeting noted also that at the 40th Session of the ICAO Assembly, it was decided to align the meeting schedule of the PIRGs and RASGs with the annual reporting requirement to the Council (A40-WP/608 refers); accordingly, the President of the Council on 7 August 2020 mandated the need for PIRGs & RASGs to meet on annual basis.

6.1.3 The meeting recognized that the increasing operational complexity within the MID Region and the growing implementation demands on States and the ICAO MID Regional Office warrant reflection on whether the current working arrangements of MIDANPIRG & RASG-MID remain the most efficient and implementation-focused model for the Region.

6.1.4 The meeting agreed that the current working arrangements of the annual combined/parallel track MIDANPIRG & RASG-MID meetings provided important benefits but also revealed several challenges.

6.1.5 Based on the above, the meeting agreed that MIDANPIRG and RASG-MID meetings alternate between in-person and virtual formats. In-person meetings would be held during the years when DGCA-MID meetings take place (even-numbered years), at least six months prior to the DGCA-MID meeting. Virtual meetings would be conducted during odd-numbered years. The virtual meetings of MIDANPIRG and RASG-MID would be organized separately and would have limited agenda focused primarily on the follow-up of existing Conclusions and Decisions, as well as any urgent or time-critical matters requiring attention or reporting. In contrast, the in-person meetings, held every two years, would address full scope agenda and maintain the current meeting format, including joint plenary sessions and parallel tracks for MIDANPIRG and RASG-MID.

6.1.6 The meeting agreed to further examine opportunities to enhance the effectiveness and efficiency of both Groups through consultations with the Chairpersons and States. The outcome of these consultations could be used to identify the most appropriate working arrangements and, if necessary, develop proposals for consideration at the next MIDANPIRG and RASG-MID meetings.

6.1.7 Based on all the foregoing, the meeting agreed to the following Decisions:

MIDANPIRG DECISION 23/41: MIDANPIRG PROCEDURAL HANDBOOK

That:

- a) the MIDANPIRG Procedural Handbook be amended to reflect the agreed working arrangements, up-to-date Organizational Structure and Terms of Reference of the different Sub Groups; and*
- b) the revised version of the Procedural Handbook be presented to the MIDANPIRG/24 for final review and endorsement.*

RASG-MID DECISION 13/10: RASG-MID PROCEDURAL HANDBOOK

That:

- a) the RASG-MID Procedural Handbook be amended to reflect the agreed working arrangements; and*
- b) the revised version of the Procedural Handbook be presented to the RASG-MID/14 for final review and endorsement.*

MIDANPIRG Support Team (MST)

6.1.8 The subject was addressed in PPT/85 presented by the First Vice Chairperson of MIDANPIRG. The meeting reviewed the Terms of Reference of the MIDANPIRG and RASG-MID. The meeting noted that The MIDANPIRG Support Team (MST) was established to act as the primary coordination and facilitation bridge connecting MIDANPIRG with its subsidiary bodies, Member States, and the ICAO Regional Office ensuring seamless communication and aligned implementation across the MID Region. The MST is composed of the MIDANPIRG Chairpersons and the MID Office Secretariat.

6.1.9 The meeting was apprised of the functions, roles and responsibilities of the different MST members and agreed to include relevant information in the MIDANPIRG Procedural Handbook.

6.2 *MIDANPIRG & RASG-MID Future Work Programme*

6.2.1 The subject was addressed in WP/50 presented by the Secretariat. According to the new working arrangements endorsed by the meeting, it was agreed that the MIDANPIRG/24 and RASG-MID/14 meetings will be held separately in a virtual setting in Q2-2027. The exact dates of both meetings will be coordinated between the ICAO MD Office and the Chairpersons of both Groups.

6.2.2 The meeting noted with appreciation the generous offer made by Kuwait to host the MIDANPIRG/25 and RASG-MID/15 meetings in Kuwait in 2028.

REPORT ON AGENDA ITEM 7: ANY OTHER BUSINESS

7.1 The meeting thanked ICAO MID Office for the efforts to organize many successful Workshops and capacity building activities and requested the Office to dedicate more resources to plan for more capacity building and implementation support activities.

7.2 The meeting noted that late submission of WPs/PPTs has a negative impact on the preparation and conduct of the MIDANPIRG and RASG-MID meetings; and urged States and International Organization to fully comply with the procedures included in the Procedural Handbooks.

7.3 The meeting thanked Egypt for facilitating a visit to its National Airspace Management Centre (NASMC), which was recognized as a unique initiative and a notable success story in the Region.

APPENDICES

APPENDIX 3.1A

FOLLOW-UP ACTION PLAN ON MIDANPIRG/22 & RASG-MID/12 CONCLUSIONS AND DECISIONS

No.	CONCLUSIONS AND DECISIONS	CONCERNS/ CHALLENGES (RATIONALE)	DELIVERABLE/ TO BE INITIATED BY		TARGET DATE	STATUS/REMARKS
C.1	<i>MENA ARCM</i> That States be encouraged to sign the MENA AIG Regional Cooperation Mechanism (MENA ARCM) MoU, if not yet done	Enhancement of cooperation among MENA States in the provision of AIG area	Sign the MoU to support States in AIG area	States	June 2025	Actioned
C. 2	<i>CONSOLIDATED REGIONAL APPROACH TO GNSS RFI MANAGEMENT</i> That, a consolidated regional approach for the management of GNSS RFI be established with the following actions: a) States be urged to: 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. b) ICAO MID Office be requested to: 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; iii. liaise with ICAO Headquarters to contribute to the deployment of global guidance material specifications,	Missing a consolidated regional approach for the management of GNSS radio frequency interference (RFI)	a) establish regional GNSS RFI monitoring and reporting mechanism through the appropriate MID regional frameworks; b) maintain an adequate network of conventional navigation aids to ensure continuity of air navigation services in case of GNSS signal degradation; c) review aircraft minimum equipage lists and implement measures to enhance aircraft system resilience to GNSS RFI;	States States States	TBD Continuous Continuous	Ongoing SL REF: AN7/30.21 -25/130 Dated 24 June 2025 (To be replaced and superseded by CNS SG/15 Draft Conclusion 15/8)

No.	CONCLUSIONS AND DECISIONS	CONCERNS/ CHALLENGES (RATIONALE)	DELIVERABLE/ TO BE INITIATED BY		TARGET DATE	STATUS/REMARKS
	including the GNSS RFI mitigation iPack and available information exchange mechanisms.		d) strengthen civil-military coordination and ensure timely sharing of information related to intentional GNSS interference; and	States	Continuous	
			e) define reversion scenarios and associated contingency procedures to maintain safe and efficient operations in the event of GNSS unavailability	States	Continuous	
			f) coordinate the development of the regional GNSS RFI management framework and potential reporting templates;	ICAO	TBD	
			g) support States through regional Capacity Building and awareness activities on GNSS interference detection and mitigation; and	ICAO	TBD	

3.1A-3

No.	CONCLUSIONS AND DECISIONS	CONCERNS/ CHALLENGES (RATIONALE)	DELIVERABLE/ TO BE INITIATED BY		TARGET DATE	STATUS/REMARKS
			h) liaise with ICAO Headquarters to contribute to the development of global guidance material, including the GNSS RFI mitigation iPack and available information exchange mechanisms.	ICAO MID		
D. 3	AMENDED RASG-MID SAFETY ADVISORY 14 <i>That, the amended RASG-MID Safety Advisory 14 (RSA-14) at Appendix 2B is endorsed.</i>	Amendment of the current RSA 14	Amended RSA 14	ACAO, ICAO, IATA, IFALPA	June 2025	Completed
C. 4	CAPACITY BUILDING ON GNSS RFI <i>That, ICAO, in collaboration with ICAO partners, organize a Regional Capacity Building event on GNSS Interference during 2025.</i>	Raise awareness on the GNSS RFI management and Resilience	Interregional Workshop on GNSS RFI	ICAO	November 2025	Completed

FOLLOW-UP ACTION PLAN ON RASG-MID/12 CONCLUSIONS AND DECISIONS

No.	CONCLUSIONS AND DECISIONS	CONCERNS/ CHALLENGES (RATIONALE)	DELIVERABLE/ TO BE INITIATED BY		TARGET DATE	STATUS/REMARKS
C. 12/1	MENA RSOO That States be encouraged, if not yet done, to sign the MOA and join the MENA RSOO and actively contribute to the success and sustainability of the MENA RSOO.	Enhance cooperation among MENA States in the area of SSP	Sign the MOA to support MENA States in SSP and USOAP	States	July 2025	Actioned
C. 12/2	GUIDANCE FOR IMPLEMENTING GOAL 6 OF THE 2026–2028 GASP That, ICAO is invited to develop guidance to assist states in assessing non-ICAO recognised industry evaluation programmes.	Assist states in assessing non-ICAO recognized industry evaluation Programmes	Development of guidance material	ICAO	June 2025	Actioned Coordination with HQ
C.12/3	13TH ASR That, The Thirteen MID Annual Safety Report is endorsed and be posted on the ICAO MID Website.	Sharing the final 13th MID-ASR for the period 2019-2023 with identified MID Region safety priorities and an update on safety performance	MID-ASR 13th Edition published on the ICAO website	RASG-MID/12	June 2025	Completed
C. 12/4	SHARING OF SAFETY DATA ANALYSIS In respect of the next MID ASR edition, States are encouraged to provide necessary safety information and safety data analysis to the ICAO MID Office by June 2025, related to each occurrence category in Appendix 4B for the past 5 years (2020– 2024) and using the templates in Appendices 4C and 4D . The Draft of the 14 th edition of the	Collection of safety data analysis for a Harmonized database	Safety Data Analysis for development of ASR	States	May 2025	Completed SL ME 4-25/104 Dated 26 May 2025

MIDANPIRG/23 & RASG-MID/13–REPORT
APPENDIX 4A

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No.	CONCLUSIONS AND DECISIONS	CONCERNS/ CHALLENGES (RATIONALE)	DELIVERABLE/ TO BE INITIATED BY		TARGET DATE	STATUS/REMARKS
	MID ASR will be presented to the ASRG/7 meeting for review.					
C. 12/5	IMPLEMENTATION PROGRESS ON THE SAFETY ENHANCEMENT INITIATIVES (SEIs) That, a) The implementation progress of the Safety Enhancement Initiatives (SEIs) and safety actions included in the MID-RASP 2023-2025 Edition at Appendix 4F is endorsed; and b) States, international organizations and industry are urged to support the MID-RASP 2023-2025 Edition activities, including SEIs and safety actions.	Support the MID-RASP 2023-2025 Edition activities, including SEIs and safety actions	Implementation of SEIs and safety actions	States, organizations, and industry	May 2025	Actioned
C. 12/6	AAM AND NEW ENTRANTS That, a) AAM and AI covered under the ICAO Focus area AAM and new entrants be included as a Safety Enhancement Initiative (SEI) within the MID Region Aviation Safety Plan (MID-RASP) 2026-2028 Edition to ensure structured regional coordination and alignment with global aviation innovation priorities; b) Encourage States and industry stakeholders to prioritize and conduct capacity-building initiatives, to foster expertise and knowledge-sharing in AAM and AI technologies, regulatory frameworks, and risk management strategies; and c) Encourage States and stakeholders to actively engage in the proposed SEI by sharing operational insights, best practices, and lessons learned.	Support AAM and new entrants in the MID Region	Include AAM and new entrants as SEI in MID-RASP 2026-2028	States, organizations, and industry	June 2025	Actioned SL REF:ME4 -25/115 Dated 4 June2025. Has been included as SEIs in MID-RASP 2026-2028

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No.	CONCLUSIONS AND DECISIONS	CONCERNS/ CHALLENGES (RATIONALE)	DELIVERABLE/ TO BE INITIATED BY		TARGET DATE	STATUS/REMARKS
C. 12/7	DEVELOPMENT OF NATIONAL AVIATION SAFETY PLAN (NASP) IN MID STATES That, States be: a) urged to prioritize the development and implementation of the NASP in line with the GASP and MID-RASP, if not yet done so; b) encouraged to share the latest versions of their NASPs with ICAO HQ and ICAO Regional MID office for publication on the GASP public portal; c) Encouraged to leverage existing ICAO guidance materials, tools, and best practices to accelerate NASP development and implementation; d) Invited to seek technical assistance from the ICAO MID Regional Office for NASP development, including tailored on-site assistance missions and/or State-specific NASP workshops to address unique operational challenges; and e) Encouraged to actively share lessons learned, challenges, and successes in NASP development during SEIG meetings and/or the Regional NASP Workshops, fostering peer-to-peer knowledge exchange and regional collaboration.	Compliance with Assembly Resolution A40-1	State Letter	ICAO	July 2025	Actioned SL REF: ME 4 – 25/159 Dated 7 July 2025
C. 12/8	DEVELOPMENT OF SSP IN MID STATES That, States be: a) urged to prioritize the timely establishment, implementation, and maintenance of State Safety Programmes (SSPs) and to strengthen Safety Management System (SMS) adoption across all	Support States with the development and Implementation of SSP	MID States SSP development	ICAO and States	July 2025	Actioned SL REF: ME4-25/16 Dated 4 June 2025

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No.	CONCLUSIONS AND DECISIONS	CONCERNS/ CHALLENGES (RATIONALE)	DELIVERABLE/ TO BE INITIATED BY		TARGET DATE	STATUS/REMARKS
	aviation service providers, ensuring alignment with ICAO Annex 19 standards; b) encouraged to request assistance from the ICAO MID Regional Office related to the development and implementation of their SSPs including the conduct of: i. Targeted SSP technical assistance missions to prepare States for upcoming ICAO SSP assessments ii. Tailored SSP implementation Workshops iii. State Safety Risk Management framework workshops to enhance risk-based decision-making capabilities. c) Invited to share lessons learned, challenges, and successes in SSP development during SEIG meetings, fostering peer-to-peer knowledge exchange and regional collaboration; and d) encouraged to share their latest version of SSP manuals with ICAO MID Office.					
C. 12/9	ESTABLISHMENT OF ELECTRONIC PILOT That a) The survey on the Electronic Pilot Licence (ePL) will be developed by the UAE GCAA, in coordination with the ICAO MID Regional Office; b) The MID Office will circulate the survey to all MID States and encourage them to provide their inputs; and c) The results of the survey analysis will be shared with the UAE to support the development of the Working Paper to be presented at the 42nd ICAO Assembly.	Support States to establish EPL	Conduct of Survey	ICAO and States	June 2025	Completed SL REF: ME4-25/103 Dated 26 May 2025

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No.	CONCLUSIONS AND DECISIONS	CONCERNS/ CHALLENGES (RATIONALE)	DELIVERABLE/ TO BE INITIATED BY		TARGET DATE	STATUS/REMARKS
C.12/10	SARPs, AND GUIDANCE RELATED TO FATIGUE RISK MANAGEMENT (FRM) FOR MAINTENANCE LICENSED PERSONNEL That, a) a detailed survey to assess the measures taken to mitigate fatigue in the maintenance environment to be developed by UAE and Saudi Arabia, in coordination with the ICAO MID Regional Office, IATA, and IFALPA; b) the ICAO MID Office to circulate the survey to all MID States and collect feedback and proposals; c) the results of the survey to analyzed by UAE and Saudi Arabia, in coordination with the ICAO MID Regional Office, IATA, and IFALPA; d) UAE in coordination with Saudi Arabia, IATA, and IFALPA to develop a Working Paper to be presented at the 42nd ICAO Assembly, inviting ICAO to develop SARPs and guidance for maintenance licensed personnel, and e) UAE and Saudi Arabia, in coordination with the ICAO MID Regional Office, IATA, and IFALPA, to develop a Regional Safety Advisory on the subject to be presented to the SEIG/7 Meeting for further discussion and agreement on the way forward.	Support States with FRMS for maintenance	Conduct of survey	ICAO and States	June 2025	Ongoing SL REF:ME4-25/108 Dated 29May2025
C.12/19	ADHERENCE TO ICAO ANNEX 13- ACCIDENT INVESTIGATION FINAL REPORTS That, The State conducting an aircraft accident investigation must submit a Preliminary report to ICAO within thirty days of the date of the accident and release the final report within twelve months in accordance with ICAO Annex 13 requirement.	Sharing of the Final Investigation Report	RASG-MID/12	States	June 2025	Completed SL REF ME4-25/113 Dated 2 June 2025

LIST OF OCCURRENCE CATEGORIES TAXONOMY

Scope: State of Occurrence

The data to be collected be based on scheduled commercial operations involving aircraft having a Maximum Take-off Weight (MTOW) above 5700 kg.

Occurrence Category	ADREP/CICTT taxonomy	Remarks
Runway Excursion (RE)	Veer off or overrun off the runway surface.	
Abnormal Runway Contact (ARC)	Any landing or take-off involving abnormal runway or landing surface contact.	
Loss of Control-Inflight (LOC-I)	Loss of Control while, or deviation from intended flight path, in flight.	
Controlled Flight Into Terrain (CFIT)	Inflight collision or near collision with terrain, water, or obstacles without indication of loss of control.	
MID Air Collision (MAC)/ NMACs	Airprox/TCAS Alerts, Loss of separation as well as NMAC or collisions between aircraft inflight.	
Fire/Smoke (F-NI)	Fire or smoke in or on the aircraft, in flight, or on the ground, which is not the result of impact.	
Runway Incursion (RI)	Any occurrence at aerodrome involving the incorrect presence of an aircraft, vehicle, or person on the protected area of a surface designated for landing and takeoff of aircraft.	
System Component Failure –Non-Power Plant (SCF-NP)	Failure or malfunction of an aircraft system or component other than the power plant.	
Turbulence Encounter (TURB)	In-flight turbulence encounter.	
Bird strike (BIRD)	Occurrences involving collisions/near collisions with bird(s).	
Navigation Errors (NAV)	Occurrences involving the incorrect navigation of aircraft on the ground or in the air	
System Component Failure- Power Plant (SCF-PP)	Failure or malfunction of an aircraft system or components related to the power plant.	

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Security related (SEC)	Criminal/Security acts which result in accidents or incidents (per Annex 13 to the Convention on International Civil Aviation).	
Wind shear	Flight into wind shear or thunderstorm	

NB: States may share any other occurrence category or national safety concern.

TEMPLATE FOR THE COLLECTION OF ACCIDENT, SERIOUS INCIDENT AND INCIDENT DATA AND SAFETY ANALYSIS

Name of State:

1- **Occurrences:** *The data to be collected be based on scheduled commercial operations involving Aeroplane having a Maximum Take-off Weight (MTOW) above 5700 kg.*

[illegible]

11	Navigation Errors (NAV)															
12	System Component Failure- Power Plant (SCF-PP)															
13	Security related (SEC)															
14	Wind shear															

States should provide the number of accident, serious incidents, and incidents related to each category mentioned in the template above for the past five years (2021-2025)

Scope: State of Occurrence

2- Brief- Safety data Analysis (Root-cause analysis, Trends, Low probability high consequence (LPHC) events if any, etc.)

3- Identified Top Five safety risks

4- Safety mitigations/Recommendations

TEMPLATE FOR THE COLLECTION OF ACCIDENT, SERIOUS INCIDENT AND INCIDENT DATA AND SAFETY ANALYSIS

Name of State:

1- Occurrences: *The data to be collected involving commercial helicopters operations*

[illegible]

	Errors (NAV)															
12	System Component Failure- Power Plant (SCF- PP)															
13	Security related (SEC)															
14	Wind shear															

States should provide the number of accident, serious incidents, and incidents related to each category mentioned in the template above for the past five years (2021-2025)

Scope: State of Occurrence

2- **Brief- Safety data Analysis (Root-cause analysis, Trends, Low probability high consequence (LPHC) events if any, etc.)**

3- **Identified Top Five safety risks**

4- **Safety mitigations/Recommendations**

Consolidated List of SEIs with their respective Safety Actions

SEI Code	SEI Name	Actions	Owner(s)	Status/Progress	Completion Date
Regional Operational Safety Risks					
Goal 1: Achieve a Continuous Reduction in Operational Risks					
G1-SEI-01:	Aircraft Upset in Flight (LOC-I)	A1- Guidance material on flight crew proficiency	IATA to be supported by Airbus	Planned 2026	2023- 2025
		A2- Advisory Circular: Mode Awareness and Energy State Management Aspects of Flight Deck Automation	IATA to be supported by Airbus	Planned 2026	2023- 2025
		A3- Conduct Upset Recovery capacity building activities	UPRT Workshop. Airbus, ICAO, Kuwait	Regional ICAO UPRT Workshop (jointly involving Airbus, ICAO, Kuwait) conducted in Kuwait 7-11 May 2023. /UPRT webinar conducted 2024. Completed	2023-2025
		A4- Develop guidance material on the air cargo safety	Oman	To be presented to RASG-MID/13 for endorsement. Completed	2023-2025
G1-SEI-02:	Runway Safety- Runway Excursion	A1- Support States to implement the Global Reporting Format (GRF) Methodology through capacity building activities.	ICAO and ACI	Completed for 2023/ continuous for 2024/2025	2023-2025
		A2- MID Region Action Plan/Milestones on the Global Reporting Format (GRF) Implementation.	ICAO	Completed for 2023/ continuous for 2024/2025	2023-2025
G1-SEI-03:	Runway Safety- Runway Incursion	A1- Conduct Capacity Building Activities on the Advanced Surface Movement Guidance and Control System (A-SMGCS)	ICAO To be supported by Euro-Control, FAA	Completed Conducted February 2023	2023-2025

SEI Code	SEI Name	Actions	Owner(s)	Status/Progress	Completion Date
		Implementation			
G1-SEI-04A1:	Controlled Flight into Terrain (CFIT)	A1- Advisory Circular: Instrument Approach Procedures Using Continuous Descent Final Approach Techniques.	IATA is supported by aircraft manufacturers	Planned 2026	2023-2025
		A2- Guidance for designing RNP Approach	ICAO and MID FPP	Completed. circulated	2023-2025
		A3- Advisory Circular: Crew Resource Management Training Programme (CRM)	IATA supported by Aircraft manufacturers	Planned for 2026	2023-2025
		A4- Awareness Material on the vulnerabilities of BARO-VNAV approaches and mitigation actions	ICAO	Circulated to all States 2024. Completed.	2023-2025
G1-SEI-04A2	5G Operations on Radar Altimeter	A1- Develop a guidance material on safeguarding measures to protect Radio Altimeter from potential harmful interference from 5G Operation	Radio Altimeter Action Group (RADALT AG) To be supported by Boeing	Completed Publication of the guidance material: MID DOC 15 edition 1.0 in May 2023.	2023-2025
		A2- Conduct a Webinar addressing the matter to raise awareness and promote the guidance material developed by the RADALT AG	ICAO and RADALT AG To be supported by Airbus & Boeing	Completed The webinar has been conducted.	2023-2025
G1-SEI-05B1:	MAC- Loss of Separation	A1- Conduct workshop to implement Civil-Military cooperation.	ICAO supported by States and International Organizations	At national level, workshop has been conducted in Iran in 2022 and follow up meeting was conducted in Aug 2023. In this respect the action plan has been developed and agreed. Completed	2023-2025
		A2- Conduct seminar on raising awareness among stakeholders related to the potential risk of MAC over high seas	ICAO supported by States, and international organizations	To be planned for 2025	2023-2025

SEI Code	SEI Name	Actions	Owner(s)	Status/Progress	Completion Date
G1-SEI-05B2:	GNSS Interference & Spoofing	A1: Raise awareness on the potential impact of GNSS interference on the aviation during the Civil-Mil Workshop	ICAO and IATA	The CMC Workshop is planned for July 2025. Postponed for 2026 due to security situation	2023-2025
		A2- Urge States to follow the reporting procedure agreed by MIDANPIRG Conclusion 19/4 when needed	ICAO	SL has been issued. Completed	2023-2025
		A3- Capacity Building on GNSS operations and GNSS RFI	ICAO and ACAA	Regional GNSS Workshop Completed. GNSS symposium planned for 2025	2023-2025
G1-SEI-05B3:	Ensure the Safe Operations of UAS (Drones)	A1- UAS iPack deployment	ICAO and States	If requested by States Completed	2023-2025
		A2- Organize symposium on Drones related subjects	ICAO and ACAA supported by FAA and Boeing	ACAA organized Drones symposium in Morocco during the period 4-5 October 2023. Completed/Continuous for 2025.	2023-2025
		A3- Conduct survey on States UAS regulatory framework	ICAO and States	To be circulated during 2025 in coordination with ICAO HQ. pending HQ Confirmation	2023-2025
		A4- Develop an AAM study	UAE	UAE presented WP during SEIG/6 meeting. Completed.	2023-2025
G1-SEI-05B4:	Expansion of ATS route Networks	A1- Conduct gap analysis to identify current ATS route networks gaps	ICAO and States	The required data and information have been gathered, and the dashboard was deployed. Completed.	2023-2025
		A2- Establishment of parallel unidirectional ATS routes (De-confliction)	ICAO and States	Establishment of the parallel airway at interface of Kuwait and Iraq is on process. In addition, Iran requested to establish new parallel ATS route between Iran and Iraq to accommodate regional traffic in the most safe and efficient manner. Completed.	2023-2025

SEI Code	SEI Name	Actions	Owner(s)	Status/Progress	Completion Date
Organizational Challenges/issues					
Goal 2: Strengthen States' Safety Oversight Capabilities					
G2-SEI-01:	Strengthening of States' Safety Oversight Capabilities	A1- Conduct Capacity Building Activities to promote effective implementation of SARPs	ICAO, States, International Organizations, and Industry.	USOAP workshops conducted 2023, 2024, and 2025. ACAO and Singapore CAA: an AOC certification & Flight Inspectors course conducted in Amman the 29 -2 Jun 2023. Completed/continuous for 2024. ICAO & GCAA Symposium: “The Future of Aviation safety and Aircraft Accident Investigation” in Dubai, during 3 to 4 May 2023. “The Prevention of Aircraft Accidents and Incidents through the Collection & Analysis of Safety Data & Information” Workshop held in Rabat, Morocco from 11 to 12 July 2023. Conference on “Assistance to Aircraft Accident Victims and their Families” (AAAVF 2024) conducted 8-9 May 2024. Aviation Safety and Aircraft Accident and Incident Investigation Symposium planned to be conducted this year in Abu Dhabi. ACAO and Singapore CAA conducted a course on resolution of safety issues CE8 in Amman the 19 -23 Jan 2025	2023-2025

SEI Code	SEI Name	Actions	Owner(s)	Status/Progress	Completion Date
		A2- Conduct technical assistance and NCLB missions to States , with focus on states with EI<80% as well as ANS, AIG, AGA, and OPS areas	ICAO and States	TAs conducted 2023 (Kuwait, Lebanon, Oman, Sudan, Libya). ANS Technical assistance to Kuwait, Sudan, Jordan and Lebanon conducted. Completed. NCLB Missions conducted for Egypt and Kuwait 2024 and 2025.	2023-2025
		A4 - Conduct a Capacity Building Activity for Aerodrome Inspectors (Training Course on Aerodrome Inspection) (Action addressed under G6-SEI-01 A5)	States (Qatar) and ICAO	Conducted February 2023. Completed.	2023-2025
		A5- Develop guidance material to assist MID Region States in the issuance of exemptions related to temporary deviations from standards	Qatar supported by Iran, Sudan, UAE, ACAA, and IATA	Completed To be endorsed during RASG-MID/13	2023-2025
		A6- Develop guidance material to support States for the conduct of remote surveillance	Qatar supported by Iran, Jordan, Saudi Arabia, Sudan, UAE, and ACAA	Completed To be endorsed during RASG-MID/13	2023-2025
		A7- Develop guidance material on the enhancement of understanding the concept of judicial enforcement for aviation inspectors	Qatar supported by Saudi Arabia and UAE	Completed To be endorsed during RASG-MID/13	2023-2025

SEI Code	SEI Name	Actions	Owner(s)	Status/Progress	Completion Date
G2-SEI-03:	Establishment of MENA ARCM Database	A1- Establishing a Platform for Sharing data for MENA ARCM Member States	ICAO, ACAO, and MENA ARCM Member States	ACAO has established a share folder as an initial step for sharing information. Completed	2023-2025
G2-SEI-04:	Enhance State Oversight on Dangerous Goods	A1- Dangerous Goods (DG) capacity building activities including Lithium batteries fire/smoke risk in cabin	ICAO, States, International Organizations, IATA, And Industry	Planned 2026	2023-2025
		A2- Develop guidance material on carriage and transport of Lithium batteries	IATA is supported by States, International Organizations, And Industry	Guidance material endorsed by RASG-MID/11 and circulated. Completed.	2023-2025
G2-SEI-05:	Human factors and Competence of Personnel	A1- Advisory Circular: Crew Resource Management Training Programme (CRM). (Action addressed under G1-SEI-04: CFIT).	IATA	Planned for 2026	2023-2025
		A2- Organize CBAT/EBT, Crew Resource Management Capacity building activities	ACAO, ICAO & Airbus,	. CBTA/EBT workshop conducted 25-26 Sep 2024. Completed.	2023-2025
		A3- Organize Team Resource Management Capacity building activities	ACAO, ICAO & Airbus	Planned for 2026	2023-2025
		A4- Conduct Fatigue Risk Management and Mental Health Best Practices Capacity building activities	ACAO, ICAO & Airbus	Webinar conducted 23 Sep 2024. Completed	2023-2025
		A5. Data analysis and Artificial intelligence study	UAE	Completed	
G2-SEI-06:	Impact of security on safety	A1- Organize seminar/Symposium/Workshop to exchange experiences and good	ICAO	Planned 2026	2023-2025

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SEI Code	SEI Name	Actions	Owner(s)	Status/Progress	Completion Date
		practices on assessing the risks and sharing of information related to the overflying of conflict zones in coordination with RASFG-MID and MIDANPIRG.			
		A2- Risk management on conflict zone workshop	ICAO/ACAO	Completed. Conducted in Cairo June	2023-2025
G2-SEI-07:	Managing cybersecurity risks	A1- Develop a Regional Action Plan to bridge the gap between ICAO Cyber Security Action plan and the implementation level of Cyber Resilience in the MID Region	ANS Cyber SeC Action Group ACAO AFCAC ECAC	Completed. Conducted 3rd ed of Interregional Seminar on « Innovation & Cybersecurity » in Casablanca/ Morocco, 17- 19 July 2024	2023-2025
		A2- Conduct activities on Cyber Security and Resilience- (Jointly ANS and AVSEC)	ICAO supported by Boeing	Completed conducted Nov 2023	2023-2025
		A3- Develop a MID Region Cybersecurity Action Plan	Cybersecurity Security Ad-hoc Group	Completed	2023-2025
G2-SEI-08:	Impact of COVID-19 pandemic- Safe return to operations	A1- Continued support to the aviation industry through MID-RPTF meetings/Activities, as needed	ICAO, States, International Organizations, and Industry	Completed Aviation medicine workshop conducted Feb 2023	2023-2025
		A2- Sharing of guidance material/best practices	ICAO, States, International Organizations, and Industry	Completed.	2023-2025
Goal 3: Implementation of Effective States Safety Programme (SSP)					

G3-SEI-01:	Implement effective Safety Management	A1- Conduct ICAO SSP/SMS Capacity building activities	SSP workshops for States. 2023 SMS & Flight Data analysis workshop for airlines. ACAO, Airbus and ICAO. ACAO, ICAO & MENA RSOO States	SSP training course and SSP workshop conducted. (Kuwait & Oman) 2023 SRM Workshop conducted 2024. SMS & Flight Data analysis workshop for airlines Conducted Nov 2023. Completed/Continuous for 2024. SSP workshops provided for UAE & Jordan. SRM workshop for Jordan Completed	2023-2025
		A2- Conduct SSP Technical Assistance missions	ICAO and States	Conducted to Egypt Jan2025 Completed	2023-2025
G3-SEI-02:	NASP Development & Implementation	A1- Conduct NASPs workshops & technical assistance missions	ICAO. 2023	Workshop conducted in Kuwait and Qatar 2023 & 2024. Completed/Continuous for 2025. To be conducted Back-to-back with RASG-MID/12 meeting	2023-2025
		A2- NASP iPacks deployment	ICAO	If requested by states. Completed	2023-2025
Goal 4: Increase Collaboration at the Regional Level					
G4-SEI-01:	Development and Implementation of	A1- Development and Implementation of MID-RASP 2023-2025 Edition	SEIG	Published May 2023. Completed	2023-2025

	MID-RASP				
G4-SEI-02:	Enhance collaboration between States, international organizations, and industry	A1- Develop and agree on joint work activities through MID-RCM meetings	ICAO, States, Regional Groups, International Organizations, and Industry	Completed Conducted Oct 2023	2023-2025
		A2- Support the establishment of MENA RSOO and its activities	ACAO, ICAO and States	States Signed the RSOO MoU on Dec 2023 and RSOO started its operations. Completed.	2023-2025
Goal 5: Expand the Use of Industry Programmes and Safety Information Sharing Networks					
G5-SEI-01:	Promoting the Use of industry Programmes	A1- Encourage IATA’s IOSA and ISAGO registrations through safety promotion	IATA	Completed	2023-2025
		A2- Encourage the implementation of ACI Airport Excellence (APEX) in Safety Programme	ICAO and ACI	Completed	2023-2025
Goal 6: Ensure the Appropriate Infrastructure is available to Support Safe Operations					
G6-SEI-01:	Certification of International Aerodromes	A1- Support States on the implementation of the ICAO Annex 14 requirements to achieve compliance with regards to Aerodrome Design and Operations, through capacity building activities.	ICAO and ACI	Four (04) activities have coordinated with ACI for 2024 (Implementation Status: Completed)	2023-2025
		A2- Enhance capacity building for States CAAs and Airport operators related to Aerodromes Certification through capacity building activities.	ICAO and ACI	Planned activity for 2025	2023-2025
		A3 - Deployment of iPack on Aerodrome Re-Start	ICAO and States	If requested by states Completed	2023-2025

		A4 - Support States in implementing aerodrome oversight/inspection mechanism through capacity building activities on Aerodrome Oversight	ICAO Supported by FAA	Planned activity for 2025	2023-2025
		A5 – Conduct a Capacity Building Activity for Aerodrome Inspectors (Training Course on Aerodrome Inspection)	States (Qatar) and ICAO	Conducted February 2023. Completed.	2023-2025
		A6 – Conduct a Wildlife Hazard Management Control capacity building Activities	ICAO, ACAO, WBA	Symposium planned Dec 2025 Completed	2023-2025
		A7- Conduct a Capacity Building Activity for States CAAs and airports regarding the introduction of ACR/PCR SARPS	ACAO, ICAO	Conduct an ICAO ACAO WS on ACR/PCR and SMS implementation, in rabat the 5 & 6 Jun 2024. Completed.	
G6-SEI-02:	Establish Runway Safety Team (RST) at International Aerodromes	A1- Conduct Runway Safety Go-Team (RST) assistance missions	ICAO. Supported RSP (Runway Safety Programme Partners)	Planned for 2025	2023-2025
		A2: Support States to implement the Global Reporting Format Methodology through capacity building activities: (Action addressed under G1-SEI-02: Runway Excursion).	ICAO and ACI	Completed for 2023/ continuous for 2025	2023-2025



INTERNATIONAL CIVIL AVIATION ORGANIZATION

**AVIATION TEMPORARY EXEMPTIONS GUIDANCE MATERIAL
FOR MID REGION STATES**

Compiled by the ICAO MID Regional Office	
Version 1.0	1 November 2025

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Example Checklist: Exemption Issuance Process

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Sample Exemption Application Form

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Risk Assessment Template for Exemption Evaluation

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Sample Exemption Approval Letter

1. Introduction and Purpose and Scope

- 1.1 Over the past decades, international civil aviation has achieved a high degree of safety harmonization, thanks in large part to risk-based decision-making and robust cooperation among stakeholders. However, new challenges (e.g. global health crises, technological changes) require even greater cooperation and harmonization to maintain safety performance. One such challenge is the consistent management of aviation exemptions – instances where States allow temporary deviations from ICAO Standards and Recommended Practices (SARPs) under controlled conditions.
- 1.2 The HLCC 2021 Safety Stream reviewed a proposal by Qatar (on behalf of Arab Civil Aviation Organization Member States) urging additional guidance for States when considering exemptions. It was noted that ICAO’s Universal Safety Oversight Audit Programme (USOAP) data showed a high rate of unsatisfactory Protocol Questions (PQs) related to exemptions, indicating that many States lack the basic capabilities or structured processes to properly assess and grant exemptions. In other words, audits found that numerous States did not have a formal or adequate system in place for managing exemptions, underscoring the need for a harmonized approach.
- 1.3 This guidance material provides MID Region States with an ICAO-aligned framework for the issuance of aviation regulatory exemptions. In extraordinary circumstances such as public health emergencies, natural disasters, conflicts, or operational exigencies (as experienced during the COVID-19 pandemic), Civil Aviation Authorities (CAAs) may need to grant temporary exemptions to certain aviation requirements to maintain continuity of operations. This document outlines the principles, processes, and tools to ensure that any such exemptions are granted only, when necessary, in a controlled manner that upholds safety and aligns with ICAO’s standards and recommended practices (SARPs).
- 1.4 The guidance is intended for use by regulators and policymakers in the MID Region to promote consistency and transparency in how exemptions are handled across different States. It covers the entire exemption lifecycle from initial request and evaluation through issuance, oversight of compliance with conditions, and eventual expiration or renewal of the exemption.
- 1.5 The need for a harmonized approach to aviation exemptions became evident during recent crises that disrupted normal regulatory compliance. The COVID-19 pandemic, for example, forced many States to allow deviations from training and medical requirements when travel restrictions and lockdowns made compliance impractical. In response, ICAO introduced the COVID-19 Contingency Related Differences (CCRD) and Targeted Exemptions (TE) system in 2020-2021 as a globally coordinated mechanism for States to notify temporary exemptions to certain Standards. While the specific pandemic-related processes (such as the TE online portal) were time-bound, the broader lesson is clear: States should have a robust framework in place to evaluate and issue exemptions before unforeseen events occur. By learning from these experiences and ICAO guidance (e.g. references in ICAO Doc 9734 Part A and Doc

9859 on managing regulatory compliance in crises), MID Region CAAs can strengthen their preparedness for granting exemptions without compromising aviation safety or international obligations.

- 1.6 This manual is organized to mirror a structured approach, beginning with foundational principles (Section 2) and preparedness (Section 3), then detailing a step-by-step process for handling exemption requests (Sections 4 and 5), followed by post-issuance oversight (Section 6). Best practices and a concluding remark are provided in Sections 7 and 8. Several annexes (appendices) offer practical tools, including a checklist for the exemption issuance process and sample templates (application forms, risk assessment matrix, exemption letter, and notification formats). States are encouraged to adapt these templates to their national contexts. The goal is to ensure that any exemption granted by a MID State's CAA is justified, safe, transparent, and time-bound, and recognized and communicated appropriately within the international aviation system.

2. Framework for Aviation Exemptions

- 2.1 Alignment with ICAO Standards: Any State-issued exemption must be embedded within the broader obligation to comply with ICAO SARPs under the Chicago Convention. States remain responsible for safety oversight (ICAO Critical Element 7) and for resolving safety issues (Critical Element 8) even when granting regulatory relief. In practice, this means that before granting an exemption, the CAA should verify whether doing so would result in non-compliance with an ICAO Standard. If it would, the State must be prepared to notify a difference to ICAO under Article 38 of the Convention. All exemptions should be consistent with the intent of the relevant ICAO Annex provisions – granting relief only to the extent necessary and with mitigations to achieve an equivalent level of safety. By aligning the national exemption process with ICAO's expectations, MID States ensure that safety is not compromised and that international transparency is maintained. (For example, if a State grants an exemption allowing flight crew to extend the interval of proficiency checks beyond the limit in Annex 1, that difference should be filed with ICAO through the EFOD system or appropriate channel and shared with other States as needed.)
- 2.2 Principles for Granting Exemptions: Exemptions are policy tools of last resort. They are intended for use under exceptional conditions where strict compliance with a requirement is impractical or contrary to the public interest, and where an equivalent level of safety can be achieved through alternative means. Key guiding principles include:
 - Necessity and Justification: The applicant (airline, organization, or individual) must demonstrate a clear operational necessity for the exemption. Convenience or cost savings alone are not sufficient justification. The CAA should be convinced that without the exemption, there would be a significant disruption or an inability to carry out vital aviation activities.

- **Safety Equivalence:** There must be evidence-based assurance that granting the exemption will not degrade safety. Typically, this is shown via a safety risk assessment (see Section 4.3) that identifies hazards introduced by deviating from the rule and implements mitigations to control risk to an acceptable level. The alternative measures proposed should aim to provide a level of safety equivalent to full compliance with the original requirement.
- **Temporariness and Scope:** Exemptions should be temporary in nature and limited in scope. They are not a mechanism to permanently bypass regulations. Each exemption should have a defined effective period and should apply only to specific entities, operations, or products as needed. Open-ended or broadly generalized exemptions are to be avoided. If a long-term regulatory alleviation is needed, the proper course is to amend the regulation or pursue differences at the international level, not to continually extend exemptions.
- **Public Interest and Benefit:** The CAA should weigh the public interest benefits of granting the exemption (e.g. sustaining critical air services, enabling humanitarian flights, facilitating economic recovery) against any potential negative impact. Exemptions should support the continued safe operation of aviation activities that benefit the public or industry, especially in emergency or unusual situations.
- **No Undue Advantage:** The exemption process should ensure fairness. An exemption must not grant an unfair competitive advantage. If multiple entities face the same challenge, the CAA should be prepared to handle similar requests in a consistent manner. Clear criteria help avoid perceptions of favoritism or lowering standards selectively.

2.3 Scope of Application: This guidance applies to exemptions from national civil aviation requirements (regulations, rules, or implementing standards issued by the State). Such requirements may be derived from ICAO SARPs or from additional State regulations. The types of requirements that might warrant exemptions include:

- **Personnel Licensing and Training requirements:** e.g. extending the validity of licenses, medical certificates, or training/check intervals under strict conditions (as many CAAs did during COVID-19 for pilot proficiency and medicals).
- **Aircraft Operations and Airworthiness requirements:** e.g. authorizing a ferry flight with an overdue maintenance item under specified limitations, or permitting operation in certain airspace with temporarily inoperative equipment when normally prohibited by regulations.
- **Airport and ANS regulations:** e.g. temporary deviation from an airport operating standard or an air traffic service requirement due to infrastructure issues or emergencies, provided safety is maintained by other measures.

- Any other safety requirements where rigid adherence is temporarily impractical but equivalent safety can be assured.

However, not all rules are subject to exemption. Safety-critical standards should rarely be exempted unless there is absolutely no alternative and the case is compelling. For example, basic aircraft airworthiness criteria or critical operational procedures should not be compromised. Each State should define which provisions cannot be exempted (or set high approval thresholds for them) in its policy. Additionally, if an exemption request involves multiple domains (e.g., personnel licensing and ops specs deviations together), the CAA should ensure a coordinated evaluation across all affected departments.

2.4 Not a Substitute for Compliance: Exemptions are a contingency tool, not a substitute for effective compliance or timely regulatory updates. MID States are cautioned not to use exemptions as a loophole to avoid implementing requirements or as a long-term solution for outdated regulations. Whenever an exemption is granted, it should trigger a later review: Why was exemption necessary? If it was due to an impractical or overly stringent rule, the State may consider amending that regulation through the normal rulemaking process. Likewise, operators should not rely on repeated exemptions in lieu of compliance; they are expected to have robust planning to meet regulatory obligations. In essence, the use of exemptions should reinforce the regulatory system's flexibility in extraordinary situations while preserving its integrity. Continuous or careless use of exemptions could erode safety or international trust, so they must remain the exception rather than the norm. Once conditions permit or the underlying issue is resolved, the goal is always to return to full compliance or to implement permanent regulatory solutions if needed, rather than extending exemptions indefinitely.

3. *Regulatory and Organizational Preparedness*

3.1 The CAA's authority to grant exemptions should be clearly established in the State's civil aviation law or regulations. Typically, there will be a provision empowering the CAA (or a designated senior official, such as the Director General of Civil Aviation) to exempt compliance with specific requirements under defined conditions. States should review their primary aviation legislation and operating regulations to ensure that:

- The scope of allowable exemptions is defined (which regulations can be exempted and which cannot, or any general criteria mandated by law).
- The law requires that an exemption may only be granted if it is in public interest and will not compromise safety (some States explicitly write these criteria into the legal text).

- The law or a policy document outlines the procedure for granting an exemption (application, review, record, etc.), or empowers the CAA to establish such procedure via guidance material (like this document). If necessary, States should update their regulations to address any gaps – for instance, adding a regulation that says “The Authority may exempt compliance with a requirement of these regulations in individual cases, subject to such conditions as the Authority deems necessary in the interest of safety.” All exemptions granted should cite the specific legal provision that authorizes the CAA to do so. This legal clarity protects both the State and the operator, ensuring that the exemption is enforceable and recognized under the law.

3.2 State Policy and Evaluation Criteria: Beyond the bare legal authority, CAAs need a clear internal policy or written procedures on how to evaluate and decide on exemption requests. This internal guidance (often an inspector handbook or a policy manual) should cover:

- **Standard Criteria:** A set of criteria that must be met for any exemption to be approved (e.g., “no acceptable alternative means of compliance available,” “meets equivalent safety through mitigation,” “limited duration,” etc.). These criteria create consistency. For instance, the policy may state that safety risk assessment demonstrating an acceptable level of safety is mandatory for approval.
- **Approval Levels:** Define who within the CAA can approve exemptions. Minor technical exemptions might be approvable at the department head level, whereas major exemptions (especially those affecting international standards or multiple organizations) might require Director General or even Ministerial approval. Clear delegation of authority avoids confusion during urgent situations.
- **Process Steps:** Lay out the steps the CAA will follow when an application is received (screening, assignment to technical experts, review meetings, safety analysis, decision, documentation). A flowchart or checklist (like Appendix 1 of this guidance) can be part of the policy.
- **Documentation and Justification:** Emphasize that every exemption decision must be fully documented, including the justification for granting or denying, the analysis performed, and any special conditions imposed. This creates an auditable trail and knowledge base for future cases.
- **Consistency and Precedents:** The policy should task a focal point (e.g., a regulatory standards department) with maintaining a log of all exemptions granted, to monitor trends and ensure consistency. If a similar request was handled in the past, the CAA should apply a consistent approach unless circumstances have changed.

By formalizing such a policy aligned with ICAO guidance (e.g. drawing from principles in ICAO Doc 9734 Part A, Chapter 3 on compliance and enforcement), States ensure that inspectors and decision-makers have a common understanding of how to handle exemptions. This reduces subjectivity and promotes transparency and fairness in the exemption process.

3.3 Industry Communication and Transparency: It is important that the aviation industry (airlines, service providers, license holders) clearly understands the State's expectations regarding exemptions. The CAA should communicate to industry stakeholders that:

- Exemptions are exceptional: Through advisories or guidance to industry, emphasize that organizations must plan to comply with all regulations and should not assume that exemptions will be granted. Good safety management includes contingency planning that does not solely rely on regulatory relief.
- Application Process: Provide accessible information on how to apply for an exemption, including any standard application form (such as the template in Appendix 2) and the required lead time. For example, a State might publish a notice that all exemption applications should be submitted at least 60 or 90 days in advance of the needed effective date, except for unforeseen emergency cases.
- Information Required: Inform applicants that comprehensive justification and supporting evidence (safety risk assessments, impact analysis, etc.) must accompany any request. If the CAA has published guidance material or a checklist for industry on preparing exemption requests, reference it. This sets the expectation that frivolous or poorly substantiated requests will not be entertained.
- Transparency of Outcomes: States may consider publishing summaries of exemptions granted (while respecting any confidential operational details) so that industry peers and the public are aware of significant deviations. Some CAAs issue Exemption Bulletins or include exemptions in their official gazette or website. Transparency helps maintain trust that exemptions are being used responsibly and not to give unfair advantage.

Open communication ensures that when a genuine need for an exemption arises, the applicant knows how to proceed and the CAA receives better-quality submissions, thereby speeding up the evaluation. It also deters misuse of the exemption process by making it clear that requests will undergo rigorous scrutiny.

3.4 International Notification Obligations: A critical aspect of preparedness is having a mechanism to fulfill international obligations when an exemption affects compliance with ICAO Standards. Each CAA should coordinate internally (e.g., between the

technical department handling the exemption and the department or National Continuous Monitoring Coordinator responsible for ICAO compliance) to ensure that:

- **Difference Notification:** If an exemption result in a temporary difference from an ICAO Standard, the State is ready to notify ICAO. This could be via the Electronic Filing of Differences (EFOD) system or a formal letter, depending on ICAO requirements. Appendix 5 of this document provides a sample format for notifying ICAO of a difference due to an exemption. Timely notification keeps the ICAO registry up to date and informs other States of potential impact (for instance, if a neighboring State's inspectors know that pilots from your State might have extended medical validity, they can take that into account).
- **Mutual Recognition and Coordination:** If the exemption involves cross-border operations, the CAA should communicate with other affected States or regional bodies. For example, if a MID State grants an exemption that allows its airline to operate in another region under alleviated requirements, it is prudent to notify the Civil Aviation Authorities of those destination States. This could be done via a formal letter or through regional coordination groups (like the MID Region Safety or Operations group). Standardized notification formats (see Appendix 5) help streamline this communication.
- **Publication in Aeronautical Information (if needed):** In some cases, if the exemption could impact foreign operators or flight planning (e.g., an exemption related to airport operational standards or airspace procedures), it may need to be promulgated via NOTAM or AIP Supplement so that all users are informed. The CAA's procedure should include liaising with the AIS office to issue such notifications when relevant.

By predefining these steps, States ensure that granting an exemption does not inadvertently put them in breach of international responsibilities. Instead, even when using flexibility, they remain aligned with the cooperative spirit of ICAO standards and avoid surprises to other States.

3.5 Resource and Responsibility Allocation: Handling exemption requests can be complex and time-sensitive, especially in emergencies. CAAs should allocate adequate resources and define responsibilities in advance:

- **Dedicated Team or Focal Points:** Identify a unit or individuals responsible for managing exemption applications. For example, a Regulatory Affairs or Standards section might act as the coordinator, logging incoming requests and convening the appropriate technical experts to evaluate each case. This focal point ensures consistency and that timelines are tracked.

- **Technical Expertise:** Depending on the subject of the exemption, different technical inspectors or engineers will need to be involved (flight operations inspectors for ops matters, airworthiness engineers for technical waivers, medical assessors for licensing exemptions, etc.). The CAA should maintain a roster or protocol for quickly assembling a multidisciplinary review team. Complex cases might require input from multiple departments (e.g., an exemption for extended twin-engine operations might involve both airworthiness and operations specialists).
- **Risk Assessment Capability:** Ensure the CAA staff are equipped to perform or evaluate safety risk assessments. This may involve having risk analysis tools or templates (see Appendix 3 for a generic risk assessment template), as well as training staff in risk-based decision making (see 3.6 Training). In some cases, the CAA might establish a safety risk panel that can be convened to collectively examine higher-risk exemption proposals.
- **Administrative Support:** Given that exemptions often involve formal letters, records, and possibly legal orders, administrative support is needed to prepare documents correctly and maintain the exemption register. The CAA's secretariat or legal office might help draft the official exemption instrument text to ensure it's unambiguous and legally sound.
- **Emergency Procedures:** Include in your planning the scenario of urgent exemption needs outside normal office hours or during crisis periods. Assigning on-call contacts or an emergency procedure (e.g., a fast-track approval by the DG with subsequent technical analysis) can be valuable. The key is to avoid panicked, ad hoc processes by having a pre-thought-out plan, even if abbreviated, for emergency cases.

3.6 Training and Competency Development: As part of preparedness, MID States should train their personnel on the exemption process. This ensures that staff at all levels understand their roles and how to uphold safety during the exemption process:

- **Inspector Guidance and Workshops:** Develop guidance material for inspectors and technical staff on evaluating exemptions (aligned with this document). Conduct workshops or briefing sessions to walk through hypothetical exemption scenarios. For example, simulate an airline requesting an exemption for extended pilot flight hours, and have the team practice evaluating it, doing a risk assessment, and drafting conditions. Such exercises build competency and confidence.
- **Risk Management Training:** Since risk assessments are central to exemption decisions, provide training (or refresher courses) in safety risk management, as per ICAO Doc 9859 (Safety Management Manual) principles. Inspectors

should be comfortable reviewing an operator's risk mitigation proposal or creating one if the operator hasn't provided a sufficient assessment.

- **Legal and Communication Training:** Ensure those drafting exemption documents or communicating decisions are familiar with the correct terminology and tone. The exemption letter (Appendix 4 provides an example) is an official legal document; errors or ambiguities in it could create enforcement problems. Training can be provided on how to write clear conditions and articulate the regulatory basis. Similarly, staff should know how to communicate with industry diplomatically – e.g., how to explain a denial of an exemption request with factual reasoning.
- **Continuous Learning:** Encourage staff to keep abreast of international best practices regarding exemptions. ICAO, EASA, and other bodies sometimes issue updated guidance or case studies (for instance, lessons from the COVID-19 Targeted Exemptions experience). By staying updated, the CAA can refine its own processes. A feedback mechanism (see Section 6.6 Post-Exemption Review) can also be part of training, wherein after each major exemption case, the team debriefs what was learned and updates procedures accordingly.

By investing in preparedness across legal, procedural, resource, and training dimensions, MID States can handle exemption needs proactively. This upfront work pays off when a request arises, as the CAA can respond swiftly but thoughtfully, rather than scrambling to invent a process on the fly. It embeds resilience in the State's safety oversight system, ensuring continuity of aviation activities even under duress, without sacrificing the rigor of oversight.

4. Process for Exemption Application and Evaluation

When an entity seeks an exemption, a structured process helps ensure thorough evaluation and consistent handling. This section (Section 4) covers the pre-issuance phase – from the moment a request is received up to the point a decision is ready to be made, but before the official exemption is issued. Following sections will cover the issuance and post-issuance phases.

4.1 Submission of Exemption Requests: The process typically starts with the **applicant** submitting a formal request to the CAA. The CAA should require that all exemption requests be made **in writing**, using an official form or letter that captures necessary details. Appendix 2 provides a *Sample Exemption Application Form* that States can adopt or tailor. Key aspects of this step include:

- **Who May Apply:** Clarify that only authorized representatives of the affected certificate holder or organization (or the individual, if it's a licensee) may submit the request. For instance, an airline's post holder or quality manager would apply on behalf of the airline, providing their contact information and accountability.

- **Content of Application:** The application must clearly identify the specific requirement from which exemption is sought (cite the exact regulation, rule, or directive number and paragraph). It should detail the scope of relief (for example, “to allow XYZ Airlines to operate aircraft with an out-of-interval navigation database for up to 5 days beyond the requirement of regulation ABC”). The applicant should specify the duration of exemption needed (start and end date) and the reason it is needed. Additionally, the applicant should attach or outline their proposed safety case/justification, including any risk assessment and mitigation strategies they will implement. All relevant supporting documents (e.g., technical analysis, contingency plans, evidence of why they cannot comply) should be included.
- **Lead Time:** Unless it’s an unforeseen emergency, applications should be submitted well in advance of the needed effective date. Many States require applications at least 30-90 days prior. This lead time should be communicated to industry (as noted in 3.3). If an application arrives late, the CAA will need to decide if it’s due to genuinely unforeseeable events or just poor planning; poor planning alone is usually not an acceptable reason for urgency (i.e., “lack of planning on your part does not constitute an emergency on our part” approach). However, emergency cases (e.g., a sudden discovery of a safety issue grounding aircraft unless an immediate exemption is given for a one-time ferry flight) should still be processed expeditiously, albeit with no compromise on necessary safety checks (see 4.5).
- **Acknowledgment:** The CAA should acknowledge receipt of the application in a timely manner. An acknowledgment letter or email typically outlines the next steps, provides a reference number for the request, and if possible, an estimate of timeline for a decision. This assures the applicant that the request is in process and sets expectations.

4.2 Preliminary Screening of Applications: Once received, the exemption request undergoes a preliminary review to ensure it is complete and within the CAA’s purview:

- **Completeness Check:** The CAA (through the designated focal point or office) should verify that the application contains all required information and documentation. If critical details are missing – for example, the applicant failed to clearly state which regulation or did not include a justification – the CAA should promptly request additional information. As a policy, incomplete applications may be put on hold or even rejected if the applicant cannot or will not furnish the necessary details. Section 6.3 of the sample application form (Appendix 2) lists the typical information required. The CAA might use a checklist internally to mark off that each required item is present.

- **Scope and Validity Check:** The screening also determines if the request is asking for something that can legally be granted. If, for instance, the exemption sought is for a requirement that by law cannot be exempted (perhaps certain safety requirements have no exemption provision), the CAA should recognize this early. Alternatively, the request might pertain to another authority's jurisdiction (e.g., something that actually requires approval from a different State's CAA or a different government agency). In such cases, the CAA should inform the applicant accordingly and not proceed down the normal process.
- **Assign to Technical Experts:** If the request passes the above checks, the coordinator assigns it to the appropriate technical department(s) for in-depth evaluation. For example, if an airline requests an exemption from a flight duty time limitation, this goes to Flight Operations inspectors; an aircraft equipment requirement exemption goes to Airworthiness; if it's about airport standards, assign to the Aerodrome Safety team, etc. For multi-faceted requests, a joint team may be formed. At this stage, set an internal timeline – for instance, the technical evaluation team should convene or report back within X days. Marking the request as urgent (if applicable) also happens now.
- **Risk Category (Optional):** Some CAAs do an initial risk categorization of the request – e.g., classify as “minor”, “moderate”, or “significant” impact – to determine the level of scrutiny needed. A request with potentially high safety impact might trigger a more formal review board or require higher approval authority (see 3.2 on Approval Levels). This triage helps allocate effort where it's most needed.

4.3 **Safety Risk Assessment:** Conducting a thorough safety risk assessment is the cornerstone of the exemption evaluation process. At this stage, the technical evaluators (with input from the applicant as needed) will analyze what safety risks arise from granting the exemption and whether those risks can be mitigated to an acceptable level. Key points in this step:

- **Identify Hazards:** Examine the exact nature of the deviation. What scenarios or hazards could arise if the normal rule is not followed? For example, if extending a pilot's license validity by one month (exemption from license renewal timeline), hazards might include pilot proficiency decay or undetected medical issues. If deferring a maintenance inspection, hazards could be component failure. List all credible failure modes or safety consequences tied to the exemption.
- **Assess Severity and Likelihood:** For each hazard scenario, assess the severity of the worst credible outcome and the likelihood of that outcome during the exemption period. Use the State's standard risk matrix (often part of its State Safety Program) or the methodology the CAA typically applies for safety assessments. The goal is to determine the risk index or level (e.g., high,

medium, low) of each hazard without additional mitigation. This establishes the baseline risk of granting the exemption as requested.

- **Mitigation Measures:** Identify and evaluate mitigations that can reduce risk. Often, the applicant will propose some mitigations in their request (e.g., additional training, more frequent checks, operating limitations). The CAA should critically assess these: Are they adequate and realistic? The CAA may require additional conditions as mitigations (for instance, “granting the exemption provided the aircraft is only used for cargo flights, not carrying passengers” or “the pilot must fly with a fully qualified co-pilot and not be pilot-in-command during the extended period”). Think creatively and cautiously about what measures would offset the safety gap introduced. This may involve consulting manufacturer guidance or other States’ practices in similar situations.
- **Residual Risk and Acceptability:** After applying the mitigations, reevaluate the risk. Does it come down to an acceptable level (typically defined by the State’s safety risk tolerability criteria)? If the residual risk is still too high, the exemption cannot be safely granted in its current form – the CAA might then consider if any further mitigations are possible or if the request must be denied. Document the final assessment of risk for the exemption. Ideally, the risk assessment process and conclusion should be captured in a formal report or template (Appendix 3 provides a format example for recording this evaluation).
- **Use of Expertise:** In complex cases, the CAA may convene a small expert panel or involve the State Safety Program’s risk management unit to peer-review the assessment. Particularly novel or high-risk proposals benefit from multiple eyes. It’s also beneficial to check if ICAO or other authorities have published any guidance on the specific topic – for example, during COVID, ICAO published safety operational measures for extending crew validity, which can be referenced as benchmarks for risk mitigations.

Throughout this step, maintain communication with the applicant. If certain mitigations are needed or if aspects of their proposal seem insufficient, the CAA can go back and ask the applicant to refine their risk mitigation plan. This iterative communication not only improves the safety outcome but also ensures the applicant is aware of possible conditions and is prepared to implement them.

4.4 Consultation and Coordination: Depending on the exemption’s complexity and impact, broader consultation may be warranted before a decision is made:

- **Internal CAA Consultation:** Within the CAA, ensure all relevant sections provide input. For example, even if the Flight Operations department is lead for a pilot licensing exemption, the Licensing office and perhaps the Medical unit should be consulted to weigh in on consequences and consistency with policies.

The legal department should review any novel exemption for compliance with law. An internal meeting or case conference can be very useful: gather all stakeholders to discuss the draft assessment and proposed decision. This also helps anticipate any enforcement or implementation issues (e.g., how to surveil compliance with exemption conditions).

- **Consultation with Applicant:** It can be beneficial to hold a technical meeting with the applicant (or at least have discussions) especially if the CAA is inclined to grant the exemption with conditions. In this meeting, the CAA can ensure the applicant understands the proposed conditions and is capable of meeting them. If the applicant finds any condition unworkable, they can discuss alternatives. This collaborative approach, while maintaining the CAA's authority, often leads to a more robust set of safety measures. It also helps the CAA gauge the applicant's commitment to safety – an applicant unwilling to engage seriously in risk discussions may not merit the exemption.
- **Regional Coordination:** In cases of exemptions that might set precedents or have regional implications, CAAs in the MID Region might coordinate with each other (through the ICAO MID Office or regional safety groups). For example, if multiple States are facing similar issues (like an inability to renew licenses due to a regional training center closure), a coordinated approach can ensure harmonization. During COVID-19, such coordination was common via ICAO regional offices to align on exemption policies. A MID State might reach out to another State that dealt with a similar request for advice or data (keeping in mind not to disclose any confidential info without permission).
- **External Consultation (if applicable):** Sometimes, consulting other stakeholders is prudent. For a maintenance-related exemption, maybe consult the aircraft manufacturer or maintenance organization for their expert view or recommended limits. If an exemption could affect airlines from other States (e.g., a change in airport requirement), consult representatives or ICAO if needed. Always consider if the exemption touches on multilateral agreements or requirements (for example, EU-based rules if a State is part of an agreement, or if an operation is code-share with a foreign carrier, etc.). Gathering input ensures no blind spots in the decision.

4.5 Timelines and Urgent Requests: The processing time for an exemption should be commensurate with its urgency and complexity. Under normal circumstances, the CAA should strive to complete evaluation and decision within a standard timeframe (e.g., 30 days) to provide predictability. However, urgent and emergency requests require flexibility:

- **Expedited Process:** If an exemption is needed on very short notice due to unforeseen events (e.g., an aircraft stranded needing a one-time flight, sudden unavailability of a required facility, etc.), the CAA may adopt an expedited review. This might involve forgoing some steps (like full team meetings) but

compensating by having key personnel focus intensively on the case for a few hours or a day. The Director General or delegated official might authorize proceeding with minimal bureaucracy, provided the safety analysis is still done. In extreme cases, a verbal preliminary approval might be given (to get an aircraft moving, for instance), but it must be followed by the written exemption document as soon as possible.

- **Justification for Urgency:** It's important that the reason for urgency is documented. As noted, poor planning by the applicant (e.g., they "forgot" to apply earlier) is generally not a valid reason to skip steps. However, a genuine emergency or last-minute event is. Documenting this ensures transparency and accountability for why a fast-track was used.
- **Adequate Assessment even if Fast:** Even under pressure, do not skip the fundamental assessment of risk. If time is extremely short, lean on expert judgement and any analogous cases or existing data. The CAA might impose very restrictive conditions as a precaution when there's little time for deeper analysis. For example, if maintenance can't be done on time due to a sudden issue and a ferry flight exemption is needed, the CAA can say: "Okay, one flight allowed by special permit, daytime only, no passengers, with specific inspections done prior to flight" – essentially layering conservatism to mitigate unknowns.
- **Record of Decision:** After handling an urgent case, conduct a quick internal review to capture any lessons (did the CAA get all info needed, were communications clear, etc.?) which can improve future responses. Also, make sure the exemption is entered into the official log even if done quickly.

4.6 Decision-Making Criteria: Once all information is gathered (from the application, risk assessment, and consultations), the CAA's decision-makers must apply consistent criteria to arrive at approval or denial. The State's established criteria (from Section 3.2) will guide this. Generally, an exemption should only be approved if:

- The situation and evidence satisfy the necessity test (it is needed to achieve an outcome in the public interest or to avoid an undue hardship that wasn't self-created).
- The safety risk is acceptable with the identified mitigations in place (i.e., equivalent safety can be maintained). This typically must be clearly demonstrated in the risk assessment.
- The exemption's duration and scope are limited to the minimum required to address the need. If the request was broader or longer than necessary, the CAA might decide to approve a narrower version (e.g., approve for 3 months instead of 6, or only for certain operations instead of all).

- The applicant has a good compliance track record (if an applicant has a history of violations or failing to meet conditions, the CAA can factor that in – a privilege like an exemption requires trust that the operator will adhere to the alternate measures).
- If applicable, the exemption would not cause the State to violate international agreements beyond what can be managed (if it does, perhaps it cannot be granted at all without higher-level coordination). Conversely, reasons to deny an exemption include: failure to demonstrate equivalent safety, insufficient justification, feasible alternatives exist (so exemption not truly needed), or the CAA lacks authority to grant it. The decision should ideally be made by the person/body at the appropriate authority level. For instance, technical staff present the case and make recommendations to the Director General or a committee if required. A clear recommendation (provides conditions or deny) should be made. Any divergent opinion among the evaluators can be noted, but ultimately the authorized decision-maker's ruling stands.

4.7 Documentation and Record-Keeping: Before moving to issuance, ensure that the entire evaluation process is well documented. Prepare an Exemption Evaluation Report or file that includes: the original application, records of all communication with the applicant, the completed risk assessment worksheet, minutes or notes from any consultation meetings, and the final recommendation/decision briefing.

- This will form the basis of the exemption document text and is kept in CAA archives. Good documentation is vital for accountability and for any future reference, especially if the exemption is renewed or if another CAA or ICAO inquires about how the decision was made. In addition, decide on a unique Exemption Reference Number or ID that will be used on the official letter and in the tracking system.
- Many CAAs number exemptions serially by year (e.g., “EX-2025-005”). Having a reference number helps link all documentation and is useful for tracking and retrieving the case later.
- By the end of the Section 4 process, the CAA should have a clear outcome of the evaluation: either to prepare an exemption for issuance (with specific conditions drafted) or to prepare a letter of denial.
- The groundwork laid here ensures that any exemption granted is solidly justified. We now move to Section 5, which deals with the execution of the issuance (the formal granting and communicating of the decision).

5. Issuance of Exemptions: Execution

This section describes how an approved exemption is formalized, communicated, and put into effect. Even after deciding in principle to grant an exemption, careful execution is important to ensure the exemption is legally valid and clearly understood by all parties.

5.1 Drafting the Exemption Instrument: The exemption is typically issued in writing as an official Exemption Letter or Order on the CAA's letterhead (see Appendix 4 for a Sample Exemption Approval Letter). Drafting this document requires precision:

- **Addressing and References:** The letter should be addressed to the applicant (e.g., the accountable manager of the airline, or the individual if applicable) and clearly reference their original request (including date of request and any reference number they provided). It should also reference the legal authority under which it's granted (for example, "Pursuant to Article X of the Civil Aviation Law and Regulation YYY-123,").
- **Grant and Scope:** A concise statement granting the exemption should be made, specifying what requirement is being exempted and to whom it applies. For instance: "The Civil Aviation Authority hereby grants XYZ Airlines an exemption from the requirement of [Regulation citation] which stipulates [the rule], to allow [describe what is allowed]." If the exemption is only for certain aircraft, personnel, routes, or operations, detail that.
- **Effective Period:** Clearly state the start date and end date of the exemption's validity. Use absolute calendar dates when possible (e.g., "effective from 01 December 2025 until 31 March 2026, inclusive"). If it's event-based (e.g., "until the aircraft reaches base for repair on its next flight"), try to also include a backstop date. If the exemption is to end on occurrence of an event, mention how that will be confirmed.
- **Conditions:** This is a critical part – list all the conditions or limitations attached to the exemption. They should be numbered or bulleted for clarity. Conditions are measures the operator must comply with to use the exemption. Examples include: additional inspections, training, reporting requirements, restrictions on operation (like VFR only, or limited altitude), carrying copies of the exemption letter on board, etc. Essentially, any mitigation from the risk assessment that needs to be mandatory should be written as a condition. Also, a general condition often included is that the operator must immediately inform the CAA of any safety incidents or significant changes related to the exemption.
- **ICAO Difference Note (if relevant):** If the exemption results in a difference from an ICAO Standard, the letter may include a statement acknowledging that and that the State will notify ICAO. However, some CAAs prefer to handle ICAO notification separately and not burden the applicant with that detail. If included, it might read: "This exemption constitutes a temporary difference from [Annex X, Chapter Y, Standard Z] which will be notified to ICAO in accordance with Article 38." This signals transparency.

- **Consequences and Miscellaneous:** Include statements such as: the exemption is granted based on the facts and mitigation presented – if those change or if the conditions are not met, the exemption may be withdrawn or becomes invalid. Also clarify that when the exemption expires, full compliance with the original requirement must resume. The letter can also note if the exemption is non-transferable (most are; it applies only to the named party).
- **Signature:** The letter must be signed by the authorized person (DG or whomever is designated). It should carry the official seal or other authentication if required by national procedures.

Ensure the draft goes through an internal review (e.g., by legal or a senior inspector) to catch any ambiguities. Wording is important – conditions especially must be enforceable and clear. For instance, saying “the operator should try to do X” is not enforceable; instead say “the operator shall do X.”

5.2 Approval by the Competent Authority: The draft exemption letter, along with the evaluation dossier, is then submitted to the competent authority for final approval and signature. Depending on the State’s setup:

- This could be the Director General of Civil Aviation or a board/committee if one is established for such decisions. The approving authority reviews the materials to ensure they are satisfied with the justification and conditions. They may ask questions or request modifications (for instance, adding a condition or shortening the duration if they feel it necessary).
- Once satisfied, they sign the exemption letter. The date of signature is usually the effective date unless otherwise specified. (If there’s a delay between signature and needed effect, the letter should clarify that it’s effective from a later date, as mentioned in 5.1).
- It’s good practice to have at least one other official witness or countersign or initial the document for record integrity, though not always required.
- After signature, the exemption is now officially granted, but not yet in effect for the applicant until communicated.

5.3 Communicating the Decision: Communication must be prompt and clear:

- **To the Applicant:** The signed exemption letter (and any certificate or official order document that accompanies it) should be transmitted to the applicant immediately. Ideally this is done via official means – a scanned signed letter emailed (for speed) followed by a hard copy delivered, or an official electronic signature system if in place. Accompany the letter with a brief cover note if

needed, thanking for their cooperation and reiterating any next steps (like compliance monitoring activities, see Section 6.1). If the exemption is denied instead, a denial letter would be sent that outlines the reasons for refusal (e.g., insufficient safety justification). In the case of denial, the applicant might be advised on what they can do (if anything) to meet requirements or if they can re-apply with different parameters.

- Within the CAA: Inform all relevant inspectors and departments about the decision. For example, if a flight ops exemption was granted, the ops inspectors overseeing that operator should have a copy and incorporate the new oversight tasks (ensuring conditions are met) in their surveillance plan. If the exemption affects other sections (air traffic, aerodromes), inform them too. Circulate internally perhaps via a memo or include in daily briefings. This ensures the whole CAA speaks with one voice and anyone interacting with the operator is aware of the special circumstances.
- Other Stakeholders: Depending on the nature of the exemption, other stakeholders might need notification. For instance, if an exemption is granted to an airline that allows something unusual that airports or ATC need to know, coordinate to inform those stakeholders. If the exemption is something that pilots will carry, the CAA might instruct the operator to brief their pilots to show the exemption letter to foreign ramp inspectors if questioned. Essentially, consider who might need to know to avoid confusion – for example, during COVID exemptions, many CAAs sent out notices to foreign embassies or CAAs about their general exemptions so that foreign authorities would honor their licenses or certs temporarily.

5.4 Stipulating Conditions and Limitations: As introduced in 5.1, conditions are a key part of the exemption. Here we emphasize how the CAA ensures they are implemented:

- Operator's Acknowledgment: It's wise to get an acknowledgment from the applicant that they understand and will comply with all conditions. This could be as simple as them signing a copy of the letter to return, or sending an email confirmation. It adds accountability.
- Embedding in Operator's System: The operator (especially if an airline or organization) should ideally integrate the exemption conditions into their operational control system. For example, if a condition is that a certain maintenance action must be done every week during the exemption period, the CAA might request the operator to show that this has been added to their maintenance planning or tracking system. This ensures the condition isn't forgotten. If a condition involves reporting or checks by pilots, the operator should issue an internal notice or bulletin to staff referencing the CAA exemption and listing what must be done. The CAA can ask to be copied on such internal instructions.

- **Limitations for Safety:** Some limitations might involve external coordination, like if an aircraft isn't technically meeting an equipage requirement for certain airspace due to an exemption, the operator might be limited to only fly in certain areas or altitudes. Those limitations must be communicated in flight plans or remarks to avoid issues. The CAA should verify that the operator has a plan for this.
- **Tracking Compliance:** Plan for how the CAA will monitor these conditions (more on that in Section 6.1). Essentially, once conditions are in place, they become additional regulatory requirements for the duration – the operator is now obligated to meet these just as they would the normal rules. It's the CAA's role to enforce them accordingly.

5.5 Dissemination and Publication: For transparency and in fulfillment of any legal or international requirements, the CAA may disseminate information about the exemption:

- **ICAO and States Notification:** If, as identified earlier, the exemption causes an ICAO difference or needs to be known by other States, the CAA should proceed with those notifications immediately after issuance. Appendix 5 gives a sample format; often this entails sending a letter to ICAO (or updating EFOD) with details like the affected standard, effective dates, and any conditions. Similarly, if notifying other specific States or airlines, send those notices out. This step keeps the international community informed and helps avoid any operational surprises (for instance, a foreign regulator might allow a flight crew with expired medical to operate into their territory if they know an official exemption is in place).
- **Domestic Publication:** Some States require that exemptions be published in an official public record, such as a government gazette or a CAA online registry. If that is the case, ensure this publication is made in accordance with the timeline (maybe within a certain number of days of issuance). Even if not required, the CAA might publish a summary on their website for significant exemptions, as part of transparency initiatives. For example, "CAA grants temporary exemption to [Operator] for [Requirement] until [Date] subject to conditions...". Of course, sensitive or proprietary info should be omitted.
- **Ops Documents Update (if needed):** If the exemption affects operational documents (like Aeronautical Information Publication, operations specifications attachments, etc.), coordinate to update those. For example, if an Ops Spec normally would contradict what's now allowed by the exemption, a temporary note might be inserted, or at least internal ops spec records should reflect that an exemption is overriding a part of it for now.

5.6 Registration and Tracking: Finally, the CAA should record the exemption in its internal tracking system:

- Exemptions Register: Enter the key details in a database or log: Reference number, who it was granted to, what rule was exempted, effective dates, and any summary note of conditions. This register helps with oversight (you can quickly see which exemptions are active and when they expire) and with reporting (some CAAs report the number and types of exemptions granted annually, as a measure of regulatory flexibility or oversight health).
- Reminders: If possible, set up reminders for the expiration date so that the responsible inspector is alerted before it lapses. Many modern systems allow flagging a date; otherwise a manual diary entry can work. This ensures timely follow-up on whether the exemption was used properly and if things reverted to normal afterwards (or if a renewal request may be coming).
- Files and Archives: Place all related documents in the official file (physical and/or electronic). Because exemptions may be scrutinized later (by audits, investigations, or ICAO USOAP reviews for compliance), having everything filed is crucial. As noted in Section 3.4 and 3.5, keep also copies of any notifications sent to ICAO or other correspondence, as these form part of the record. These records should be retained as long as required by the State's record retention policy – considering that an exemption might relate to a safety event, a long retention (indefinitely for significant cases) is recommended.

With the exemption now officially issued and disseminated, the role of the CAA shifts to monitoring and eventually closing out the exemption. Section 6 will detail the post-issuance oversight and follow-up actions to ensure that safety is maintained throughout the exemption period and beyond.

6. *Post-Issuance Actions and Oversight*

Granting exemption is not the end of the responsibility. The CAA must oversee compliance with the exemption's terms and assess outcomes to ensure safety is indeed maintained. This section outlines the follow-up actions after issuance and leading up to the exemption's end or renewal.

- 6.1 Monitoring Compliance with Conditions: Once the exemption is in effect, the CAA should actively monitor the operator's adherence to all imposed conditions and any emergent safety issues:

- **Inspection or Audit Activities:** Plan targeted oversight activities focusing on the exemption. For example, if a maintenance-related exemption was granted, inspectors might perform more frequent checks or require reports to verify the maintenance tasks stipulated as conditions are being done. If it's an operational exemption (e.g., extending flight time limits), the CAA could sample flight records or observe operations to ensure the operator isn't exceeding the allowance or ignoring other safeguards (like fatigue management). Essentially, treat the conditions as special regulatory requirements and enforce them through normal surveillance processes.
- **Required Reports from Operator:** Many exemptions include a condition that the operator must submit periodic reports to the CAA (for instance, weekly status reports, or a final report after the exemption period). Ensure these reports are received and reviewed. They can provide data on how the exemption is working – e.g., number of flights conducted under it, any incidents, any difficulties encountered. Promptly follow up if reports are not submitted or if they indicate any problem.
- **Incident Monitoring:** Keep an eye on any incidents, occurrences, or safety reports that occur while the exemption is in place. If, for example, an incident or hazard occurs that is directly or indirectly related to the area of exemption, this might signal the need to re-evaluate the arrangement. The operator should be required (either via regulation or a specific condition) to immediately report to the CAA any event that could be linked to the exemption (like if a pilot who was allowed to fly on an extended medical had to discontinue a flight due to illness, or if a deferred maintenance item caused a minor inflight issue).
- **Enforcement of Non-compliance:** If the operator fails to comply with any condition of the exemption, the CAA must be prepared to act. This could include revoking the exemption immediately (thus grounding the operation or requiring compliance forthwith), and potentially taking enforcement action if laws were violated. Clearly, the CAA should communicate this risk to the operator from the outset – that an exemption is not an entitlement but a conditional privilege that will be withdrawn if abused or if safety is compromised. Document any such non-compliance and actions taken.

Regular monitoring instills confidence that safety is maintained and signals to the operator that the CAA is vigilant, which in turn encourages them to diligently follow the rules of the exemption.

6.2 Follow-Up and Data Collection: Throughout the exemption period, gather data and insights that can inform both the ongoing safety assurance and any future considerations:

- **Performance Data:** Depending on the nature of the exemption, define what data would indicate success or emerging risk. For instance, if pilots are flying longer hours (exemption from flight time limits), track fatigue reports or performance

data; if maintenance intervals are extended, track any defect reports or mechanical reliability metrics; if training currency is extended, watch for any proficiency issues. The operator's safety management system (SMS) can be a source of such data, as they should also be monitoring the impact internally. Liaise with the operator's safety office to exchange relevant information.

- **Regular Check-ins:** It may be useful for the CAA to schedule periodic check-in meetings during a long exemption period (e.g., monthly for a year-long exemption). In these meetings, both the CAA and operator can discuss how the operations under exemption are progressing, and if any adjustments are needed. This keeps the dialogue open and can pre-empt issues.
- **Mid-course Corrections:** If data or monitoring shows something concerning, the CAA can implement changes even while the exemption is active. For example, if one of the mitigation measures isn't as effective as thought, the CAA could tighten a condition or add a new one. This would typically be done formally via an amendment to the exemption letter or a new letter that revises certain terms. Ensure the legal authority covers amendments. The operator should be given clear updated instructions in such cases. In extreme cases, if new information shows the situation is too unsafe to continue, consider early termination of the exemption (see 6.3).
- **Documentation of Outcomes:** Keep records of all monitoring activities and findings. If everything is going smoothly, note that. If issues are found and addressed, capture how. This documentation not only helps with any future analysis but also will be useful if the operator later seeks a renewal or another exemption – the CAA can refer back to how this one went.

6.3 Modification or Revocation: Exemptions are granted based on certain assumptions and conditions; if those change, the CAA must be ready to modify or revoke the exemption to preserve safety:

- **Triggers for Modification/Revocation:** These could include the operator not complying with conditions, an incident or hazard that arises indicating the exemption is riskier than anticipated, or external changes (for instance, if ICAO or the regional body issues new guidance that disallows such exemptions, or if a critical assumption like availability of an alternate mitigation falls through).
- **Process:** In many legal frameworks, the same authority that grants an exemption can revoke or amend it. The exemption letter itself often states “the CAA may withdraw this exemption at any time.” If deciding to revoke, ideally discuss with the operator unless urgency demands immediate action. Provide the reasons in writing through a formal revocation notice. If modifying, issue an

amended exemption letter or an addendum that clearly delineates new conditions or changes (and have it signed/issued with the same formality).

- **Safety First:** The guiding principle is if safety can no longer be assured under the exemption, it should not continue. It might be disappointing for the operator, but safety is paramount. If possible, coordinate such decisions so that the operator can transition back to compliance with minimal disruption (unless the situation is urgent). For example, you might give a short grace period like “exemption will be revoked in 48 hours” to allow safe cessation of operations if immediate stop isn’t needed. However, if the case is severe (imminent risk), immediate grounding or halt of the exempted activity is warranted.
- **Communication:** Ensure others (like ICAO or other States if they were informed of the exemption) are also informed if the exemption is revoked earlier than planned, especially if they had adjusted any of their oversight based on knowing the exemption existed. This closes the loop internationally.

6.4 Renewal of Exemptions: As the expiry nears, the operator might seek an extension or renewal of the exemption. The guidance here is to treat a renewal almost like a new application, but with the benefit of data from the first period

- **Advance Request:** Require the operator to apply for renewal well before the current exemption expires (if they believe they still need it). The application for renewal should include justification for why an extension is necessary and evidence that they have been complying with all conditions and trying to resolve the underlying issue. For instance, if the exemption was to allow time to obtain a spare part for compliance, and they still haven’t gotten it, they need to explain why and show efforts made. Some States explicitly ask for proof that the operator worked towards compliance during the exemption period.
- **Review of Performance:** The CAA should review how the original exemption period went. Was there full compliance? Did the mitigations work as expected? Any incidents or concerns? Use this performance record to judge if a renewal is acceptable and under what terms. If there were minor issues, perhaps a renewal is only granted with stricter conditions or for a shorter period. If performance was good and the situation still justifies an exemption, a renewal might be granted but, again, generally one short additional period – continuous renewals are a red flag that something else should be done (like a regulation change or alternative solution).
- **Updated Risk Assessment:** Circumstances might have changed since the first issuance. Update the risk assessment for the new period. For example, seasonal

changes or different operational tempo might affect risk. The CAA should ensure that the justification and mitigations are still valid for the extension. If any new hazards have emerged or new mitigations are available, incorporate them.

- **Approval and Documentation:** If renewal is approved, issue a new exemption letter (or a continuation letter) with new effective dates and any revised conditions. Ensure it references the original exemption and states it supersedes or extends it. Notify ICAO/others again if needed (especially if the initial notification had an end date – they need to know it’s extended). Add the renewal info to the tracking register. If renewal is not granted, communicate that with enough lead time for the operator to comply with the original requirement by the expiry.

6.5 Expiry and Return to Compliance: Once an exemption reaches its end date (and if not renewed), the operator must revert to full compliance with the normal regulation. The CAA should confirm this happens smoothly:

- **Operator Confirmation:** The operator should confirm in writing (or the CAA should verify via inspection) that by the day after expiry, they have resumed compliance. For example, if an aircraft had an exemption to fly past an inspection deadline, it should stop flying until inspected once the exemption expires; if crew were allowed an extended license validity, they should stop exercising privileges if not formally renewed by expiry, etc. The CAA might schedule an audit or check shortly after expiry to ensure the operation has normalized as required.
- **Grace Periods:** Generally, there is no grace beyond the exemption validity. A good practice is to remind the operator a few weeks in advance of the pending expiry (if they haven’t sought renewal) to avoid any “oops we forgot” situations. Many CAAs send a notice like “Exemption #XXX will expire on [Date]. Please ensure all operations are in compliance thereafter. If you anticipate any issues, contact us immediately.”
- **Closing the File:** After expiry and confirmation of compliance, formally close out the exemption case. Note in the records that the exemption was concluded and whether everything was in order. If the exemption was used as a bridge to a more permanent solution (e.g., regulation amendment or implementation of a new system), you might note that outcome as well.

6.6 Post-Exemption Review: It is beneficial for the CAA to conduct a retrospective analysis of each significant exemption. This is about learning and continuous improvement:

- **Effectiveness Evaluation:** Did the exemption achieve its intended purpose (e.g., allow continuity of operations) without adverse effect? Were the mitigations sufficient? If there were any incidents or close calls, analyze them. Also consider operational feedback: did the operator find the conditions reasonable and effective, or were there unforeseen difficulties in applying them (which could point to areas to refine future conditions)?
- **Regulatory Implications:** The CAA should reflect on whether the need for the exemption indicates any change needed in the regulatory framework. Perhaps the rule from which the exemption was granted is overly rigid or outdated, and the State might consider updating it for the long term. Or maybe the exemption was very specific to a one-time event and no change is needed. This strategic view ensures the regulatory system evolves. For example, if multiple operators keep asking for the same type of exemption, that's a strong signal that the regulation might need revision or more flexible built-in criteria.
- **Document Lessons:** If any lessons were learned (e.g., about communication, risk assessment, or a particular domain of operations), document them in an internal report or debrief. Share insights with other inspectors. Possibly update the official exemption guidance or checklist (Appendix 1) if you found a step that could be improved.
- **Reporting:** Consider including the summary of exemptions and their outcomes in the State's safety oversight reports or State Safety Program annual report. It provides transparency and can help identify trends. If required, report the summary to ICAO or regional bodies if they have queries on how States managed extraordinary situations.

6.7 Records Management: Throughout and after the exemption process, maintain meticulous records:

- Ensure the exemption file (physical or digital) has all pertinent documents, from the initial application to the final review notes. As mentioned earlier, keep records according to State policy, but given the potential significance of exemptions, long-term retention is recommended.
- Update the central database or register to mark the exemption as closed (and whether it was utilized successfully, renewed, or revoked).

- If the exemption involved notifying ICAO of a difference, remember to also notify ICAO when the difference no longer applies (i.e., the State is back in compliance). This closure of the loop is important to keep the international repository accurate. For example, if a difference was filed due to the exemption, file a follow-up difference notice or use the EFOD to indicate compliance restored as of X date.

By diligently following up and closing out exemptions, the CAA demonstrates its commitment to ensuring that short-term alleviations do not lead to long-term degradation of safety or compliance. The post-issuance oversight, combined with the upfront rigor, completes the lifecycle ensuring that exemptions remain a positive safety tool rather than a gap in the system.

7. Best Practices for Effective Exemption Management

7.1 Drawing on experiences from the MID Region and globally, the following best practices can enhance the effectiveness of a state's exemption process:

- Institutionalize the Process: Treat the exemption issuance process as an integral part of the State Safety Oversight system, not an ad-hoc reaction. Document it in your procedures, and make sure it's understood by all relevant staff. A well-defined process reduces errors, delays, and inconsistency.
- Maintain a Central Registry and Analyze Trends: By keeping a central log of all exemptions, a CAA can periodically analyze the data to see if there are common themes. If many exemptions pertain to one regulation, that regulation might need updating. Trend analysis can also reveal if any operators are frequent requesters – perhaps indicating deeper compliance issues that need to be addressed through assistance or enforcement.
- Ensure Equivalence of Safety: Always remind stakeholders (internally and externally) that safety is non-negotiable. An exemption should never result in a situation less safe than full compliance. Use of recognized tools like Safety Risk Management, and referencing ICAO's safety management principles, will support this. When in doubt, err on the side of caution – it's better to deny or restrict an exemption than to allow a potential unsafe condition.
- Promote Transparency and Confidence: The more transparent the exemption process, the more confidence it will instill. Publish your policies, share non-sensitive details of exemptions granted, and be open about the rationale. This not only builds trust with industry and the public, but also with international partners. Other States are more likely to accept the implications of your exemption (such as allowing your airline to operate under it in their airspace) if they see you have a robust system, as opposed to if they suspect leniency or arbitrariness.

- **Leverage Regional Collaboration:** The MID Region, under ICAO's coordination, offers forums for sharing practices. States can develop common criteria or checklists for certain types of exemptions (for example, many States worked together on COVID-related exemptions to harmonize their conditions). Consider entering into agreements or understandings with neighboring States for mutual recognition of exemptions in areas like pilot licensing or aircraft ferry flights, when appropriate. This can be particularly useful for States with similar regulatory frameworks or shared operators.
- **Regular Training and Scenario Drills:** Continuously train staff on new scenarios. As aviation evolves (e.g., introduction of new technologies, new kinds of operations like drones), think ahead about what exemptions might be requested and prepare accordingly. Running internal drills – “tabletop exercises” of hypothetical exemption requests – can reveal gaps in preparedness and keep the team sharp.
- **Balance Flexibility and Rigor:** A successful exemption system strikes a balance: it offers flexibility to deal with real-world challenges (showing the regulator is not inflexible or oblivious to operational realities), but it enforces rigor in requiring safety justification and compliance with conditions. Both aspects are important. Being overly rigid (never granting any exemption even when safe to do so) can stifle operations in crises; being too lax can degrade safety. Aim for a balanced, risk-based approach as espoused by ICAO.
- **Document and Share Lessons Learned:** After major events (like a pandemic or other crisis that led to widespread exemptions), compile a lessons learned report. ICAO and regional bodies often solicit such feedback to improve global guidance. By contributing your State's experiences, you help build a global knowledge base and possibly improve SARPs or future crisis response strategies. Internally, revise your guidance material (like this one) as needed to incorporate what was learned.

8. Final Comments

8.1 Aviation is a dynamic industry, and regulators must be equipped to address situations that fall outside the norm. The issuance of exemptions is one such tool – allowing temporary deviation from standard requirements when it is absolutely needed to maintain operations or adapt to unforeseen challenges. For the MID Region States, adopting a standardized, ICAO-aligned approach to exemptions is essential for maintaining safety and mutual trust. This guidance material has laid out a comprehensive structure and practical tools to assist CAAs in that endeavor.

8.2 It is important to reiterate that exemptions should be granted sparingly and judiciously. The processes and precautions described in this document underscore that exemptions are far from a relaxation of oversight; on the contrary, they demand even greater

diligence and responsibility from the regulator and the operator alike. When done correctly, an exemption can uphold safety and enable continuity – for example, keeping vital air services running during a crisis – which ultimately serves the public good and the aviation sector’s sustainability. When done poorly, however, exemptions can undermine regulatory credibility and safety outcomes.

8.3 MID States are encouraged to collaborate, share information on exemptions granted, and support each other through ICAO MID and other platforms. A harmonized regional stance, especially on common issues, prevents confusion and promotes higher safety standards. As we move forward, the lessons from recent global events should not be forgotten: being prepared with flexible yet safe regulatory solutions is now a core part of aviation safety oversight.

8.4 By institutionalizing the principles, process, and practices outlined here, the civil aviation authorities in the MID Region will be well-prepared to manage any future need for exemptions in a manner that is transparent, consistent, and above all, safe. The ICAO MID Office stands ready to assist States in implementing this guidance and facilitating information exchange to ensure that the MID Region continues to exemplify the highest commitment to aviation safety, even in the face of adversity.

9. Sources:

- ICAO Doc 9734, Safety Oversight Manual, Part A – Chapter 3 (establishing regulatory policies, including use of flexibility tools)
- ICAO Doc 9859, Safety Management Manual (principles of safety risk management applied to regulatory processes)
- Chicago Convention (Doc 7300), Article 38 (State obligations to notify differences from international standards) and related ICAO guidance on filing of differences
- Lessons Learned from COVID-19 Contingency Coordination (ICAO State letters AN 11/55 and Targeted Exemptions repository usage in 2020-2021)
- Sample State Regulations and Manuals (e.g., Oman CAA Exemptions Procedure Manual, EASA Guidance on Targeted Exemptions) – used for benchmarking best practices in exemption evaluation and documentation.

Appendix 1

Example Checklist: Exemption Issuance Process

To assist CAAs and inspectors, below is an example step-by-step checklist for processing an exemption request. This checklist can be used as a reference to ensure all critical actions are completed during the evaluation and issuance of an exemption.

Step	Action/Requirement	Status (✓/✗/N/A)	Remarks
1. Application Received	Exemption request letter/form received from applicant; logged with reference number.	✓	(Date received, reference)
2. Initial Completeness Check	Application reviewed for all required information (rule citation, justification, duration, risk assessment, etc.).	✓	(If incomplete, info requested on [date])
3. Acceptability Screening	Confirm request falls within CAA authority and is not for a non-exemptible requirement.	✓	(If not, inform applicant/redirect)
4. Acknowledgment Sent	Acknowledge receipt to applicant, outline expected timeline or additional info needed.	✓	(Sent via email/letter on [date])
5. Assign Technical Team	Relevant technical experts/inspectors assigned to evaluate (ops, airworthiness, etc. as needed).	✓	(Team leader: [Name])
6. Risk Assessment Performed	Hazard identification and safety risk assessment completed (with mitigations identified).	✓	(Risk assessment doc ref no.)

Step	Action/Requirement	Status (✓/X/N/A)	Remarks
7. Internal Consultation	Multi-department review/meeting held for consensus and input (including legal if needed).	✓	(Meeting date, key points)
8. Draft Decision Prepared	Draft determination made (approve or deny) with rationale. If approving, conditions drafted.	✓	(Draft exemption text ready)
9. Management Approval	Decision elevated to appropriate authority (DG or committee) for review and sign-off.	✓	(Approved/Denied on [date])
10. Exemption Document Issued	Official exemption letter/order signed and issued to applicant with all conditions.	✓	(Letter ref no., date sent)
11. ICAO/External Notification	If required, notify ICAO of difference and/or other States of the exemption.	✓	(State letter or EFOD updated on [date])
12. Update CAA Records	Log the exemption in registry, set reminder for monitoring and expiry.	✓	(Registry entry no., files archived)
13. Monitor Compliance	Oversight plan in place to monitor operator's compliance with conditions during exemption period.	✓	(Inspector assigned for follow-up)
14. Post-Exemption Review	After expiry, review outcomes and lessons. Operator back in compliance or exemption renewed properly.	✓	(Review done on [date])

Appendix 2

Sample Exemption Application Form

(This sample form can be provided to operators or individuals to standardize the exemption request submissions. The form ensures all necessary information is captured for the CAA's review.)

Civil Aviation Authority – Application for Exemption

1. Applicant Information:

- **Name of Applicant/Organization:**
- **CAA Certificate/License No.:** (if applicable)
- **Contact Person:** **Title/Position:**
- **Contact Details:** Tel Email Address

2. Regulatory Requirement for which Exemption is Sought:

- **Reference of Regulation/Rule:** (cite exact paragraph or provision)
- **Title/Description of Requirement:**

(Example: CAR Ops 5.123 – requirement for pilots to complete a proficiency check every 6 months.)

3. Details of the Proposed Exemption:

- **Requested Relief:** Describe exactly what compliance requirement is to be exempted and the proposed extent of the exemption.
(Example: “To allow a 2-month extension beyond the 6-month proficiency check requirement for pilots of XYZ Airlines.”)
- **Individuals/Operations Affected:** Specify who or what will be covered by the exemption (aircraft, routes, personnel, etc.).
(Example: “This exemption would apply to 50 pilots of XYZ Airlines operating the ABC-123 aircraft type.”)

4. Reason and Justification:

- **Operational Justification:** Explain why this exemption is necessary. What circumstances prevent compliance?

(Example: “Due to unforeseen closure of the training simulator center as a result of natural disaster, pilots cannot complete proficiency checks by the due date.”)

- **Impact if Not Granted:** Briefly describe the consequences if the exemption is not approved.

(Example: “If not granted, 50 pilots will be grounded, significantly disrupting the airline’s scheduled operations and connectivity for remote regions.”)

5. Safety Risk Assessment: *(Attach separate risk assessment document if needed)*

- **Hazards Identified:**

.....

(Example: Pilots’ skills may degrade without recurrent check on schedule.)

- **Mitigations Proposed:**

(Example: All affected pilots will undergo extended ground refresher training and supervised line flying; no pilot will exceed 8 months without a proficiency check.)

- **Safety Statement:** Explain how an acceptable level of safety will be maintained.

(Example: “With the proposed mitigations, we assess that operational risk remains low and safety is not compromised during the extension period.”)

6. Duration of Exemption:

- **Requested Start Date:** **Requested End Date:**

(Provide specific dates or event-based duration. Example: from 01-July-2025 to 30-Sep-2025.)

- **Is this a one-time exemption or are you planning to apply for renewal if needed?**

7. ICAO Standards Impact: *(For international operations)*

- Does the exemption contravene any ICAO Standard in Annexes (yes/no)?

.....

- If yes, identify the ICAO Standard and Annex involved:

.....

- Have you notified or coordinated with any other State or entity about this potential difference?

(This helps the CAA in determining notification needs.)

8. Previous or Related Exemptions:

- Have you or your organization previously been granted a similar exemption? (yes/no)

- If yes, provide reference number or details:

.....

- If this is a renewal of a current exemption, list the current exemption reference:

9. Applicant's Attestation:

I hereby certify that the information provided above and in attached documents is true and complete to the best of my knowledge. I understand the safety obligations associated with the granting of an exemption and commit to implementing any conditions imposed by the CAA to ensure safety.

- **Name:**
- **Position:**
- **Date:**
- **Signature:**

Attachments Checklist: (to be filled by applicant)

- Detailed Safety Risk Assessment document
- Supporting evidence (e.g., maintenance reports, training records, third-party letters, etc.)
- Copy of relevant current certificate or license (if needed for context)
- Any other pertinent documentation:

For CAA Use: (Leave this section for authority's processing notes)

- Date Application Received:
- Application Complete? Yes/No (If no, date additional info requested:))
- Assigned Evaluation Team/Inspector:
- Decision: **Approved / Denied**
- Exemption Ref No.: Date of Decision:

(End of Form)

Appendix 3

Risk Assessment Template for Exemption Evaluation

(This template is intended for CAA inspectors or safety risk managers to systematically evaluate the safety impact of a proposed exemption. It ensures all factors are considered and documented.)

A. Overview of Exemption Request:

- Exemption Reference (if assigned):
- Applicant/Organization:
- Rule from which Exemption is Sought:
- Brief Description of Proposed Exemption:
- Duration: From to (or event:)

B. Hazard Identification:

List the potential hazards or failure modes introduced by the exemption. Consider what could go wrong because the normal requirement is not met. For each hazard, identify the consequence in the worst-case scenario. For example:

- Hazard 1:
 - Potential Consequence:
- Hazard 2:
 - Potential Consequence:
- Hazard 3:
 - Potential Consequence:

(Add more as needed)

C. Initial Risk Analysis (Without Mitigations):

For each hazard identified, assess:

- **Likelihood (Probability)** of the hazard leading to an occurrence under exemption conditions. *(Use qualitative terms: Frequent, Occasional, Remote, etc., or numerical if available.)*
- **Severity** of the consequence if it occurs. *(Use standard severity classes: e.g., Catastrophic, Major, Minor, etc.)*

- **Initial Risk Level:** Determine the risk level or index from the combination of likelihood and severity (using the State’s risk matrix or methodology). Indicate if it falls in Acceptable, Tolerable (with mitigation), or Unacceptable region prior to mitigation.

For example:

- Hazard 1: Likelihood – *Occasional*; Severity – *Major*; **Initial Risk: Medium-High (Tolerable only with mitigation)**
- Hazard 2: Likelihood – *Remote*; Severity – *Catastrophic*; **Initial Risk: High (Unacceptable)**
- Hazard 3: Likelihood – *Occasional*; Severity – *Minor*; **Initial Risk: Low (Acceptable)**

(These are illustrative. Conduct actual assessment based on evidence or expert judgment.)

D. Mitigation Measures:

List the safety measures that will be in place to reduce the risk of each hazard. Mitigations can be proposed by the applicant or added by the CAA. They might include operational restrictions, additional inspections, backup systems, increased monitoring, etc. For clarity, map each mitigation to the hazard(s) it addresses:

- Mitigation 1:
 - Addresses Hazard(s) #:
- Mitigation 2:
 - Addresses Hazard(s) #:
- Mitigation 3:
 - Addresses Hazard(s) #:

(Ensure all high/tolerable risks have at least one mitigation. Some mitigations may cover multiple hazards.)

E. Residual Risk Analysis (With Mitigations):

Re-assess the Likelihood and Severity for each hazard after implementing the above Mitigations:

- Hazard 1: New Likelihood – *Remote*; Severity – *Major*; **Residual Risk: Medium (Tolerable)**
- Hazard 2: New Likelihood – *Extremely Improbable*; Severity – *Catastrophic*; **Residual Risk: Medium (Tolerable)**

- Hazard 3: (if unchanged, copy as is) Likelihood – *Occasional*; Severity – *Minor*;
Residual Risk: Low (Acceptable)

Evaluate if the **Residual Risk Level is acceptable** per State’s criteria. (Typically, high risks must be reduced; medium may be tolerated with management decision; low are acceptable.) In this example, assume Hazard 1 and 2 have been reduced to a tolerable level with strong oversight, and Hazard 3 was already acceptable.

F. Additional Considerations:

- **Cumulative or Interactive Effects:** Consider if multiple exemptions or other concurrent issues could compound risk. (*Example: Pilot’s training interval extended and aircraft maintenance check extended at same time – combined effect on safety.*)
- **Impact on Other Parties:** Does the exemption pose any risk to others (e.g., other operators, general public) beyond the applicant’s operation? If so, addressed by mitigation?
- **Human Factors and Organizational Factors:** Any concern about human performance or organizational capability that could affect the outcome (e.g., reliance on pilot judgment, workload issues, company’s SMS robustness)?
.....

G. Risk Assessment Conclusion:

- Given the above analysis, is the risk of granting the exemption **acceptable with the identified mitigations** in place? **Yes / No**
- Summary Statement:
(e.g., “*With the conditions proposed (extra training, limited operations, monitoring), the operational safety risk is reduced to an acceptable level for the duration of the exemption. It is concluded that the exemption can be granted without compromising safety.*”)
- If no, state reasons and what would be required to achieve acceptability (or conclude exemption cannot be granted safely).

H. Recommended Conditions for Exemption:

Based on the mitigation measures and any other regulatory considerations, list the conditions that should be imposed if the exemption is approved. These should correlate with the mitigations:

1.
2.
3.

(These conditions will be inserted into the exemption letter. E.g., “Aircraft XYZ shall only be operated on daytime cargo flights under VFR during the exemption period.”)

I. Evaluation Team Sign-off:

- Lead Evaluator: _____ (Name, Position) – **Date:** ____ – **Signature:** ____
- Other Team Members: [Names/Initials]
- Reviewed/Concurred by (Supervisor/Manager): _____ – **Date:** ____

(The sign-off signifies that the risk assessment has been completed and reviewed as per CAA procedures.)

Appendix 4

Sample Exemption Approval Letter

(This is a generic template of an exemption approval letter from a Civil Aviation Authority to an applicant. It should be adapted to the State's official format and specific case details.)

[On Official CAA Letterhead]

Ref: CAA/EXEMPT/2025-xx (e.g., reference number of exemption)

Date: 15 November 2025

To: Mr. ABC XYZ, Director of Operations

XYZ Airlines

P.O. Box 12345, [City], [State]

Subject: Exemption Approval – [Brief Description, e.g., Extension of Pilot Proficiency Check Interval]

Dear Mr. XYZ,

1. Introduction:

We refer to your application dated 10 October 2025, in which **XYZ Airlines** requested an exemption from **[Regulation YYY-123, Paragraph 4.5]**, which requires that flight crew proficiency checks be conducted every 6 months. Your request was to allow an extension of this interval to 8 months for certain pilots, due to the temporary closure of the ABC Training Simulator Center.

2. Authority:

Under the powers granted to the Civil Aviation Authority of [State] by **Section 10 of the Civil Aviation Act and Part 1.2 of the [State Aviation Regulations]**, the CAA may grant exemptions to regulatory requirements on a case-by-case basis, provided such action is in the public interest and does not compromise safety.

3. Approval:

After careful review of your application, including the safety risk assessment and mitigation measures proposed, the CAA has decided to **grant the requested exemption**. This exemption allows XYZ Airlines to operate specified flights with pilots who are overdue for proficiency check, subject to the conditions below.

4. Details of Exemption:

- **Regulation Exempted:** [State Aviation Regulation YYY-123, Paragraph 4.5], which prescribes a 6-month interval for flight crew proficiency checks.
- **Nature of Exemption:** Authorizes an extension of the proficiency check interval up to a maximum of **8 months** for eligible pilots under conditions stipulated herein.
- **Effective Period:** This exemption is effective from **01 December 2025** until **31 March 2026**. Unless renewed, it will automatically expire at 23:59 LT on 31 March 2026, after which all pilots must fully comply with the 6-month proficiency check requirement.
- **Applicability:** This exemption applies only to **flight crew of XYZ Airlines who held valid proficiency checks as of 01 September 2025** that have since lapsed or will lapse before they can complete recheck due to simulator unavailability. It is not transferable to any other airline or personnel.

5. Conditions:

XYZ Airlines is required to comply with the following conditions as part of this exemption approval:

- Additional Training:** Prior to operating beyond the normal 6-month limit, each affected pilot shall undergo a structured refresher training program. This program (as described in your letter) must include at least 4 hours of classroom/theoretical training and 2 supervised line flights in a non-command role. Documentation of completion for each pilot must be retained and made available to the CAA on request.
- Operational Limitation:** Pilots operating under this exemption shall **not serve as Pilot-in-Command (PIC)** on any flight beyond 6 months since their last proficiency check. They may operate in the co-pilot role only. A currently qualified PIC (within 6-month proficiency) must be on board as the commander for all flights where an exempted pilot is part of the crew.
- Route Restrictions:** Exempted pilots shall only operate on domestic routes within [State] or routes to [Neighboring State] (as specified in your request). They are not permitted to operate to any other international destinations under this exemption unless specifically approved by the CAA.
- Monitoring and Reports:** XYZ Airlines shall closely monitor the performance of pilots flying under this exemption. Any abnormal events, safety concerns, or pilot proficiency issues must be reported to the CAA immediately. Additionally, XYZ Airlines must submit a **brief report every 30 days** during the exemption period summarizing how many flights were conducted under this exemption, and confirming that conditions were met on each flight. The first report is due by 01 January 2026.

e. **Simulator Scheduling:** XYZ Airlines must provide the CAA with evidence by 31 January 2026 that all affected pilots have been scheduled for proficiency checks at the earliest possible date once the ABC Simulator Center resumes operation (or an alternate training arrangement is made).

f. **Safety Standards:** All other operational and safety regulations remain in effect. This exemption in no way waives compliance with any requirement except the specific proficiency check interval stated. Pilots must continue to meet all other fitness for duty requirements (rest, medical fitness, etc.).

6. ICAO Compliance:

It is acknowledged that by extending pilot proficiency beyond 6 months, [State] is temporarily not in full compliance with ICAO Annex 1, Chapter 3, Standard 3.7.3 (which implies recurrent training proficiency within a given period). The CAA will file a difference with ICAO for the duration of this exemption, in accordance with Article 38 of the Chicago Convention, and notify concerned States as necessary.

7. Rights and Limitations:

The CAA reserves the right to **revoke or modify** this exemption at any time prior to 31 March 2026 if it is deemed in the interest of safety or if XYZ Airlines fails to adhere strictly to the conditions herein. Should the circumstances that necessitated this exemption abate (e.g., simulator training opportunities become available sooner), the CAA expects XYZ Airlines to promptly return to normal compliance and cease use of the exemption.

This exemption is a temporary measure granted based on the specific facts and mitigation strategies presented. It reflects the CAA's commitment to supporting continued operations during challenging circumstances **while maintaining an acceptable level of safety**. The CAA appreciates XYZ Airlines' proactive safety risk management in this process.

8. Conclusion:

Please signify your agreement to the terms and conditions of this exemption by countersigning and returning a copy of this letter (or by a written confirmation of acceptance via email). By using this exemption, XYZ Airlines and its pilots agree to comply with all stated conditions. We look forward to your continued cooperation.

For any questions regarding this exemption, you may contact [CAA focal point name] at [contact info].

Sincerely,

[Signature]

[Name of DG/Authorized Officer]

Director General (or appropriate title)

[Civil Aviation Authority of State]

Countersignature (Applicant):

I, **[Name]**, on behalf of **XYZ Airlines**, acknowledge and agree to the above terms and conditions.

Signature: _____ Date: _____

(End of Exemption Letter Template)



INTERNATIONAL CIVIL AVIATION ORGANIZATION

**REMOTE SAFETY OVERSIGHT GUIDANCE MATERIAL FOR MID REGION
STATES**

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10. Appendix 1

Example Checklist: Remote Audit Preparation

1. Introduction and Purpose and Scope

- 1.1 The COVID-19 pandemic and other crises have challenged the traditional model of on-site aviation safety oversight. Travel restrictions, health risks, civil unrest, natural disasters, and resource constraints can impede the ability of civil aviation authorities (CAAs) to conduct in-person inspections.
- 1.2 To ensure continuous regulatory compliance by airlines, maintenance organizations, airports, and other service providers under such adverse conditions, CAAs must leverage remote surveillance techniques. Remote safety oversight (also referred to as remote or virtual audits/inspections) involves using technology to perform oversight activities from off-site locations.
- 1.3 This guidance manual provides an ICAO-aligned framework and procedures for MID Region States to conduct safety oversight remotely, consistent with ICAO principles and terminology as found in Doc 9859 (Safety Management Manual), Doc 9734 (Safety Oversight Manual, Part A), and Doc 8335 (Manual of Procedures for Operations Inspection, Certification and Continued Surveillance).
- 1.4 It incorporates lessons learned during the COVID-19 pandemic and best practices from the MID Region and global authorities. Importantly, remote oversight is a supplementary tool, not a replacement for on-site inspections. On-site visits provide invaluable first-hand observations of operations and safety culture that are harder to capture through a computer screen. Remote surveillance should therefore be used as a contingency or enhancement measure to maintain oversight continuity when physical inspections are impractical, while planning for eventual on-site verification of critical items.

2. Framework for Remote Safety Oversight

- 2.1 Alignment with ICAO Standards: Remote safety oversight must be embedded within the State's overall safety oversight system, upholding ICAO's Critical Elements of safety oversight (per Doc 9734) and the State Safety Programme (per Doc 9859). This means that even when using virtual means, States remain responsible for ensuring effective surveillance (Critical Element 7) and timely resolution of safety issues (Critical Element 8). The framework outlined here is consistent with ICAO guidance and terminology, so that MID States implement remote oversight in harmony with global standards. The approach also draws on ICAO's call for resilience and innovation in oversight post-COVID-19.
- 2.2 Principles of Remote Oversight: Remote oversight is intended for use under specific conditions such as pandemics (e.g. COVID-19), public health emergencies, periods of civil unrest or conflict, natural disasters, or significant financial/resource constraints that make travel difficult. Under these circumstances, remote surveillance serves as a mitigation strategy to continue essential oversight activities. However, it should be

guided by a risk-based approach – regulators must determine when and where remote methods are suitable. Not all oversight tasks are ideal for remote execution; complexity and safety-critical aspects must be considered. For example, the U.S. Federal Aviation Administration (FAA) cautions that remote technology has limitations and that inspectors should apply careful consideration and risk management when deciding to use it. Highly complex or sensitive inspections (such as detailed interior inspections or tests of novel systems) may still require on-site presence. Simpler or routine tasks, by contrast, can often be performed virtually with proper planning. Each CAA should integrate remote options into its Safety Risk Management process – assessing the risks of not performing oversight versus the potential limitations of doing it remotely.

2.3 Scope of Application: Remote safety oversight techniques can be applied across various domains of aviation oversight, including:

- **Certification and Approvals:** Conducting certain phases of certification remotely (document evaluations, remote demonstration of procedures, etc.). For instance, FAA policy now allows real-time video for some prototype conformity inspections, engineering tests, production conformity inspections, and even airworthiness certificate approvals under defined conditions.
- **Surveillance and Auditing:** Performing scheduled audits or inspections of airlines (AOC holders), maintenance organizations (AMOs), training organizations, and airports through virtual meetings, document portals, and live video facility tours.
- **Continued Compliance Monitoring:** Using remote means for follow-up on corrective actions, oversight of foreign operators, or interim surveillance when on-site visits are postponed.

Crucially, remote oversight should be institutionalized as part of the State's oversight system, not merely an ad-hoc pandemic workaround. A clear policy and framework gives inspectors and service providers certainty on how and when remote audits will be used. Many States worldwide are moving in this direction – for example, the East African Community's aviation oversight agency (CASSOA) has issued guidelines for the conduct of remote oversight activities as part of COVID-19 measures. The MID States are encouraged to establish similar guidance within their regulatory framework.

2.4 No Replacement for On-Site Oversight: Even as remote surveillance becomes a permanent tool in the safety oversight toolkit, MID States should remember that it does not eliminate the need for physical inspections. Remote audits and inspections are considered complementary methods to ensure continuous oversight when on-site access is not possible. They can also serve as a prelude or follow-up to on-site visits (for example, conducting a remote documentation audit before a targeted on-site inspection). Once conditions permit, CAAs should schedule on-site visits especially for areas that could not be effectively evaluated remotely (e.g. observations of live

operations, hands-on checks of aircraft or equipment, on-the-ground safety culture assessments). Maintaining this balance ensures that the effectiveness of oversight is not compromised by exclusive reliance on virtual means.

3. Regulatory and Organizational Preparedness

For remote oversight to be effective, States need to ensure their **regulations and internal procedures** explicitly support and govern its use. This section addresses the first main component: **regulations/special procedures for remote oversight**.

- 3.1 **Legal and Regulatory Framework:** Review national civil aviation regulations and guidance material to identify any barriers to remote oversight. In general, regulations do not need to change the **safety standards** themselves, but CAAs may need to clarify that required audits, inspections, and tests **can be conducted via audio/video or electronic means**. For example, a regulation might state that an inspection shall be conducted by an inspector “**at a time and place acceptable to the Authority**” – this could be interpreted to include virtual settings if properly documented. If necessary, promulgate **temporary exemptions or guidance** to permit remote inspections under emergency conditions (as many regulators did during COVID-19). Ultimately, incorporate permanent provisions or acceptable means of compliance for remote surveillance into the State’s regulatory framework or inspector handbooks (aligned with ICAO Doc 8335 guidance on surveillance procedures)
- 3.2 **State Oversight Policy and Inspector Guidance:** Develop **formal procedures or an inspector bulletin** on how to plan, perform, and document remote oversight activities. This should cover all phases (planning, execution, reporting) and define the use of technology (e.g. approved communication platforms). Align this guidance with ICAO Doc 9734 Part A principles by ensuring that remote activities meet the intent of **continuous surveillance**. The guidance should also delineate which activities are **not suitable for remote execution** (for instance, initial certification of a new airline may require in-person evaluation of operations and facilities). By providing inspectors with a clear policy, States ensure consistency and transparency in the use of remote methods.
- 3.3 **Agreement with Industry and Acceptance of Results:** It is important to communicate expectations to the aviation industry. **Service providers should be** informed that remote audits/inspections carry the same authority as on-site visits, and that they are expected to provide access to personnel, documentation, and areas via virtual means as requested by the CAA. States may consider requiring organizations to **facilitate remote oversight** – for example, by stipulating in approval conditions that the certificate holder must accommodate remote inspections upon request and maintain the necessary technological capability. Additionally, the CAA should determine the **status of remote findings**: for example, non-compliances identified remotely are just as enforceable as those found on-site. If any legal constraints exist (such as rules about

inspector presence for certain sign-offs), address these through legal interpretations or amendments.

3.4 Confidentiality and Security Measures: Remote oversight often involves digital exchange of sensitive documents (e.g. operations manuals, training records) and live video of facilities. CAAs must institute **security protocols** to protect this information. Use secure file transfer methods or encrypted platforms when reviewing documents. Establish whether remote sessions will be recorded and how those recordings are stored or disposed of, in line with privacy laws and records retention policies. Both inspectors and the regulated entities should be aware of and agree to these protocols in advance. This builds trust that remote oversight will not compromise proprietary or personal data.

3.5 Resource and Infrastructure Requirements: Ensure the CAA has the needed tools: reliable high-speed internet, secure videoconferencing software, VPN access to CAA networks, and possibly specialized equipment (for example, tablets or smart glasses for inspectors, if using advanced remote inspection tools). If resources allow, consider setting up a dedicated **“remote inspection station”** at CAA offices – equipped with multiple screens, good audio/video hardware, and backup power/internet – to facilitate smooth virtual inspections. Likewise, encourage or require the organizations being inspected to prepare the necessary equipment on their side (such as a portable camera or mobile device to carry around for a virtual facility tour).

3.6 Training and Competency: Train CAA inspectors in both the technical and soft skills required for effective remote oversight. This includes proficiency with the chosen video conferencing and document-sharing tools, knowledge of cybersecurity/hardware setup, as well as techniques for remote communication (interviewing skills when face-to-face via video, methods to request evidence without physical presence, etc.). Inspectors may initially shadow or pair up for remote audits to gain experience. Incorporate these competencies into the CAA’s inspector training program, in line with the competency frameworks of Doc 8335 and related ICAO guidance.

By establishing a robust regulatory and organizational foundation, MID States create an environment where remote surveillance is conducted in a controlled, standardized manner. With the framework in place, we now turn to the **operational procedures** for planning and conducting remote audits and inspections

4. Planning and Preparation for Remote Oversight

Thorough planning is key to a successful remote audit or inspection. This section outlines step-by-step procedures for the **pre-inspection phase**, ensuring that both the CAA team and the organization to be inspected are ready.

4.1 Determine Oversight Scope and Feasibility: The CAA (team leader or supervisor) should first decide **what activities will be included in the remote oversight**. Define

the objectives, scope (e.g. which functional areas or departments to cover), and the type of oversight (audit, routine inspection, spot check, etc.). Critically, perform a **risk assessment** to confirm that doing these tasks remotely is appropriate. Consider the complexity of the operation and the criticality of the areas to inspect. For instance, reviewing documents or conducting interviews can often be done remotely with low risk, whereas inspecting intricate equipment or observing operations might have higher risk if done virtually. If the risk assessment indicates certain elements cannot be adequately assessed off-site, plan to **exclude** those from the remote scope (and address them later on-site), or ensure additional mitigations (such as using multiple camera angles or having a local delegate on-site if possible).

- 4.2 **Notification and Agreement with the Service Provider:** Once scope is set, notify the organization well in advance that a remote oversight activity will take place. Provide an **official letter or email** outlining: the purpose of the audit/inspection, the proposed dates and schedule, the list of areas or functions to be reviewed, and the format (virtual meetings, document submissions, live video inspections). Clearly state any **information or documents to be submitted beforehand**. For example, request electronic copies of manuals, training records, maintenance logs, or specific evidence (like internal audit reports, safety performance data) at least a certain number of days prior to the remote audit. Also confirm that the organization has (or will set up) the required technology on their side. Encourage them to designate a **primary focal point** to coordinate logistics, and to test the chosen video conferencing platform with the CAA team before the audit. Early communication ensures the auditee understands the process and can prepare, which improves the effectiveness of the remote surveillance
- 4.3 **Assemble the CAA Inspection/Audit Team:** Determine how many inspectors and what specialties are needed (operations, airworthiness, ATM, etc., depending on the scope). In a remote setting, it can be practical to include specialists from different locations since travel is not required – for example, a regional expert could join virtually if needed, improving resource utilization. Assign roles such as **Team Leader** (to lead meetings and be main liaison) and **Technical Members** (each responsible for specific checklist items or subject areas). Ensure every team member has access to the schedule, the documents submitted by the organization, and the tech tools. Conduct an **internal pre-briefing** among the team to discuss the plan, assign responsibilities (e.g., who will lead which interview, who will observe which procedures on camera), and go over contingency plans for tech failures.
- 4.4 **Review of Documentation (Pre-audit):** Prior to any live virtual sessions, inspectors should review the documents provided by the organization. This is analogous to the on-site document review but done in advance. Each assigned inspector reviews their relevant documents (e.g. the ops inspector reviews the operations manual sections, the airworthiness inspector reviews maintenance records, etc.) and notes any findings or clarification points. Sharing documents securely is vital – use a pre-agreed method (secure email, cloud drive, or the CAA’s portal). Inspectors may compile a **document review checklist** to ensure they cover all required items remotely. Any critical missing documents should be requested before the inspection date. This pre-review maximizes

efficiency, allowing the live remote sessions to focus on clarifications, verification, and interactive examination rather than reading paperwork on the fly.

4.5 Technology Setup and Testing: Well before the inspection date, the CAA team and the organization's team should conduct a **technology test**. This includes verifying the video conferencing platform works on both ends (with sufficient audio quality, video clarity, and screen-sharing capabilities), and that any firewalls or permissions are sorted out. If the plan includes live streaming from a hangar or aircraft, test the connectivity in those locations – signal strength and camera functionality (possibly using a mobile device or wearable camera). Agree on a backup communication method, such as a phone teleconference line or instant messaging, in case the primary video link fails. The CAA team should prepare any tools they will use, such as an electronic checklist or shared online document to log findings in real time. During testing, also familiarize the auditee with how the process will flow: for example, show them how the inspector might ask to point the camera at certain items, or how to use screen-share for demonstrating an electronic system. Smooth technology operation is fundamental to avoiding delays and frustration during the actual remote oversight.

4.6 Time Zone and Scheduling Considerations: If the oversight involves parties in different time zones (e.g., a MID State CAA inspecting a foreign operator remotely), ensure the schedule is reasonable for all. Plan the daily agenda with shorter sessions if needed, since remote work can be more tiring. Build in buffer time in case of technical issues or overruns. Circulate a **detailed schedule** to the auditee, indicating timing for the opening meeting, document discussions, specific interviews (with names of people needed), any live demonstrations (with the area/equipment to be shown), breaks, and the closing meeting. This level of detail helps the organization arrange for the right personnel to be available (e.g., the accountable manager, safety manager, maintenance chief, pilots or engineers for interviews, etc.) at the right times, even in a virtual environment.

By rigorously preparing in these steps, the CAA sets the stage for an effective remote oversight activity. Next, we detail how to execute the audit/inspection itself – covering document review, interviews, virtual tours, and meetings in a remote context.

5. Conducting Remote Audits and Inspections: Execution

Once planning is complete, the CAA team will carry out the remote surveillance in several phases. The three main components of remote oversight – **digital document review, virtual inspection, and associated regulatory procedures** – come together during execution. The following sub-sections provide guidance on each aspect of the audit/inspection process.

5.1 Opening Meeting (Virtual); Just as in an on-site audit, the process begins with an **Opening Meeting**. This meeting is held via video conference with the CAA team and the organization's key personnel. Best practices for the opening meeting include:

- **Introduction:** The Team Leader introduces all CAA participants (name, role) and requests the organization's representatives to introduce themselves (accountable executive, heads of departments, escorts for the virtual tour, etc.). This helps establish a professional atmosphere despite the remote setting.
- **Purpose and Scope:** Clearly restate the **purpose of the audit/inspection and the scope** of activities to be covered. Even though this was communicated in advance, reiterating it ensures everyone has a common understanding at the outset. Emphasize that this is a regulatory oversight activity carried out remotely due to current conditions (mentioning, for example, the travel restrictions or other reason, if applicable).
- **Outline of Method and Schedule:** Explain how the remote inspection will be conducted. Describe the planned activities (document reviews, interviews, live video inspections) and the schedule for each. Mention the platforms being used (We will remain on this Microsoft Teams call for the interviews, then switch to a mobile video feed for the hangar tour at 1300 local time). Ensure that all participants are clear on **when and how each part will occur**. Also remind participants of any **ground rules**: for instance, ask everyone to mute when not speaking to avoid background noise, or request that no one record the session unless agreed.
- **Technical Checks:** Confirm that all parties can see and hear each other well. Address any last-minute technical glitches now. Also verify that any screen-sharing needed (for example, to show a specific document or the inspection checklist) is working.
- **Questions and Consent:** Provide an opportunity for the organization to ask questions about the process. Confirm that they are ready to proceed and agree to the approach. This is also a good time to handle any administrative points (e.g., confirming the list of documents received, ensuring required personnel are available as scheduled, and agreeing on what will happen if connectivity is lost). If the CAA plans to record any part of the remote session (audio/video), obtain consent and explain that it will be used only for official purposes. In many cases, formal recording is not necessary; detailed note-taking suffices, but if used, consent is important.

By the end of the opening meeting, both the CAA and organization should be aligned on the plan and comfortable with the virtual format. The inspectors should project approachability and clarity, setting a collaborative tone similar to an on-site audit, while maintaining authority as regulators.

5.2 Remote Documentation Review: Following the opening, the team typically proceeds with documentation review discussions, which leverage the digital document audit that was conducted pre-inspection. In a remote audit, document review may happen in a couple of ways:

- **Offline Review with Follow:** As noted, inspectors usually review the documents provided ahead of time. During the remote audit, they then schedule sessions to **discuss their observations or ask follow-up questions**. For example, an inspector might say: (I reviewed your maintenance training records that were submitted. I have a question about the recurrent training interval for your technicians – could you clarify how you ensure they meet the requirements?) The organization’s personnel can then explain or provide additional evidence in real-time (perhaps by screen-sharing their training database to demonstrate compliance). This interactive Q&A helps validate the documents’ content.
- **Live Screen-Sharing of Electronic Records:** If the organization uses electronic management systems (for safety reporting, maintenance tracking, etc.), the inspector may ask them to share their screen and navigate through specific records live. This is akin to an on-site auditor asking to pull a random record from a filing cabinet – except done via the company’s information system. The inspector can direct the company representative: “Please open the aircraft maintenance log for tail number XYZ and show the last inspection entry.” The ability to **see the data in real time** provides assurance that the information is current and unaltered. It also allows the inspector to request spontaneous samples (let’s open the training file for employee “name”) to mimic the sampling in an onsite audit.
- **Use of Digital Audit Tools:** Some CAAs or organizations might have specialized audit software or shared platforms. If available, the inspector can use these to collaboratively review documents. For instance, a cloud-based checklist could allow the inspector to tick off items as evidence is seen, and even attach screenshots or files as supporting evidence directly into the audit record.

During remote document review, **attention to detail** is crucial. The inspector should verify that documents are the latest version (remote oversight often relies on electronic manuals to ensure the revision status is current). They should also assess whether the documents were likely prepared **specifically for the audit** or are part of routine records. In remote settings, there’s a slight risk that an organization might try to curate or edit documents before sending; inspectors can counter this by asking for very recent records or cross-checking dates and signatures. If any document seems questionable, the inspector can ask to see a broader context or more samples.

Keep a clear **audit trail** of what has been reviewed. This can be done by referencing document numbers or titles in the checklist and noting any discrepancies or conformities. If an issue is found (an out-of-date procedure or missing training record), the inspector flags it for the report and possibly asks the organization for immediate clarification or corrective action even during the audit.

5.3 Remote Interviews and Discussions: Interviewing personnel is a key part of oversight to assess competence, understanding of responsibilities, and the safety culture. In a remote context, interviews are typically done via video call. To conduct effective **remote interviews**:

- **Plan Interview Sessions Separately:** It often works best to schedule separate video call segments for different groups or individuals (one session for management interview, one for frontline staff, one for safety officers). This ensures the right people are present and reduces distractions. One advantage of remote interviews is that you might more easily involve individuals who are geographically dispersed (for example, a pilot/ATCO/Engineer currently in another city could join the call without travelling).
- **Build Rapport and Observe Cues:** Start each interview by putting the person at ease a few informal remarks can help overcome the lack of in-person connection. Maintain eye contact via the camera and observe body language as much as the medium allows. It's harder to read a room through video, but noticing tone of voice and facial expressions is still possible. Ensure the interviewee's camera is on and that they are alone or in an appropriate setting (to avoid coaching or undue influence off camera).
- **Use Open-Ended Questions:** As with on-site interviews, ask open questions that require more than yes/no answers. For example: "Can you walk me through how you would handle an aircraft grounding due to a mechanical issue under your maintenance control program?" The goal is to gauge their knowledge and how they apply procedures. Listen actively and follow up with deeper questions or hypothetical scenarios to test understanding. In a remote format, it may be helpful to ask questions in smaller parts and confirm understanding frequently (since slight audio delays or dropouts can occur).
- **Ensure Inclusivity:** If you interview a group via teleconference (say, several maintenance technicians together), manage the discussion so that all

have a chance to speak. Call on quiet participants for input, because in virtual meetings some people might hold back. This is analogous to moving around the table in an in-person meeting.

- **Confidentiality and Openness:** Sometimes in on-site audits, private one-on-one discussions are held (an inspector might privately ask an employee about safety concerns). In a virtual environment, achieve this by scheduling separate calls if needed. Make sure interviewees know they can speak freely; no one else should be in the room with them unless it's part of the planned group interview. If sensitive issues come up, the inspector can take note and follow up later by phone if more discretion is required.
- **Assessing Safety Culture Remotely:** While challenging, inspectors should ask questions that give a window into the organization's safety culture and leadership commitment. For example: "How has management supported you in resolving any safety issues you've reported remotely during the pandemic?" or "Can you give an example of a safety improvement made recently and how it was communicated?" The richness of these answers, even over video, can help the inspector sense whether there is an open reporting culture and proactive safety management (which aligns with ICAO Doc 9859's safety management principles).

Throughout remote interviews, maintain a polite and professional tone, but also direct the conversation to cover all necessary points (using a questionnaire or checklist as a guide). Take detailed notes. If an answer raises a concern, the inspector can request evidence (You mentioned a new procedure was issued; could you share that on screen or send it to me?) or flag it as a finding. Remember that technical glitches can interrupt if something is not heard clearly, ask them to repeat rather than assume. The goal is to extract the same quality of information as an in person interview, acknowledging the medium's constraints.

5.4 Virtual On-Site Inspection (Facility and Operations Tour) : One of the most challenging components of remote oversight is the **virtual inspection of physical facilities, equipment, or live operations**. This is where technology stands in for the inspector's own eyes on-site. To perform a virtual inspection effectively:

- **Assign a Camera Operator:** The organization should have a designated person (or persons) on the ground to walk through the facility with a camera (often a smartphone or tablet with a good camera and internet connection). This person serves as the “eyes and hands” of the inspector, following instructions on where to go and what to show. It is critical that this person is competent and cooperative – typically an experienced staff member who knows the facility layout and can respond to requests (e.g., an QA manager or safety officer).
- **Use Real-Time Video Tours:** Via the live video call, the inspector will direct the camera operator. For example, during an aircraft maintenance hangar inspection, the inspector might say: “Please pan slowly across the tool calibration board... hold there, zoom in on that calibration sticker... what is the date on that? Okay, thank you. Now let’s move to the aircraft – show me the open panel on the left wing.” This approach attempts to mirror what the inspector would do on-site: looking at equipment, checking labels, observing activities. The camera operator should keep communication open (“Now we are walking into the engine shop...”) and respond to directions promptly. The inspector can take screenshots if needed to capture specific evidence shown on video.
- **Structured and Unstructured Observations:** Plan an itinerary for the virtual tour (a list of areas to visit, such as the ops control center, maintenance hangar, training classroom, etc.), but also allow some **unscripted** exploration. For instance, the inspector might see something on camera and ask to take a closer look, or spontaneously request, “Let’s open that cabinet,” similar to how an on-site inspector might perform a spot check. This helps reduce the chance that the organization only shows “pre-prepared” clean areas. It’s a good practice to ask the operator to show today’s activities: e.g., if a flight dispatch briefing is happening or maintenance task being carried out, have them go there and stream a portion of it. Observing actual operations remotely provides insight into real-time compliance and safety practices.
- **Multiple Camera Angles:** If possible, use multiple devices or cameras. Some advanced uses include fixed cameras (CCTV) that can be accessed remotely. If the airport or facility has CCTV covering critical areas, the CAA might ask for temporary remote access to those feeds, or to have someone show the CCTV view via screen-share. Alternatively, multiple staff with cameras could join the call from different locations (for example, one in the cockpit of a training simulator, another on the ramp). The inspector can

switch between feeds. While this requires more coordination, it can significantly broaden the coverage of the virtual inspection.

- **Limitations Acknowledgement:** Certain things simply cannot be checked remotely with high fidelity—for example, an inspector cannot physically tug on a component to see if it’s secured, or smell if there are fuel fumes, etc. Acknowledge these limitations and focus on what can be done: visual verification and asking the operator on-site to do actions (like open a panel, measure something on camera, etc.). The FAA’s experience has noted that some engineering inspections (like complex interior checks) have been challenging to do by video. Inspectors should identify any critical items they could not verify remotely and document them for future on-site follow-up. In some cases, an organization’s internal inspection reports or third-party audit results can be used to augment the virtual inspection (for example, if you couldn’t inspect a remote airport, perhaps use recent IOSA audit observations as indirect evidence).
- **Safety during Virtual Tours:** The on-site camera operator must still maintain their own safety and compliance during the tour. Instruct them that if any safety rule would be violated by taking the camera somewhere (e.g., entering a secure area without clearance, or walking under a jacked aircraft without proper gear), they must not do so. The inspector should schedule high-risk area tours (like an airside apron tour) only if it’s safe and permissible, possibly requiring the operator to use proper personal protective equipment and have another person assist for lookout.

Throughout the virtual inspection, the inspector should be diligently taking notes of observations just as if present. If any discrepancy or finding is noted (say, an expired fire extinguisher observed on camera, or an unsafe practice glimpsed), make a record and possibly take a screenshot as evidence. **Communication is constant:** the inspector narrates what they want to see; the camera operator confirms and shows it; the inspector then might ask the organization’s accompanying subject-matter expert (if present on the call) to explain something seen. For example: “I notice in the engine shop the chemical storage cabinet is open – can you tell me what your procedure is for securing it and who is responsible?”.

Finally, consider concluding the live tour with a brief recap while still connected, to ensure nothing was missed. The team leader can ask each inspector if they have any final areas they want to see via video before closing that part of the audit.

5.5 Closing Meeting (Virtual)

After the document reviews, interviews, and virtual facility tour are completed, the remote oversight activity should conclude with a **Closing Meeting** via video conference. The closing meeting allows the CAA team to present their findings and for both sides to clarify the results. Key points for the closing meeting:

- **Attendance:** Ideally, have the same attendees as the opening (management and concerned personnel), plus any additional individuals the organization wants to include to hear the results (e.g., the CEO or Accountable Manager if they didn't attend the whole audit). Ensure the CAA team is all present and that a lead spokesperson (usually the Team Leader) is designated.
- **Thank and Acknowledge:** The Team Leader should begin by thanking the participants for their cooperation and adaptability in conducting the oversight remotely. Acknowledge any challenges that were overcome (e.g., "We appreciate your team's efforts in facilitating the virtual tour and the prompt provision of documents."). This sets a constructive tone for feedback.
- **Summary of Activities:** Provide a brief summary of what was accomplished during the remote inspection: "Over the past two days we reviewed [X number] of documents, interviewed [Y] personnel, and virtually inspected [facilities A, B, C]." This recap shows the breadth of oversight covered and serves as a lead-in to findings.
- **Presentation of Findings:** Present the **findings** identified, both positive (conformities and good practices) and negative (non-compliances or concerns). It's often helpful to share your screen with a summary document or slide listing the findings for clarity. Each finding should be explained clearly, referencing evidence. For example: "Finding 1: The training program documentation does not show evidence of simulator training for all pilots as required by regulation X **【document reference】** . We noted 3 out of 15 pilot records sampled were missing simulator session logs." In a remote context, since everything reviewed is digital, you can precisely cite the file or record observed. Ensure to categorize findings by severity if your CAA uses levels (e.g., Level 1 – significant safety issue, Level 2 – minor). Also mention any **positive observations** (e.g., "The

introduction of an electronic safety reporting system is noted as a good practice that can enhance your SMS”).

- **Clarifications and Reactions:** After presenting all findings, give the organization an opportunity to ask for clarifications or provide additional input. They might wish to explain certain circumstances or even present additional evidence on the spot. The remote setting allows them, for instance, to quickly share a file to dispute a finding if they believe something was misunderstood. The CAA team should be open to reviewing any such extra evidence if time permits, but without diluting the objectivity of the audit. Any disputes that cannot be resolved immediately can be noted for further analysis.
- **Next Steps and Corrective Actions:** Outline the next steps. Inform the organization that a formal **audit/inspection report** will be issued (typically within a certain timeframe, e.g., 2 weeks). Explain the process for them to respond to findings – they may need to submit a **corrective action plan (CAP)** for each finding, with deadlines, even though the audit was remote the process for closure remains the same as usual. If any **immediate safety risks** were found, detail what immediate mitigation or enforcement action is required (for example, if a serious issue was discovered, the CAA might require operations to be curtailed or specific fixes done immediately – handle this just as you would on-site).
- **On-Site Follow-up (if applicable):** It’s good to mention whether an on-site follow-up is expected. For instance: “As discussed, due to the limitations of remote viewing, we plan to conduct a brief on-site validation of maintenance facilities within the next 6 months, once travel is feasible, to verify areas we could not fully observe remotely. This will primarily cover [XYZ].” This reassures both parties that any gaps in the remote process will be eventually closed.
- **Closing Remarks:** Conclude the meeting by thanking everyone again for their participation. Emphasize that the cooperation shown during the remote oversight reflects a mutual commitment to safety. Encourage the organization to continue addressing the findings earnestly and note that the CAA is available for any clarification during the corrective action process. End on a positive note, highlighting that despite the remote execution, the oversight was successful in identifying areas to improve and confirming areas of compliance.

After ending the call, the CAA team should internally debrief (perhaps immediately on a separate call) to discuss how the remote audit went and ensure alignment on the findings recorded. This internal debrief can feed into improving future remote oversight activities.

6. *Post-Oversight Reporting and Follow-Up*

The remote oversight process doesn't end with the closing meeting. Proper documentation and follow-up are crucial to ensure the oversight achieves its purpose of enhancing safety.

- 6.1 Report Preparation:** The CAA team will prepare a **formal report** just like for any audit/inspection. The report should clearly state that the oversight was conducted remotely (including the dates, methods used, and any limitations noted). Document all findings with evidence references (e.g., specific document names or screenshots from the virtual tour if applicable). Also include positive notes or compliance confirmations. It's important the report stands up to scrutiny, as it may be reviewed in future audits (e.g., ICAO USOAP) to demonstrate the State continued its oversight duties via remote means. Ensure the report writing follows the CAA's standard format (Doc 8335 provides guidance on reporting), and have it peer-reviewed if required by internal quality processes.
- 6.2 Distribution:** Send the finalized report to the organization within the agreed timeframe. In a remote context, this will typically be via email or through an online portal. Request an acknowledgment of receipt. It might be prudent to also schedule a quick follow-up call to walk the organization through any complex findings in the report, especially if some detail was not fully discussed in the closing meeting due to time.
- 6.3 Corrective Action Plans:** Require the organization to submit their proposed **corrective action plan** (CAP) for each finding by a certain deadline. The CAP should detail how they will address the non-compliance or deficiency, who is responsible, and the timeline. Encourage the organization to include systemic fixes (not just addressing the single instance) to improve their processes, in line with safety management principles (e.g., root cause analysis for significant issues). The CAA inspectors will review these CAPs remotely and either approve them or request improvement, as per normal oversight practices.
- 6.4 Follow-Up Activities:** Monitor the implementation of corrective actions. This can often be done remotely as well – for example, if a finding was missing training records, the follow-up might be the CAA verifying via email that new records are now in place or an updated procedure was provided. For more serious findings, the CAA might schedule another **remote check** or even an on-site verification

when possible. All follow-up actions should be tracked to closure in the CAA's oversight system.

6.5 On-Site Validation (if needed): As mentioned in the closing meeting, plan any on-site validation that was deemed necessary. When conditions allow travel or access, conduct a focused inspection to verify critical items that could not be assessed remotely. The results of such on-site follow-up should reference the original remote audit to tie them together.

6.6 Records Management: Ensure all records from the remote oversight are properly archived. This includes the report, any transcripts or notes from interviews, screenshots or files obtained, and correspondence. Since this was a remote activity, there might be electronic records like chat logs or recordings – handle these per the CAA's recordkeeping rules (for instance, storing them in a secure drive for a certain retention period). These records may also serve as evidence of the State's oversight performance in internal reviews or international audits.

Evaluation and Improvement: It is highly recommended that the CAA **evaluate the remote oversight process itself** after completion. Gather feedback from the inspectors involved: What went well? What challenges were faced (technically or procedurally)? Did we cover everything we would have on-site? This reflective exercise can identify lessons learned. Similarly, consider soliciting feedback from the inspected organization about the remote process – their perspective might highlight areas to improve communication or technology for next time. Use this information to update the CAA's remote oversight procedures or training. Over time, as technology and experience grow, the process will become more refined and effective.

By diligently following up, the CAA ensures that remote surveillance achieves tangible safety outcomes (corrected deficiencies, improved compliance) and not just a checklist exercise. The end goal remains the same as traditional oversight: to enhance aviation safety and compliance in the State.

7. Best Practices for Effective Remote Oversight

Drawing on experiences around the world, this section compiles **best practices** and tips to maximize the effectiveness of remote safety oversight:

7.1 Adopt a Risk-Based Approach: Be selective and strategic in using remote oversight. Focus on areas that can be effectively evaluated with technology, and **defer or prioritize** on-site inspections for areas that cannot. Always consider the

risk context for example, a well-established operator with a strong compliance record might be a good candidate for a largely remote audit, whereas a new or poor-performing operator might warrant an earlier on-site check.

- 7.2 Leverage Technology Smartly:** Use the best available tools and keep abreast of new solutions. Simple measures like using high-definition cameras and stable internet connections can drastically improve the quality of a virtual inspection. Some CAAs have experimented with wearable cameras (on hard hats, etc.) and even drones for remote viewing of airfield facilities. Ensure all team members are comfortable with the tools, through practice sessions. Also, **have backup options:** an alternative platform (if the primary video conference fails), extra batteries or devices for the on-site camera person, and a phone hotline as a last resort communication channel.
- 7.3 Ensure Strong Communication:** In remote oversight, clarity in communication is paramount. Inspectors should be explicit in their requests and confirmations. For example, when asking to see a document, specify the exact title or ID; when concluding an interview, summarize key points to ensure understanding. Without physical presence, miscommunications can happen easily, so double-check that both sides have the same interpretation of any agreements or observations. Encourage an atmosphere where the auditee feels comfortable asking, “Could you please repeat that?” or informing, “We didn’t catch that detail,” so that nothing is missed or assumed.
- 7.4 Document Everything:** Maintain an extensive paper (or digital) trail. In on-site audits, an inspector might scribble notes on a notepad; in remote audits, consider using a shared document or an inspection log that is updated in real-time. Save copies of crucial evidence (files, screenshots). This not only helps in report writing but also provides justification for the remote oversight’s outcomes, which might be scrutinized later. If using an electronic checklist tool, ensure it is backed up. Essentially, treat the data from a remote audit with the same rigor as physical evidence from an on-site audit.
- 7.5 Focus on Human Factors:** Recognize that participating in a remote audit is as new for the auditee’s staff as it might be for the CAA. Fatigue can set in due to long video calls; schedule breaks and don’t plan excessively long days virtually – several shorter sessions may be more effective than a marathon video call. Be mindful of the stress on both inspectors and the organization’s employees: technical hiccups or the formality of virtual communication can increase anxiety. A bit of patience and flexibility goes a long way. For example, if internet connectivity is acting up, don’t rush – pause and resume when stable, or adjust by turning off video temporarily if bandwidth is low.

- 7.6 Maintain Professionalism and Authority:** Even though you may be sitting at home or office behind a webcam, the oversight activity is official. Inspectors should conduct themselves with the same professionalism as in the field. This includes dressing appropriately (at least from the waist-up on camera), being punctual in virtual meetings, and upholding protocols (introductions, briefing, debriefing) systematically. Similarly, require the auditee to treat the process seriously – they should allocate dedicated time and not treat a remote audit as a casual chat that can be multitasked amid other work.
- 7.7 Incorporate Data and Tools from Industry:** Remote oversight can be complemented by other sources of safety data. ICAO and various industry groups have suggested using **industry assessment programs as data sources** to supplement state oversight. For example, if an airline is IOSA (IATA Operational Safety Audit) registered, the CAA could review the IOSA report remotely to identify areas of concern or verify certain compliance aspects. Likewise, third-party audit results, safety performance indicators reported through the State Safety Program, or even live data (like Flight Data Monitoring summaries) could be leveraged. These can enrich the remote audit and compensate for some lack of on-site exposure.
- 7.8 Regional and International Cooperation:** One of the benefits of remote technologies is the ability to **collaborate across borders**. MID Region States can share specialists to join each other's remote inspections as observers or advisors (with proper arrangements). This not only helps smaller CAAs access expertise but also promotes a harmonized approach. The Asia-Pacific experience during COVID-19 showed the value of assisting one another in oversight activities and sharing best practices. The MID region can emulate this by forming peer groups or using regional mechanisms (like RASG-MID Safety Enhancement Teams) to discuss remote oversight experiences. Additionally, stay informed on global developments – for instance, the FAA's successful practices and CASSOA's guidelines in Africa cassoa.org – and consider applying relevant aspects in the MID context.
- 7.9 Continuously Update Remote Oversight Procedures:** As technology evolves and more is learned, CAAs should regularly update their remote oversight guidance. What worked in 2021 might be superseded by better methods or tools in 2025. Treat the remote oversight framework as a **living document**. Incorporate inspector feedback, adapt to new ICAO recommendations (ICAO may issue further guidance as these practices mature), and refine criteria for when to use remote means. Over time, the goal is to embed remote oversight seamlessly into

the **routine safety oversight program**, using it to increase efficiency and coverage without compromising quality.

By following these best practices, CAA inspectors can conduct remote surveillance that is both effective and credible, yielding real safety oversight value.

8. *Final Comments*

- 8.1 Remote surveillance for aviation safety oversight has transitioned from an emergency improvisation into a **valuable component of modern oversight strategies**. By adhering to ICAO's principles and the guidance in this manual, MID Region States can implement remote auditing and inspection practices that uphold safety and compliance even when traditional methods are disrupted. The framework and procedures outlined – covering regulatory adjustments, meticulous planning, effective use of technology during execution, and thorough follow-up – provide a **comprehensive roadmap** for CAAs to follow
- 8.2 The overarching message is one of balance and continuous improvement: remote oversight is not a panacea, but it is a potent tool when used appropriately. It can increase efficiency (cover more ground with less cost) and ensure oversight continuity in trying times, thereby supporting the State's obligations under ICAO's safety oversight system. At the same time, CAAs must remain vigilant about the limitations and maintain on-site presence whenever necessary to capture the full picture of an aviation entity's operations and culture.
- 8.3 By developing capacity in remote surveillance, the MID region will be better equipped to handle future challenges – whether they be another pandemic, geopolitical issues, or simply the need to do more with limited resources. **Collaboration, technology, and a strong safety focus** will drive the successful integration of remote oversight. In line with global best practices and with support from ICAO, MID States can lead by example, showing how to maintain the highest standards of aviation safety oversight no matter the circumstances.

Finally, this guidance is intended to be a living document. Users are encouraged to customize it to their national context and share feedback or new best practices. The aviation world will continue to evolve, and so too should our oversight methods – always aiming to enhance safety in the skies.

9. *Sources:*

- ICAO SEIG/4 Working Paper on Remote Oversight (Presented by Qatar)

- FAA Policy and Industry Practice on Remote Inspections (Aviation Week, Apr 2020) aviationweek.com/cts/sys.com
- CASSOA (East African Community) Guidelines for Remote Oversight cassoa.org

Appendix 1

Example Checklist: Remote Audit Preparation

To further assist CAAs and inspectors, below is a simplified example of a **Remote Audit Pre-Flight (Preparation) Checklist** that could be used as a reference:

Step	Action/Requirement	Status (✓/X/N/A)	Remarks
1. Define Scope & Objectives	Confirm audit scope, areas, and regulations. Ensure suitability for remote evaluation.		
2. Risk Assessment	Assess remote feasibility (complexity, critical checks). Hybrid/on-site if risk is high.		
3. Team Assigned	Identify team members. Allocate roles (Team Leader, Ops Inspector, Airworthiness Inspector, etc.).		
4. Notify Operator	Send official audit notification (dates, scope, expectations). Ensure acknowledgment is received.		
5. Documents Requested	Send list of requested documents (manuals, records, org charts, training logs). Set submission deadline.		
6. Documents Received	Confirm receipt and accessibility of all requested documents. Follow up if pending.		
7. Pre-Review Done	Team reviews documents. Note preliminary observations/questions.		

Step	Action/Requirement	Status (√/X/N/A)	Remarks
8. Tech Platform Setup	Select primary video platform (Zoom/Teams). Create links and share with operator. Arrange backup method.		
9. Test Call Completed	Conduct audio/video test with operator. Check video quality for critical areas (e.g., hangar).		Date:
10. Schedule Finalized	Prepare detailed agenda (opening, interviews, tour, closing). Confirm with operator. Time zones checked.		
11. Inspector Equipment Check	Ensure inspectors have laptops, webcams, headsets, and templates. Quiet environment confirmed.		
12. Security Check	Agree on secure file sharing, screen sharing permissions, and recording rules.		
13. Contingency Plan	Brief team and operator on disconnection protocol (e.g., wait 10 min, then call by phone).		
14. Ready to Commence	Confirm all preparations complete. Team Leader approves audit start.		



INTERNATIONAL CIVIL AVIATION ORGANIZATION

**GUIDANCE MATERIAL ON JUDICIAL ENFORCEMENT FOR AVIATION INSPECTORS
FOR MID REGION STATES**

Compiled by the ICAO MID Regional Office	
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1. Introduction and Purpose and Scope

- 1.1 In the MID Region, civil aviation authorities (CAAs) and their inspectors play a crucial role in ensuring compliance with aviation safety regulations. While administrative actions (such as warnings, fines, or certificate suspensions) are common tools to address safety violations, certain cases require escalation to the judicial system for enforcement. Judicial enforcement involves pursuing legal action through the State's courts or judiciary to impose penalties or sanctions for serious violations of aviation laws. This guidance material has been developed specifically for MID Region States to enhance aviation inspectors' understanding of judicial enforcement mechanisms. It provides a structured framework, procedures, and best practices aligned with ICAO standards, tailored to the regional context and legal environments of MID States
- 1.2 This document's primary objective is to guide aviation safety inspectors on how and when to engage the judicial enforcement process as part of their oversight duties. It aims to ensure that serious breaches of aviation regulations, especially willful, reckless, or repeat violations are dealt with effectively through legal channels, thereby enhancing overall safety compliance. By clarifying roles, processes, and expectations, the material seeks to bolster inspectors' confidence and competence in cooperating with judicial authorities.
- 1.3 The scope of this guidance covers the end-to-end process of judicial enforcement in aviation oversight. It spans from the initial identification of violations and gathering of evidence, through the decision making to pursue legal action, up to participating in court proceedings and post-trial follow-up. It addresses various sectors of aviation (flight operations, airworthiness, licensing, aerodromes, etc.) where inspectors may encounter violations that warrant judicial action. While administrative enforcement actions remain important, this document focuses on those scenarios where inspectors must prepare cases for prosecution or legal adjudication. It is assumed that each State may adopt these guidelines in accordance with national laws and judicial structures.
- 1.4 The guidance is intended for use by regulators and policymakers in the MID Region to promote consistency and transparency in how exemptions are handled across different States. It covers the entire exemption lifecycle from initial request and evaluation through issuance, oversight of compliance with conditions, and eventual expiration or renewal of the exemption.
- 1.5 This guidance is aligned with ICAO's Safety Oversight principles and the State Safety Programme (SSP) framework. It complements existing ICAO manuals and documents, including **Doc 9734** (Safety Oversight Manual, Part A) and **Doc 8335** (Manual of Procedures for Operations Inspection, Certification and Continued Surveillance), which emphasize the need for effective enforcement as part of a robust safety oversight system. In particular, ICAO's Critical Element 8 on **Resolution of Safety Concerns** highlights that States must have processes to resolve safety deficiencies and **take enforcement action when appropriate**. This material interprets those global principles for practical

application by inspectors in the judicial context of MID Region States. The development of this guidance also responds to regional aviation safety goals (as noted by MIDANPIRG/RASG-MID) to strengthen enforcement capabilities of inspectors.

- 1.6 Ultimately, the effective use of judicial enforcement by CAAs serves two key purposes: deterrence (sending a strong message that serious violations will be met with serious consequences) and accountability (ensuring that individuals or entities who flout aviation laws are held responsible under the law). By working hand-in-hand with prosecutors and judges, aviation inspectors can help uphold aviation safety regulations and protect the traveling public. The sections that follow outline the framework and detailed procedures to achieve these aims, mirroring the structured approach of other ICAO guidance materials for consistency and ease of use.

2. Framework for Judicial Enforcement in Aviation Oversight

- 2.1 **Alignment with ICAO Standards:** Judicial enforcement in civil aviation must be embedded within the State's overall safety oversight system and legal framework, in harmony with ICAO standards and recommended practices. ICAO's safety oversight model calls for States not only to monitor compliance (through inspections and audits) but also to ensure the resolution of safety issues, which includes enforcement actions up to prosecution if necessary. In the MID Region context, this means CAAs should integrate judicial enforcement as a formal component of their State Safety oversight system and enforcement policies, consistent with Critical Element 7 (Surveillance) and Critical Element 8 (Resolution of Safety Concerns) of ICAO's framework. Aligning with ICAO guidance ensures that terms, processes, and outcomes of enforcement actions are internationally recognizable and defensible. For instance, when pursuing legal action for an aviation violation, inspectors and CAA legal staff should reference the relevant ICAO Standards and national regulations that have been promulgated from those standards. This alignment also helps demonstrate to international auditors (e.g. ICAO USOAP missions) that the State has an effective mechanism to address violations through legal means when warranted. Overall, embedding judicial enforcement in the regulatory system underscores a State's commitment to uphold aviation safety rules through all available avenues.

- 2.2 **Principles of Judicial Enforcement:** The use of judicial enforcement should be guided by key principles to ensure it is fair, effective, and contributes to aviation safety. These core principles include:

- **Legality and Due Process:** Enforcement actions must have a clear basis in national law and regulations. Inspectors should only initiate judicial proceedings for violations that are defined as offenses or non-compliances under the law. All actions must respect due process rights of the accused, including proper notification, the right to a defense, and an impartial judicial review.

- **Proportionality:** The severity of the enforcement action should be proportional to the gravity of the violation. Judicial action (which can lead to criminal penalties or significant sanctions) should be reserved for serious breaches – for example, willful violations, fraud or falsification of records, repeated non-compliance, or acts that put lives at risk. Lesser infractions or unintentional errors are typically handled with corrective actions or administrative penalties.
- **Consistency:** The CAA should apply enforcement consistently so that similar violations yield similar legal responses. This builds industry confidence that enforcement is not arbitrary. A clear enforcement policy (Section 3.2) helps ensure that inspectors make recommendations for judicial action based on standardized criteria, rather than personal discretion alone. Consistency also means coordination with prosecutors so that the legal outcomes (fines, sentences) are in line with precedent.
- **Deterrence and Compliance:** A fundamental goal of enforcement is to deter non-compliance. The prospect of facing court action and penalties should discourage regulated entities from knowingly violating rules. However, the enforcement process should also aim to bring the offender into compliance. For instance, judicial enforcement should be seen as enforcing accountability while ultimately enhancing future compliance.
- **Transparency:** The enforcement process should be as transparent as possible. Once a case is concluded, the CAA may consider sharing information (e.g., a summary of the violation and penalty) with the aviation community, as appropriate and in line with national laws, to reinforce the lessons learned. Internally, inspectors should document every step leading to judicial referral, creating a clear record of why the action was taken

By adhering to these principles, MID States can ensure that judicial enforcement actions strengthen the rule of law in aviation safety while preserving trust between Civil Aviation Authorities (CAAs), operators, and service providers. Within the framework of the State Safety Oversight (SSO) system and CE-8 requirements, enforcement decisions must clearly distinguish between:

- **Non-punitive responses** to unintentional errors or voluntarily reported safety events, which support a Just Culture and encourage transparency; and
- **Judicial enforcement measures** for intentional, reckless, or repeated violations that threaten lives, property, or public order.

Inspectors must apply this distinction carefully to avoid undermining safety reporting systems or creating a climate of fear, while ensuring that deliberate non-compliance is met with firm legal action. Judicial enforcement should therefore be used neither excessively nor hesitantly:

- **Not excessively**, so as not to discourage self-disclosure and safety learning;
- **Not hesitantly**, so that serious safety breaches receive timely, proportionate, and transparent legal resolution.

This balanced approach ensures that enforcement actions serve their primary purpose: **to resolve safety concerns, prevent recurrence, and protect the traveling public**, while maintaining confidence in the State’s aviation safety oversight system

2.3 Scope of Application: Judicial enforcement in aviation can apply across various domains and scenarios where legal violations occur. Inspectors should be aware of the types of cases that typically warrant judicial action under their national framework. Examples within the scope include:

- **Serious Regulatory Violations:** Cases where an aviation service provider or individual has **knowingly or recklessly** violated safety regulations. For example, an airline continuing operations on an aircraft with known serious defects, or a maintenance organization falsifying safety-critical inspection records. Such deliberate non-compliances endanger lives and usually meet the threshold for legal prosecution.
- **Operation Without Valid Certification:** Instances of entities or personnel operating in civil aviation without the required certifications, licenses, or approvals. For example, a charter company flying passengers without an Air Operator Certificate (AOC), or an unlicensed individual presenting themselves as a certified aircraft mechanic. These situations often involve fraudulent activity and undermine the regulatory system, thus calling for judicial enforcement.
- **Interference and Obstruction:** Any acts of obstructing inspectors or investigations can fall under judicial enforcement. If an operator refuses access to facilities, hides evidence, or threatens inspectors, those acts may violate laws (such as obstructing a government official) and need to be referred for prosecution. Ensuring inspectors can carry out their duties without interference is critical to oversight.
- **Criminal Offenses in Aviation Context:** Some violations overlap with criminal law. Examples are transporting dangerous goods illegally, security breaches, or cases of corruption (e.g., bribing an inspector or issuing certificates fraudulently). Inspectors may uncover such offenses during audits or surveillance. While specialized agencies might take lead (e.g., security authorities for security violations), aviation inspectors should coordinate closely and provide expertise, with the possibility of being called as expert witnesses during judicial proceedings.
- **Environmental and Other Specialized Violations:** Certain States have laws for environmental violations (like illegal aircraft emissions or dumping of waste) or economic offenses (such as violating consumer protection in aviation). If these are under CAA oversight and violations occur, inspectors might need to coordinate with authorities to enforce these through courts.

It is important to note that not all findings or safety concerns will fall within the scope of judicial enforcement. Many safety findings are best handled through corrective action plans, safety management processes, or administrative penalties. Judicial enforcement is appropriate for the high-end, more egregious cases where the State needs to exercise its full legal authority to sanction and correct behavior. Inspectors must use their judgement (guided by State policy and legal advice) to distinguish routine compliance issues from those rising to the level of judicial action. In unclear cases, consultation with the CAA's legal counsel or enforcement office is recommended before proceeding.

2.4 **Just Culture and Enforcement Balance:** Modern aviation safety management emphasizes a “Just Culture” approach, which encourages open reporting of errors and hazards by distinguishing between acceptable (unintentional errors) and unacceptable

(negligent or intentional) behaviors. MID States are strongly encouraged to foster a just culture environment even as they implement judicial enforcement. This means that inspectors and CAA officials should not seek to punish individuals for honest mistakes or system-induced errors that are willingly reported and corrected. Such occurrences are often better addressed through training or system improvements. On the other hand, willful violations and gross negligence, the kinds of behaviors that endanger safety intentionally or through extreme carelessness deserve sanctions of appropriate severity. In practice, this balance can be achieved by integrating the enforcement program with the State's occurrence reporting systems and safety management processes. For example, if a safety incident is reported voluntarily by an operator and it truly appears to be an unintentional lapse, the CAA may favor a non-punitive resolution (like counseling or additional oversight) **instead of immediate legal action**. Conversely, if evidence shows the incident was a result of deliberate rule-breaking or concealment, then enforcement (including judicial) is triggered. Ultimately, a Just Culture approach in the MID Region means that inspectors use enforcement as a scalpel, not a sledgehammer targeting the truly unacceptable behaviors while promoting a culture of safety and learning for all others.

3. Regulatory and Organizational Preparedness

For judicial enforcement to be effective, States need to ensure that their **regulations, policies, and organizational structures** explicitly support and govern the use of legal action in oversight. This section addresses key preparatory components that MID States should have in place to empower inspectors in carrying out judicial enforcement

- 3.1 Legal and Regulatory Framework:** A solid legal foundation is the first requirement. Each State's primary aviation legislation and regulations must define the violations and offenses that can be subject to legal enforcement. Typically, the civil aviation law or act will list violations (e.g., operating without a license, violating flight rules, failure to comply with safety directives) along with associated penalties (fines, imprisonment, etc.). Inspectors should be familiar with these provisions to know under what legal authority they can initiate court action. It is advisable that CAAs conduct a review of national civil aviation laws to ensure all critical safety requirements have corresponding enforceable provisions. If any gaps exist (for example, if certain safety requirements lack defined penalties or if inspector powers to refer cases are unclear), the State should update its regulations or issue guidance to bridge those gaps.

Additionally, States may consider empowering their CAA through legal instruments to impose administrative penalties directly for minor infractions, reserving judicial actions for major cases a tiered legal approach. Ultimately, a clear and comprehensive legal framework gives inspectors the confidence that when they detect a serious violation, the law is on their side to pursue it in court. It also signals to the judiciary the intent of the State to treat aviation violations with due seriousness.

Open communication ensures that when a genuine need for an exemption arises, the applicant knows how to proceed and the CAA receives better-quality submissions, thereby speeding up the evaluation. It also deters misuse of the exemption process by making it clear that requests will undergo rigorous scrutiny.

- 3.2 State Enforcement Policy and Inspector Guidance:** Beyond laws, CAAs should establish a formal enforcement policy that delineates how enforcement actions are pursued, including the escalation to judicial proceedings. This policy (often documented in an enforcement manual or inspector handbook) should lay out the criteria for selecting enforcement paths. For example, the policy might state: “Intentional, reckless, or repeated violations must be addressed by legal enforcement action”, **whereas isolated, unintentional violations may be handled with administrative remedies.** Incorporating such criteria helps inspectors make consistent decisions. The policy should also describe the procedural steps an inspector must take internally before a case goes to court such as notifying the inspector’s supervisor, consulting the CAA’s legal counsel, and preparing an enforcement case file (as detailed in Sections 4 and 5).

In addition to policy, practical guidance materials or bulletins should be provided to inspectors. These can include checklists for evidence collection, templates for enforcement reports, and standard operating procedures for interfacing with law enforcement agencies. By providing inspectors with a clear “roadmap” for judicial enforcement, States ensure that the process is standardized and not left to ad-hoc improvisation. Moreover, having a documented process protects the CAA by showing that enforcement actions are taken methodically and fairly, reducing accusations of bias or arbitrariness.

- 3.3 Coordination with Judicial Authorities:** Effective judicial enforcement requires close coordination between the CAA (and its inspectors) and the State’s judicial apparatus – typically prosecutors, police (for criminal investigations), and the courts. MID States should strive to establish formal channels of coordination. This might be achieved through Memoranda of Understanding (MOUs) or inter-agency protocols that outline how aviation cases are handled. For example, a State could have an MOU between the CAA and the national Prosecutor General’s Office specifying that aviation safety violations discovered by the CAA will be reviewed promptly for potential prosecution, and that technical support (expertise from inspectors) will be provided to prosecutors. Some States designate specific prosecutors or units to handle aviation-related cases; if feasible, this is a best practice as it builds expertise in the judiciary on aviation matters. Inspectors should be introduced to those counterparts so they know whom to contact when a violation needs referral.

Coordination also involves practical arrangements: agreeing on how evidence will be handed over (chain of custody procedures), how communication will occur during investigations, and whether joint training or workshops are held. It’s beneficial to sensitize judges and prosecutors about aviation safety and the importance of enforcement, possibly through seminars or including them in aviation safety events. This mutual understanding can lead to more effective handling of cases. In summary, inspectors should not view judicial enforcement as entering a foreign territory alone there

should be a structured partnership between the CAA and judicial authorities supporting the process.

- 3.4 Evidence Collection and Preservation:** When preparing for potential legal action, the integrity of evidence is paramount. CAAs must ensure that inspectors have clear procedures and tools for collecting, handling, and preserving evidence in a manner admissible in court. This includes both physical evidence (e.g., faulty parts, documents, printed records) and digital evidence (e-mails, electronic records, photos, videos). Inspectors should be trained to secure original documents or certified true copies, take photographs or video recordings with timestamps, and record witness statements. It's important to establish a chain of custody for all evidence, a log of who obtained it, how it was stored, and who accessed it to prevent any challenge to its authenticity in court.

Confidentiality and security measures from the oversight perspective (such as protecting sensitive safety data) should be balanced with the needs of legal evidence. If certain evidence includes personal or proprietary information, inspectors should coordinate with legal counsel on how to handle it (for instance, using sealed submissions to courts if necessary). Inspectors must also be aware of any legal requirements for obtaining evidence; in some cases, they may need a court warrant or police assistance (for example, to seize records from an operator who refuses to cooperate). The Court Evidence Checklist provided in Appendix 2 offers a reference for inspectors on what types of evidence to gather for common violations. By being thorough and methodical in evidence collection, inspectors greatly increase the likelihood of successful prosecution. Courts will base their judgments on evidence, so this aspect of preparedness cannot be overstated.

- 3.5 Resources and Legal Support:** Pursuing judicial enforcement can be resource intensive. CAAs should plan and allocate resources to support inspectors in this area. Legal support is crucial this might involve having a dedicated legal advisor or enforcement unit within the CAA that works with inspectors on case preparation. Such legal experts can help translate technical findings into legal arguments, draft charges, and liaise with prosecutors. If a CAA lacks in-house legal staff, an arrangement should be made with the State's legal authorities to provide counsel when needed. Other resources include funding for expert witnesses or technical analyses (sometimes needed to prove a violation in court), as well as travel budgets if inspectors need to attend distant courts or accompany law enforcement on follow-up actions. The CAA should ensure inspectors have access to proper equipment: for example, secure storage for evidence, tools for analyzing digital evidence (or access to a lab), and reliable means of communication with prosecutors (secure email or case management systems). Additionally, time is a resource managers should allow that inspectors involved in a court case might need to dedicate significant time to preparation and testimony, and adjust workload accordingly. By recognizing judicial enforcement as a core part of oversight duties (and not an ad-hoc extra), CAAs in the MID Region can better support their inspectors and achieve stronger enforcement outcomes.

3.6 Training and Competency: Just as inspectors are trained in auditing, certification, and surveillance techniques, they also require training in enforcement and legal processes. MID States should incorporate modules on **enforcement procedures, evidence handling, and courtroom skills** into their inspector training programs. Key training topics might include **how to recognize which violations merit legal action**, how to document findings in a way that will hold up in court, interview techniques for witness statements, report writing for enforcement, and understanding the basics of criminal procedure (e.g., burden of proof, roles of prosecutors vs. judges).

Role-playing exercises can be valuable for example, simulating a scenario where inspectors must present a case to a mock prosecutor, or testifying in a mock trial about an inspection finding. Such exercises improve confidence and communication skills. If possible, cross-training with law enforcement (such as inviting a police investigator to explain investigative techniques, or a prosecutor to explain how they build cases) can give inspectors insight into the judicial perspective. Additionally, keeping inspectors updated on changes in laws and regulations is important; if a new law criminalizes a certain behavior (say, laser strikes on aircraft or unruly passenger behavior), inspectors should know how that intersects with their oversight work.

Finally, competency in enforcement should be evaluated periodically. Not all inspectors will routinely handle court cases (since serious violations are relatively infrequent), so CAAs might designate certain experienced inspectors as focal points for enforcement, or ensure knowledge transfer when a case occurs. In summary, continuous training and a competency framework for enforcement ensure that when the time comes for an inspector to step into a courtroom, they do so with professionalism and preparedness, representing the CAA effectively.

4. Planning and Initiation of Enforcement Actions

When an inspector identifies a potential serious violation, a systematic process should be followed to decide on and initiate judicial enforcement. Proper planning at this stage will set the foundation for a strong case. This section outlines steps from detection of a violation up to the point of formally referring a case for prosecution.

4.1 Detection of Violations and Initial Investigation: The process begins when **a violation** is discovered through oversight activities. This could happen during a routine inspection, audit, accident/incident investigation, or even via a reported complaint or whistleblower. Upon detection of a possible serious violation, the inspector must first gather initial facts and assess the situation. It is important to verify the violation to the extent possible: confirm which regulation or law has been breached and collect preliminary evidence. For example, if an inspector suspects an airline operated flights without proper crew qualifications, they should secure records of crew licenses and flight logs as an initial step. At this stage, discretion is key the inspector may not yet inform the entity that a legal action is being considered, to avoid any tampering with evidence or heightened resistance. **However, safety considerations remain paramount;** if the violation poses an immediate safety risk, the inspector should take necessary immediate action (like grounding an aircraft through an administrative order) even as the judicial process is set

in motion. Document all observations meticulously in an inspection report or violation report. This report should clearly describe what was found, when and where, and why it is a violation of specific regulations. The initial investigation phase might also involve consulting with senior inspectors or managers to ensure consensus that the issue is indeed severe. Once the inspector is satisfied that a serious violation has occurred and initial evidence is in hand, they proceed to the next step.

4.2 Enforcement Decision Process: With the facts gathered, the inspector (often in consultation with the CAA's enforcement committee or management) must decide whether to pursue judicial enforcement or handle the matter through other means. Many CAAs have an internal Enforcement Review Board or similar mechanism to review significant violations. Criteria for this decision should align with the State's enforcement policy (see 3.2) – typically considering factors like intent, harm, and compliance attitude. A helpful approach is to ask: Would failure to pursue this violation in court set a bad precedent or leave a serious safety risk unaddressed? If yes, judicial action is likely warranted. Another consideration is the evidence strength – do we have or can we obtain enough evidence to likely secure a conviction or penalty? If key evidence is missing and unattainable, a prosecution might fail and alternative enforcement (like certificate action) could be more effective. At this stage, inspectors should involve the CAA's legal advisors. Often a prosecutorial discretion comes into play; the case may be discussed informally with a prosecutor to gauge their interest or get advice on how to proceed. The outcome of the decision process should be documented, noting who was involved and the rationale. If the decision is not to pursue judicial enforcement, the inspector should then follow through with appropriate administrative or compliance actions to address the violation. If the decision is to proceed with judicial enforcement, the inspector moves forward with formal notification and case building.
Submission of Exemption Requests: The process typically starts with the **applicant**

4.3 Notification and Coordination with Authorities: Once a decision for judicial enforcement is made, the inspector/CAA needs to formally notify the relevant authorities and coordinate the next steps. Typically, this involves:

- **Internal Notification:** The inspector notifies the CAA's higher management (if not already involved) that a case is being escalated. Some States require that the Director General of CAA or a specific Enforcement Office approve referrals to the judiciary. Ensuring internal leadership is aware prevents any surprises and allows them to allocate support.
- **Notifying Law Enforcement/Prosecutor:** Depending on the State's process, the inspector either contacts a designated prosecutor directly or goes through a law enforcement agency (such as the police or a special investigations unit). A **formal referral letter** is usually prepared (see Appendix 1 for a model). This letter outlines the facts of the case, the regulations violated, and requests that legal action be taken. It should be accompanied by initial evidence or an offer to supply evidence. In some jurisdictions, the CAA may file a complaint or an offence report as the triggering document for the judicial process.
- **Notifying the Offender (if required):** In many cases, once a violation is being referred for legal action, the entity or individual involved should be informed that the matter is now subject to judicial proceedings. This might be done via a formal letter stating that "CAA

has referred the violation of XYZ to [Prosecutor/Law Enforcement] for appropriate action.” However, the timing of this notification can be sensitive if a criminal investigation is to occur, law enforcement might advise to delay informing the accused until certain steps (like evidence seizure or interviews) are done. Inspectors should coordinate with prosecutors on when and how the violator will be notified. In administrative enforcement, an immediate notice is standard; for judicial, it might wait until an official charge or summons is ready.

- **Cross-Agency Coordination:** Some cases require informing other agencies. For example, if the violation involves smuggling or security issues, customs or security agencies should be looped in. If it involves fraud in personnel licensing, the licensing authority might need alerting to possibly suspend the license pending outcome.

Throughout this coordination, maintaining a **clear line of communication** is vital. The inspector may serve as the technical point of contact for the prosecutor, so availability and prompt response to queries is important. Conversely, the inspector should ensure that the CAA’s legal/enforcement office is receiving updates from the prosecutors on how they will proceed (e.g., will there be an investigation, charges filed, etc.). At this juncture, the case has effectively moved from the CAA’s sole domain into the joint realm of the CAA and the judicial system

4.4 Evidence Gathering and Documentation: After initiating coordination, the inspector must deepen the evidence collection to build a robust case file. While some initial evidence was gathered in step 4.1, now the effort becomes more comprehensive and formal. The **Court Evidence Checklist** (Appendix 2) should be used to ensure all relevant types of evidence are considered. Key actions in this phase:

- **Gather Additional Documents:** Collect all documentation related to the case. This could include flight records, maintenance logs, training records, communication transcripts, approval certificates, surveillance reports – anything that can substantiate the violation. Ensure documents are the original or officially certified copies when possible. Each document should be labeled or indexed for reference.
- **Witness Statements:** Identify individuals who have knowledge of the violation (witnesses). These might be CAA inspectors (including the one who found the issue and any colleagues), employees of the company (whistleblowers or those directly involved), or others. It is often useful for inspectors to take written statements or interview these witnesses. However, care must be taken: if the matter could lead to criminal charges, typically law enforcement or prosecutors might prefer to conduct official interviews under caution to ensure admissibility. Inspectors should seek guidance in some cases they can obtain initial statements, but the prosecutor might later re-interview witnesses formally. In any case, make note of all potential witnesses and the essence of their knowledge.
- **Physical Evidence:** Secure any physical items relevant to the case. For example, if a part on an aircraft was substandard or fake and led to a violation, remove and preserve that part. Tag it as evidence. If it’s too large (like an aircraft), extensive photos/videos and examination reports by experts might serve in lieu. Ensure physical evidence is stored securely (e.g., in a tamper-evident bag or secure facility).
- **Analytical Reports:** In some instances, an expert analysis or lab test might be needed (for instance, testing fuel samples if fuel quality caused an engine failure that ties to a

violation). Coordinate to get those analyses done and documented. The inspector might not do this personally but should facilitate and include the expert's report in the case file.

- **Enforcement Report Preparation:** Many CAAs require the inspector to compile an **enforcement report** summarizing the case. This report is a critical document that outlines the who, what, when, where, and how of the violation, and references the evidence supporting each point. It should clearly cite the breached regulations and describe the safety impact of the violation. Essentially, it is the narrative that will help prosecutors and eventually the court understand the case. Write this report in clear, factual language, avoiding jargon or acronyms that legal readers might not know (or else include a definitions section).

As evidence is gathered, keep updating the **evidence inventory** and ensure all items are cross-referenced in the enforcement report. Good documentation at this stage increases the chances that the prosecutor will accept the case and that it will result in a successful outcome. It also demonstrates professionalism; a well-documented case file shows the judiciary that the CAA's inspectors are competent and thorough.

4.5 Preparing the Judicial Referral: With evidence in hand, the next step is formally referring or filing the case for judicial action. This involves packaging the information and evidence in a format suitable for legal proceedings. The **model judicial referral letter** in Appendix 1 provides a template for the cover letter of such a referral. Key elements of the referral package include:

- **Referral Letter:** A signed letter from the CAA (ideally from a high-ranking official like the Director of Aviation Safety or Director General, if appropriate) addressed to the prosecutorial authority. It should reference the specific case, summarize the violation (including date, location, parties involved), cite the legal provisions violated, and request that legal proceedings be initiated. It may also indicate the contact point (e.g., the inspector or enforcement officer) for further coordination.
- **Enforcement Report:** Attach the detailed enforcement report written by the inspector. This gives the full narrative and evidence list. In some jurisdictions, this might be akin to an affidavit or official statement of the inspector. Ensure it is signed and dated. If law requires it to be sworn, arrange for that formality.
- **Evidence Dossier:** All evidence items should be compiled. If feasible, provide copies of documents and photographs for the prosecutor's review, while retaining the originals in CAA custody until needed in court. For large volumes of evidence, an indexed binder or electronic file is helpful. Each piece of evidence should be clearly labeled (e.g., Exhibit 1: Copy of Aircraft Maintenance Log dated XX; Exhibit 2: Photograph of unapproved part, etc.). If evidence is held elsewhere (like a seized part in storage), note its location and availability.
- **Legal References:** Although prosecutors will know the law, it can be helpful to include a copy of the relevant regulation or law section that was violated, especially if it's an aviation-specific rule that general prosecutors might not be familiar with. This avoids any confusion about the exact offense.
- **Suggested Charges or Actions:** Some CAAs include a suggestion on what charges or legal actions they believe are applicable (e.g., violation of Civil Aviation Act §123, which

carries penalties of XYZ). This can guide the prosecutor, though the final decision lies with them.

Before sending the referral, conduct a **peer review** if possible have another inspector or a legal advisor review the package to ensure clarity and completeness. Once satisfied, deliver the referral through the officially agreed channel (physical delivery with acknowledgment, or a secure electronic submission as appropriate). After submission, maintain a copy of everything in the CAA's files. At this point, the case formally enters the judicial system's domain.

4.6 Engaging Law Enforcement (if applicable): In some cases, particularly where criminal investigation aspects are involved (fraud, intentional misconduct, etc.), law enforcement agencies will take an active role post-referral. Inspectors should be prepared to work with police or other investigators as needed. This may include accompanying officers on site visits to the entity for seizure of additional evidence, helping interpret technical aspects during interrogations, or providing subject-matter expertise to an investigative task force. It's important for inspectors to understand their role: generally, they act as **technical consultants** to the law enforcement, **rather than leading the investigation**. Ensure to hand over leadership on criminal investigative steps to those with legal authority (e.g., only police can interview a suspect in many jurisdictions). However, inspectors should remain closely involved to ensure no important technical detail is overlooked. If arrests or urgent interventions are needed (for example, preventing an unsafe flight from departing), law enforcement coordination is critical and should be done swiftly.

5. Executing Judicial Enforcement Actions: Court Proceedings

Once a case enters the judicial arena, the enforcement action moves into the prosecution and court phase. In this phase, aviation inspectors transition into a supporting role for the legal process – providing expertise, clarifications, and occasionally testimony to ensure the case is accurately presented and adjudicated. The following outlines the typical steps and the inspector's involvement during court proceedings.

5.1 Filing of Charges and Case Initiation: After reviewing the referral, the prosecutor (or relevant judicial authority) will decide on the formal initiation of the case. This usually involves filing charges or a formal complaint in court against the accused individual or organization. From the inspector's perspective, at this stage their role is to assist the prosecutor in finalizing the charges. There may be discussions where the prosecutor asks the inspector to explain technical details or verify the applicability of certain regulations. For example, prosecutors might ask: "Does this act clearly violate Civil Aviation Regulation X? Can you explain how?" The inspector should be ready to articulate the violation in layman's terms, so the prosecutor can draft the charge sheet or indictment accurately.

In some situations, additional charges might be added if new information emerges (for instance, during law enforcement investigation, they find other unrelated violations). Inspectors should offer input on any aviation-specific charges to ensure they are grounded in regulatory facts. Once charges are filed, the case is officially before the court and a process (criminal trial or administrative court hearing, depending on the legal system) is scheduled. The accused (now defendant) will be summoned or arrested, and the legal proceedings commence. Inspectors should

obtain a copy of the charge sheet and familiarize themselves with exactly what the defendant is being accused of in legal terms, as this will frame their contributions going forward.

5.2 Pre-Trial Coordination and Case Building: Between the filing of charges and the actual court hearings, there is often a pre-trial phase. During this time, the prosecution builds its case fully, and the defense may also gather their side. Inspectors can expect to be actively engaged with prosecutors in this period. Key activities include:

- **Briefings and Strategy Meetings:** Prosecutors may hold meetings with the inspector and any CAA legal representatives to outline the strategy for prosecution. They will discuss which witnesses to call, what evidence to prioritize, and how to present the technical aspects to a judge or jury. Inspectors should provide input on what they consider the strongest evidence and whether any technical demonstrations or visuals might help (for example, using a diagram of an aircraft system to show where a tampered part was found).
- **Further Evidence Requests:** The prosecution might identify gaps or request additional information. They might say, (We need proof that this regulation was communicated to the operator) requiring the inspector to fetch a copy of an earlier letter or certificate. Or they may need an expert analysis to be formally written as an expert report. The inspector should facilitate any such request promptly. In some cases, inspectors themselves might prepare supplementary statements or clarify their initial report if something was unclear.
- **Pre-Trial Hearings and Legal Motions:** There could be preliminary court sessions (e.g., bail hearings, plea hearings, or motions by the defense to dismiss or suppress evidence). Inspectors typically do not speak in these but should remain on standby to support the prosecutor with facts if needed. For instance, if a defense lawyer claims “the CAA did an illegal search,” the prosecutor might ask the inspector to detail how evidence was obtained (to show it was lawful). It’s important that inspectors maintain meticulous notes and be truthful; any hint of improper procedure can jeopardize the case.
- **Expert Witness Preparation:** If the inspector (or another technical person) will testify as an expert witness, this is the time to prepare. The prosecutor will go over potential questions to ask and what areas the testimony should cover. The inspector should also prepare to explain technical terms in simple language. It might be useful to practice answering likely cross-examination questions. An inspector’s credibility and clarity as a witness can significantly influence the case, so thorough preparation is crucial.

Additionally, ensure that all evidence is **organized and accessible** for trial. Originals of documents and evidence items should be secured and ready to be presented in court when required. The inspector may be asked to help identify and introduce evidence during the trial (e.g., Exhibit A is the logbook the inspector obtained, which shows X). A well-prepared pre-trial phase, with strong collaboration between inspector and prosecutor, lays the groundwork for a convincing presentation in court.

5.3 Court Hearings and Inspector Testimony: The case will eventually be heard in court, which could range from a single-day hearing to a complex trial spanning multiple days or weeks, depending on the complexity of the case. During the court hearings, the inspector’s involvement will primarily be as a witness for the prosecution (and occasionally assisting behind the scenes). Here’s what to expect:

- **Giving Testimony:** Almost certainly, the inspector who investigated the case will testify. This typically involves sitting in the witness box, swearing an oath, and answering questions posed by both the prosecution and defense (and sometimes the judge). The prosecution will start by asking the inspector to establish credentials (experience, role at CAA) and then to explain how the violation was discovered and handled. The inspector should clearly state the facts: what was observed, what evidence was gathered, and how the actions of the defendant violated specific regulations. It's important to **speak clearly and avoid technical jargon** unless immediately explained – remember, the judge or jury may not have any aviation background. For example, instead of saying “he violated ANTR Ops 1.2.3 by not having an MEL,” say “he violated the regulation that requires a Minimum Equipment List – a list of allowable equipment outages – to be on board; he did not have that, which is a legal requirement for operating the aircraft.”
- **Handling Cross-Examination:** The defense attorney will cross-examine the inspector. They may challenge the inspector's findings, the method of evidence collection, or the inspector's qualifications. It's crucial for inspectors to remain calm, honest, and precise in responses. If a mistake is alleged (e.g., Isn't it true you didn't calibrate your equipment), the inspector should clarify truthfully (e.g., “The equipment I used was a standard device; calibration is done annually by our lab and it was within its valid period). Do not get defensive or speculate on answers; if unsure, say so, and if the answer lies outside your expertise (e.g., legal interpretations), defer to that. Prosecutors may object if questions are irrelevant or hostile; trust the process and answer only what is asked, addressing the judge or jury.
- **Presenting Evidence in Court:** Inspectors may also be responsible for introducing certain pieces of evidence as part of their testimony. For instance, the prosecutor might ask, (Could you identify this document?) and the inspector will respond, “This is the maintenance log I obtained from the company on May 5th, which shows the aircraft was flown 5 times when it was under a grounding order.” Through the inspector, such documents become exhibits in court. The inspector might need to explain how they got the document and that it's authentic. Similarly, if there's physical evidence, the inspector might be asked to describe it (or even demonstrate something, if safe and feasible, like showing a fake part vs a real part).
- **Supporting Other Witnesses:** In some cases, other expert witnesses (like an aircraft engineer or a meteorologist, depending on the case) might testify. Inspectors could be called again to corroborate or clarify something that arises later in the trial. They should pay attention to the proceedings. Also, during breaks, the prosecutor might seek clarifications from the inspector if the defense brought up a technical point, so they can address it in re-examination or with another witness.

Throughout the court hearings, the inspector's professionalism reflects on the CAA. Dress appropriately (uniform or business attire as required), address the judge as “Your Honour” (or appropriate title in the jurisdiction), and remain objective. Remember that as a witness, the inspector's duty is to **tell the truth and explain the facts** not to “win” the case at all costs. If the facts are presented clearly and truthfully, and the evidence is strong, that itself is the best contribution an inspector can make to achieving a just outcome.

5.4 Judicial Decision and Sentencing: Following the trial, the court will render a decision. If the case is proven, this could result in a conviction (in criminal cases) or a finding of violation (in administrative or civil enforcement cases), and the court will impose penalties. Penalties might include fines, imprisonment (for individuals), or other sanctions like revocation of licenses or operating permits through court order. For inspectors, once the verdict is out, their role is not yet over. They should:

- **Review the Judgment:** Read the court's decision in detail. This provides valuable feedback on how the case was viewed. The court might highlight certain evidence as crucial or might note any shortcomings. This information can help the CAA improve future enforcement efforts. Also, verify what penalties or orders were given – e.g., if the court orders a company's operations halted, the CAA must coordinate to enforce that.
- **Assist in Sentencing Input:** In some cases, especially if the defendant is found guilty, the court may ask for recommendations or impact statements before sentencing. The CAA (through the inspector or a senior official) might be invited to provide input on how serious the offense was from a safety perspective, to guide the severity of the sentence. If given this opportunity, the CAA should stress the safety implications – for instance, "The defendant's actions showed a disregard for passenger safety, and as the safety regulator we consider this a very grave violation." Such input must remain factual and avoid hyperbole, but it can help the court understand the context.
- **Public or Industry Notification:** After a judicial decision, CAAs often have the discretion to publish or circulate information about the outcome (unless restricted by the court). While this is typically done by the CAA's communications office, inspectors might provide the technical summary for a press release or notice to industry. For example, a short summary of the case and the penalty can be a deterrent lesson for others, reinforcing that regulators and courts are actively enforcing compliance. Any communication should, of course, stick to the facts of the court's findings now that the matter is adjudicated.

It's also possible the defendant may appeal the decision. If an appeal is filed, inspectors might need to repeat some of the above steps at a higher court. Prepare to support the case in appeals by keeping all documentation handy and staying in touch with the prosecutors during the appeal process.

5.5 Concluding the Case and Post-Trial Actions: Once all court proceedings (trial, sentencing, and any appeals) are concluded, the enforcement action moves into a closure phase. Inspectors and the CAA have a few important tasks at this point:

- **Enforcement of Court Orders:** Ensure that whatever the court has ordered is effectively carried out. If a fine was imposed, verify (perhaps through the judicial channels) that it was paid, or if imprisonment was ordered, that the individual is not operating in aviation during that period. Often, the CAA may need to take administrative action in parallel for instance, if not already done, revoking a license or certificate as mandated by the court's conviction (in some cases the court might not directly order revocation, but the conviction might allow or require the CAA to revoke under its own statutes). Work with the CAA's licensing or certification departments to ensure any required followon actions (like re-exams, suspensions) are executed.

- **Closing Report:** The inspector should compile a closing report or memorandum for the CAA’s records. This document would note the final outcome (e.g., “Operator X was convicted on Date Y; penalty Z imposed”) and any follow-up needed. It should also record lessons learned by the inspector during the process – for internal improvement. Include references to the judgment document and file it in the enforcement database or archive.
- **Return or Disposal of Evidence:** Evidence that was collected needs proper disposition after the case. Some evidence might be returned to the owner (if appropriate and not hazardous), other evidence might need to be retained for a period in case of appeal, and some may be disposed of (especially if perishable or if the court orders destruction, such as illegal items). Coordinate with the legal authorities on this. The inspector should ensure that any aircraft or facility that was sealed or restricted during the case is addressed per the outcome (for example, if an aircraft was impounded, after the case it might be released if safe to do so).
- **Informing the Victims or Stakeholders:** If the violation had identifiable victims or safety implications (say passengers put at risk, or an incident that prompted the case), it is good practice to inform relevant stakeholders of the conclusion. For example, the CAA might brief the airline’s management or the complainant who reported the issue about the outcome, to close the loop and show that due process was followed.
- **Personal Debrief and Well-Being:** Participating in court cases can be stressful for inspectors. Agencies should debrief the team involved – discussing what went well and what could be improved in future enforcement cases. Management should also acknowledge the work of the inspectors; a successful prosecution that enhances safety is a significant achievement. Inspectors, on a personal level, might use the conclusion as a time to reflect and then refocus on other oversight duties with the experience gained.

By concluding the case properly, the CAA and its inspectors ensure that the judicial enforcement action fully achieves its purpose and that the chapter is properly closed in the oversight records. The final step is to take the knowledge gained and feed it back into the continuous improvement of the State’s safety oversight system, which is covered in the next section.

6. *Post-Enforcement Reporting and Follow-Up*

Enforcement doesn’t end with a court’s verdict. There are important post-enforcement activities that help integrate the outcome into the State’s safety oversight and ensure lasting safety improvements. Just as with remote oversight (or any oversight activity), documentation and follow-up are crucial in judicial enforcement cases. This section outlines what should be done after a case is closed to wrap up administratively and to learn from the experience.

6.1 Documentation of Outcomes: Every enforcement case that goes to judicial action should have its outcome formally documented in CAA records. This includes updating the enforcement database or tracking system with the final disposition (e.g., “Case #2025-01: Prosecuted – Guilty,

Fine of \$50,000 and 6-month license suspension imposed by court on [Date]”). All relevant documents, such as the court judgment, sentencing order, and the inspector’s closing report (from 5.5), should be filed. Maintaining a well-organized archive of enforcement cases is important for transparency and for reference in future cases. For example, if a similar violation occurs in the future, inspectors can look back to see how it was handled and what penalty was achieved, guiding consistency. Additionally, ICAO USOAP audits or internal audits may review enforcement case files to assess the effectiveness of the State’s resolution of safety concerns. Ensuring that files are complete and clearly show the trail from initial finding to final resolution will demonstrate compliance with ICAO expectations.

6.2 Communication of Enforcement Outcomes: Communicating what happened can serve both accountability and educational purposes. Internally, the CAA should brief relevant staff (perhaps via a short internal memo or meeting) on the outcome of significant cases. This keeps all inspectors aware of enforcement actions and reinforces a culture of not tolerating serious violations.

6.3 Corrective Actions by the Offender: Even after legal penalties, from a safety perspective the underlying issues need resolution. If the convicted party is still operating (for instance, an airline fined but allowed to continue operating after paying fines and correcting issues), the CAA should ensure that all **safety deficiencies are corrected**. This might involve requiring a corrective action plan from the operator, similar to what would happen after an audit finding – but now under the shadow of enforcement. For example, if maintenance lapses were at issue, the airline should demonstrate improvements in its maintenance management to the CAA. In some cases, the court itself may have ordered specific actions (like “the company must undergo an external safety audit” or “the engineer’s license is revoked”). The CAA must track these and ensure compliance. Inspectors might schedule a special post-enforcement inspection to verify that, say, all unauthorized parts have been removed or new procedures implemented. The goal is to prevent recurrence of the violation. Additionally, the offender may have to regain trust; the CAA could impose a period of heightened surveillance on them. Essentially, while the judicial process punished the past behavior, the CAA’s job is to secure future compliance – a combination of oversight and support to the operator in remediation.

6.4 Continued Monitoring and Compliance Verification: Following an enforcement action, especially a major one, the CAA should incorporate the case into its risk-based oversight planning. Entities that have been subject to enforcement may be at higher risk of future non-compliance (or might be prompted to improve significantly either way, they are notable). Inspectors should treat such entities with appropriate scrutiny. For example, if an airport was prosecuted for safety breaches on the airfield, future inspections at that airport should specifically check the areas that were problematic. This might even be explicitly noted in the inspection program or checklist for the next year. Conversely, if the enforcement triggered a positive overhaul of the operator’s management, inspectors should acknowledge that improvement while still verifying its effectiveness. Over time, if the entity demonstrates sustained compliance, they can be treated normally again; if not, further enforcement (administrative or judicial) might be necessary. This cyclical monitoring closes the loop of the enforcement process by feeding the outcome back into proactive oversight.

6.5 On-Site Validation (if required): There are instances where an on-site follow-up is essential to validate that the enforcement outcome has translated into real change. For example, consider a scenario: a maintenance organization was prosecuted for using unapproved parts. Post-trial, they claim to have purged all unapproved parts and improved inventory control. The CAA should perform an **on-site validation inspection** to confirm these changes – much like an audit after a major finding. This concept mirrors the approach in remote oversight where an on-site validation might follow a remote audit. In judicial enforcement, on-site validation ensures that paper compliance (court fines, management commitments) is actually implemented on the ground. Inspectors conducting such validation should coordinate with those who handled the case to target the inspection effectively. If the validation finds lingering issues (e.g., still some unapproved parts found), the CAA may need to take further action (which could be another enforcement action, or administrative penalties, depending on severity). The on-site check serves as a quality control on the enforcement process itself.

6.6 Records Management: Proper records management is a mundane but vital part of post-enforcement. All documents related to the case should be preserved according to the State's record retention policies. Given that enforcement cases might be referenced years later (for trend analysis, or if the same operator offends again), secure storage is important. In the MID Region, CAAs are encouraged to digitize enforcement records in a central database or electronic filing system for easy retrieval. Access to these records should be controlled due to their potentially sensitive content (investigation details, personal data, etc.). Additionally, any confidential sources or whistleblower identities should be specially protected in the records. If the case had international aspects (say a foreign operator or an ICAO USOAP finding related to it), consider also sharing the outcome with relevant parties (for example, ICAO or the foreign authority, as appropriate) – but only through proper channels and not violating any confidentiality. At this stage, if the case is closed, one may also release certain evidence items from custody as mentioned earlier, documenting their release or disposal in the records. A complete and well-maintained record ensures that the enforcement action can be reviewed and understood in the future by someone who was not involved directly, which is important for institutional knowledge.

6.7 Evaluation and Continuous Improvement: Finally, CAAs should treat each enforcement case as a learning opportunity to improve their oversight system. This involves an internal debrief or after-action review. The inspectors, legal officers, and management involved in the case should meet to discuss: *What went well? What challenges were faced?* For instance, maybe the evidence collection was difficult because the legal authority to seize documents was not clear – this might indicate a need to clarify regulations or obtain stronger legal powers. Or perhaps the case took very long in court – maybe training judges on aviation matters could help expedite future cases. Document any recommendations arising from this evaluation. These could range from **amending procedures** (e.g., updating the enforcement manual based on a gap noted), providing **additional training** (if an inspector felt unprepared for cross-examination on a particular topic), or even **policy changes** (if, say, the outcome suggests the penalties available in law are too lenient, the CAA might propose legislative changes).

Continuous improvement also means looking at **trends**: after accumulating several enforcement cases over years, analyze them for common root causes. It could reveal systemic issues – for example, if multiple cases involve falsification of training records, perhaps the CAA needs to

strengthen oversight in that area more broadly, not just case-by-case. Feed these insights into the broader safety management processes of the State. In summary, by closing the feedback loop, MID States can ensure that every judicial enforcement action not only addresses an individual violation but also contributes to a stronger, more proactive safety oversight system in the long run.

7. Best Practices for Effective Judicial Enforcement

7.1 Drawing on the experience of States both within and outside the MID Region, this section highlights best practices that can enhance the effectiveness of judicial enforcement in aviation safety oversight. Implementing these practices can help CAAs and inspectors achieve better outcomes and foster stronger compliance culture:

- **Early Engagement and Education of the Judiciary:** Proactively build relationships with prosecutors and judges before major cases arise. Provide informational sessions or materials about the aviation regulatory system, common violations, and the safety significance of enforcement. A judiciary that understands aviation context is more likely to prioritize and effectively handle aviation cases. In some MID States, establishing a liaison officer for the CAA at the prosecutor's office has proven useful to streamline communications.
- **Clearly Defined Enforcement Thresholds:** Develop and publish (at least internally) clear criteria for what types of violations will trigger judicial enforcement. As noted earlier, the FAA's policy explicitly lists conditions requiring legal enforcement (intentional conduct, reckless conduct, etc. Adopting a similar approach in a State's policy ensures inspectors and industry both know the "red lines." This clarity not only guides inspectors but also acts as a deterrent (operators know what actions will certainly land them in court).
- **Robust Whistleblower Protections:** Encourage and protect individuals who report serious safety violations. Often, the worst violations are intentionally hidden. Whistleblowers (e.g., an employee reporting that their company is bypassing safety protocols) can bring these to light. Ensure that laws or policies exist to shield such individuals from retaliation and, if appropriate, maintain their anonymity. Inspectors should treat whistleblower information confidentially and verify it independently where possible to build a case. Several successful enforcement actions globally have started from an insider tip-off – harnessing this requires trust in the system.
- **Efficient Case Management:** Time is of the essence in enforcement. Delayed justice can diminish safety impact and deterrence. CAAs should strive to shorten the timeline from violation detection to case referral. This might involve streamlining internal approvals or dedicating resources to handle enforcement swiftly. Additionally, once in the judicial system, maintain a presence to prevent unnecessary delays – politely follow up with prosecutors about case status, offer any help needed, and, if national law permits, request courts to expedite cases that involve pressing safety concerns. Some States have had success by categorizing aviation offenses under critical economic crimes, which get faster track in courts.
- **Leverage Regional Collaboration:** The MID Region has a structure for cooperation (through ICAO MID Office, RASG-MID, etc.). States can share experiences of enforcement cases with each other (while respecting confidentiality where needed). This exchange might reveal common challenges or successful strategies. For example, if one

State's legal system set a precedent by convicting an operator for a safety violation, neighboring States could cite that in their own legal arguments to courts, demonstrating that such enforcement is internationally supported. Regional seminars or working groups on enforcement (possibly under the MID Regional Safety Plan initiatives) can be very useful. This guidance material itself is a product of regional collaboration, and States should continue this spirit by updating one another on major developments in judicial enforcement.

- **Promote a Safety Culture Alongside Enforcement:** Emphasize to industry that enforcement is a tool for safety, not an adversarial weapon. Encourage operators to have their own internal compliance and auditing systems that catch issues before regulators do. When industry willingly reports and corrects issues, acknowledge that positively – this carrot can balance the stick of enforcement. Some States run recognition programs for airlines or organizations with strong compliance records, which indirectly encourages others to avoid being on the “enforcement list.” The best outcome is not prosecuting many cases, but having few cases because the deterrent effect and safety culture prevent violations.
- **Document Success Stories:** When enforcement actions lead to tangible safety improvements, document these as case studies. For instance, if a prosecution of a maintenance company led to sector-wide improvements in maintenance training (because others raised their game out of concern), write that up. These success stories can be presented in meetings, training, or ICAO forums to illustrate the value of enforcement. It also boosts inspector morale by showing that their hard work in pursuing a difficult case paid off in safer skies.
- **Ensure Ethical Conduct and Avoid Conflicts:** While pursuing violators, inspectors and CAA must maintain the highest ethical standards themselves. Any hint of impropriety (such as an inspector with a conflict of interest in a case, or accepting any gifts/favors from industry) can undermine an enforcement action or even void it in court. Strict internal ethics rules and oversight help here. If an enforcement case involves an entity with powerful influence, ensure transparency and possibly involve independent observers to avoid any political or undue interference. The integrity of the enforcement process is non-negotiable for it to succeed.

By incorporating these best practices, MID States can strengthen their judicial enforcement regimes. It will help create an environment where **aviation inspectors are empowered and equipped** to take strong action when needed, and where **aviation service providers understand that non-compliance has serious consequences**. Over time, this contributes to a safer aviation system with fewer violations and a proactive compliance mindset across the industry.

8. Final Comments

- 8.1 Judicial enforcement is an essential—but carefully targeted—instrument within a State's aviation safety oversight system. In the MID Region, its use must be firmly anchored in the principles of a non-punitive, “Just Culture” approach and applied in harmony with Critical Element 8 (Resolution of Safety Concerns). This guidance clarifies the boundary between safety promotion and enforcement: routine, inadvertent, or self-disclosed non-

compliance should be addressed through corrective actions, safety education, and continuous monitoring, preserving trust between the CAA and service providers; by contrast, deliberate, reckless, systemic, or repeated violations—especially those that endanger life, property, or public order—warrant proportionate legal action. Inspectors should follow a documented escalation path, apply due process and proportionality, and coordinate with judicial authorities only when established thresholds are met. Used in this calibrated manner, judicial enforcement reinforces compliance, deters willful non-conformance, and supports timely safety resolution without undermining reporting cultures or the credibility of the State’s oversight system.

8.2 By following the structured steps from initial detection and careful case building, through coordination with legal authorities, to active participation in court and thorough post-case follow-up inspectors can ensure that no significant safety violation goes unaddressed. At the same time, by aligning actions with ICAO standards and embracing just culture principles, **States will strike the right balance between punitive measures and safety improvement. Not every safety issue needs a courtroom, but for those that do, inspectors now have a roadmap to navigate that journey.**

8.3 In closing, MID States are encouraged to continuously refine their judicial enforcement practices, share experiences and learned lessons with each other, and support their inspectors with the necessary training and resources. An inspector armed with knowledge, legal backing, and organizational support can be incredibly effective – not only detecting and correcting safety issues, but also ensuring accountability through the rule of law. By doing so, we collectively contribute to safer skies in the Middle East and globally, in line with ICAO’s mission of safe, secure, and sustainable aviation for all.

9. Sources:

- ICAO Doc 9734 – *Safety Oversight Manual, Part A* (for ICAO Critical Elements framework)
- ICAO Doc 8335 – *Manual of Procedures for Operations Inspection, Certification and Continued Surveillance*
- ICAO MID RASG/ASPIG records – Proposal for guidance on judicial enforcement [icao.int](https://www.icao.int)
- Skybrary – Article on Just Culture (emphasizing accountability for willful violations) skybrary.aero
- FAA Order 2150.3C – Compliance and Enforcement Program (criteria for legal enforcement) [gao.gov](https://www.gao.gov)
- ICAO State Safety Programme guidance – Enforcement as part of safety assurance aviation-professional.net

(The above sources and examples have been referenced to align this guidance with international best practices and terminologies. MID States should adapt these references to their national context as needed.)

Appendix 1

Model Judicial Referral Letter (Template)

[This template provides a general format for a letter from the CAA to the judicial authorities (e.g., Prosecutor's Office) referring a case for legal enforcement. It should be customized to the specific case and national protocols.]

[CAA Letterhead]

Ref: **[Case/Enforcement Reference Number]**

Date: **[DD Month YYYY]**

To:

The Chief Prosecutor, **[Name of Prosecutorial Authority or Court]**

Address: **[Office Address]**

Subject: Referral for Prosecution – Aviation Safety Violations by **[Name of Entity/Individual]**

Dear **[Title and Name of Prosecutor]**,

The **[Civil Aviation Authority of State]** (CAA) hereby refers a case of aviation safety violations for your review and appropriate legal action. The details of the case are as follows:

- **Offender:** [Name of airline/operator/individual], [license or certificate number if applicable, and address or headquarters].
- **Violation Summary:** On [date(s)], the above-mentioned did commit violations of the national civil aviation regulations, namely [cite specific law/regulation sections]. The key facts are:
 - [Brief description of violation #1, with date/location – e.g., “Operating Flight ABC123 on 5 June 2025 without a valid Certificate of Airworthiness for the aircraft.”]
 - [Brief description of violation #2, etc., as needed.]These actions are in contravention of [Law/Regulation reference], which stipulates [brief quote or summary of what the law requires].
- **Safety Impact:** The violations identified are considered serious. [Provide a sentence on why it's serious – e.g., “Operating without a valid airworthiness certificate poses an immediate threat to passenger and crew safety.”]
- **Evidence Collected:** The CAA's Aviation Safety Inspectors have conducted an investigation into this matter. Key evidence includes:
 - Certified copies of [specific documents, e.g., maintenance logs, flight records] demonstrating the non-compliances.

- Statements from [witnesses or personnel], attesting to the operations and knowledge of the violations.
- [Any physical evidence, e.g., “The aircraft component (serial no. XYZ) which was installed without approval, currently secured by CAA.”]
A comprehensive **Enforcement Report** is attached to this letter, detailing the investigation findings and listing all evidence available. The CAA can promptly furnish originals of documents or any additional information at your request.
- **Previous Actions:** [If applicable, mention if the CAA took any immediate actions like grounding aircraft or suspending a license, and that these remain in effect or were interim measures. Also, mention if the entity has a history of violations or if this seems an isolated case.]

In light of the above, the CAA requests your office to initiate prosecution under [relevant section of the penal code or aviation law] against [the offender]. We believe the evidence establishes a prima facie case of [e.g., “operating an aircraft in violation of safety regulations,” or “endangering civil aviation safety” – use the legal terminology if available]. The penalties upon conviction under these provisions may include [briefly state possible penalties like fines/imprisonment as per law].

The CAA underscores the importance of this case from a safety perspective. Vigorous enforcement of aviation safety laws is essential to prevent future occurrences and maintain public confidence in air transport. We appreciate the close cooperation between our agencies in upholding these laws.

Point of Contact: For any further information or clarification, please contact [Name, Title], who is the lead aviation safety inspector for this case. [He/She] can be reached at [phone, email]. We are ready to assist your investigation and legal proceedings in any capacity, including providing expert technical testimony to the court.

Thank you for your attention to this matter. We trust in your esteemed office to take the necessary action in accordance with the law.

Sincerely,

[Signature]

[Name of CAA Head or Authorized Official]

[Title]

[Civil Aviation Authority of ...]

Attachments:

- CAA Enforcement Report (Ref. No. ...) and evidence inventory.
- Copies of key evidence documents [list attachments as needed].

Cc: [Internal CAA file reference or other agencies, if applicable]

Appendix 2 – Court Evidence Checklist

Category	What to include	Guidance / Notes	Status ☒	File ref. / link
Regulation Reference	Exact law/regulation violated (section No. + wording)	Attach official text; cite section and exact wording used in report	☐	
Inspection Reports & Notes	Original inspection/audit report	Ensure final signed copy is included	☐	
	Inspector's contemporaneous notes/worksheets	Legible, dated/timestamped; keep originals	☐	
Official Correspondence	Warning letters / notices of violation / grounding orders	Show history and entity awareness; include delivery proofs	☐	
Operational Docs (as applicable)	Flight records / journey logs / manifests	Verify dates, aircraft, crew consistency	☐	
	Maintenance records (logbooks, work orders, component history)	Cross-check part numbers, signatures, certifying staff	☐	
	Training records / personnel licenses	Validate currency, ratings, medicals where relevant	☐	
	Aircraft/component certificates (C of A, STC, etc.)	Verify validity and configuration match	☐	
	Exemptions/permits (or confirmation none exist)	Include scope, dates, conditions	☐	
Evidence of Act/Violation	Photographs / videos	Time/date-stamped; note camera/device; preserve originals	☐	
	Physical evidence items (e.g., failed part, forged doc)	Secure, label, uniquely identify	☐	
	Data logs / electronic evidence (FDR, ACARS, emails, e-maintenance)	Secure original files; create verified copies; provide printed excerpts	☐	
Witness Testimonies	Witness list (name, role, contact)	Note availability and potential conflicts	☐	
	Written statements (signed if possible)	Separate internal vs external witnesses	☐	
	Expert analysis reports + expert credentials	Lab tests, engineering analyses; include CV/qualifications	☐	

Category	What to include	Guidance / Notes	Status ☒	File ref. / link
Compliance History	Prior violations/enforcement actions	Past letters, penalties; demonstrate pattern if relevant	☐	
	Compliance record / safety audit results	Context: isolated vs systemic	☐	
Impact / Consequence	Incident/accident description linked to violation	Include official incident/occurrence report if any	☐	
	Risk assessment / safety analysis (if no incident)	Explain plausible severity and likelihood to court	☐	
Chain of Custody	Evidence handling log (who, when, where)	Unique IDs; storage conditions; signatures	☐	
	Transfers to law enforcement / others	Record date/time, receiving party, signatures	☐	
Referral & Legal Docs	Prosecutor referral letter (per Appendix 1/equivalent)	Check signatory authority and addenda	☐	
	Comprehensive enforcement report (inspector's summary)	Clear facts, elements of offense, legal basis	☐	
	Internal CAA approval/minutes authorizing referral	Attach memo or minutes excerpt	☐	
Administrative Prep	Confidentiality markings where needed	e.g., "Confidential – Court Use Only"	☐	
	Remove purely internal opinions from share set	Keep factual evidence in disclosure pack	☐	
	Legible copies; certified translations if required	Verify completeness and readability	☐	
Final Review	Evidence supports each element of the offense	Timeline consistency: who/what/when/where/how	☐	
	Peer/supervisor review of evidence package	Capture comments and resolutions	☐	
	Secure master copy in CAA archives; provide copies to prosecutors	Record what was sent and when	☐	

(End of Form)

Appendix 3 Summary of Enforcement Escalation Process

Below is a description of the enforcement escalation process in a flowchart format, illustrating how an issue can progress from detection to judicial action. Inspectors and managers can use this as a quick-reference overview.

Step 1: Violation Detected – An inspector discovers or is alerted to a potential safety regulation violation during oversight (inspection, incident report, etc.).

Step 2: Preliminary Assessment – Inspector assesses severity and nature of violation. Is it minor/unintentional or serious/intentional? Collect initial facts.

Decision Point A: Severity of Violation – *Minor or Major?*

- **If Minor/Unintentional:** Escalation to judicial enforcement is **Not Required**. Handle via compliance action (e.g., finding, corrective action request, administrative penalty). **End of Judicial Path** (monitor corrective action).
- **If Major/Deliberate:** Potential **Enforcement Case**. Proceed to formal investigation.
(for major cases)

Step 3: Internal Review – Discuss within CAA (enforcement committee/management). Confirm that judicial action is appropriate based on criteria (intentional, reckless, etc.).

Decision Point B: Go/No-Go for Judicial – *Proceed with Judicial Enforcement?*

- **No:** (If after review, decided not strong enough for court) – Revert to administrative handling (e.g., license action) and close judicial path.
- **Yes: Formal Enforcement Case Opened.**
(if Yes)

Step 4: Investigation & Evidence Gathering – Inspector (with team) gathers comprehensive evidence, documentation, witness statements. Prepare enforcement report.

Step 5: Legal Referral – CAA prepares referral package (referral letter + report + evidence) and sends to Prosecutor/Law Enforcement.

Step 6: Prosecutor Review – Prosecutor evaluates case. Possibly asks for more info. Decides whether to file charges.

Decision Point C: Prosecutor Action – *Proceed with Prosecution?*

- **Decline/Delay:** If prosecutor decides not to pursue (e.g., insufficient evidence), case may revert to CAA for alternative action or further investigation. (CAA might strengthen case or use admin penalties). **[Loop back]**
- **Accept:** Prosecutor files charges in court.
↓ *(if accepted)*

Step 7: Judicial Process – Case goes to court. Includes pre-trial, trial, verdict. Inspector provides testimony/expertise as needed. Court renders judgment.

Decision Point D: Outcome – *Guilty or Not Guilty (or other judgment)?*

- **Not Guilty/Case Dismissed:** Enforcement action ends without penalty. CAA internal review needed (what went wrong, was it evidence or interpretation?). Possibly consider civil/administrative action if any available.
- **Guilty/Violation Confirmed:** Court imposes penalties (fines, jail, etc.) and/or orders (e.g., revoke license).
(if guilty)

Step 8: Penalty Execution & Follow-Up – Ensure penalties are implemented (collect fines, revoke certificates as ordered, etc.).

Step 9: Post-Enforcement Actions – CAA monitors compliance after case: verify corrective actions by offender, communicate outcome to industry, incorporate lessons learned into future oversight. Case closed in records.

Appendix 4

Sample Case Summary Template

Inspectors can use a case summary template to report on enforcement cases for internal records or for sharing within the CAA/ICAO as needed. Below is a sample format:

Case Summary: Judicial Enforcement Action Report

- **CAA Case Reference:** [e.g., ENF-2025-05]
- **Inspector(s) Name:** [Lead Inspector Full Name, Team members if any]
- **Entity/Individual:** [Name of operator or person involved; include license/certificate numbers]
- **Violation Description:** [Short description of what rule was violated and how. Example: “Operation of ABC Airlines Flight 123 on 05/06/2025 in commercial service without a valid Certificate of Airworthiness for the aircraft, violating Section 4 of Civil Aviation Act.”]
- **Date of Violation (Detection):** [Date when violation occurred or was detected]
- **Location:** [Where it happened – airport, airspace, etc.]
- **Initial Actions Taken by CAA:** [Describe any immediate safety actions – e.g., “Aircraft was grounded on 06/06/2025 via emergency order; operator’s permit temporarily suspended pending investigation.”]
- **Investigation Summary:**
 - Initiation date of investigation and involved units.
 - Key evidence collected (list major evidence items).
 - Any coordination with other agencies during investigation (e.g., police, other regulators).
 - Conclusion of investigation: [e.g., “Evidence confirmed deliberate violation of maintenance requirements by the operator.”]
- **Enforcement Decision:**
 - Date of internal decision to pursue judicial enforcement.
 - Approval by: [Name/Title of approving authority].
 - Rationale: [e.g., “Violation was willful and posed high safety risk; met criteria for prosecution.”]
- **Referral Details:**
 - Date referred to Prosecutor and reference of referral letter.
 - Prosecutor Office/Contact.
 - Charges filed: [List the legal charges filed by prosecutor, e.g., “Count 1: Endangering Aircraft Safety (Art. X of Penal Code), Count 2: Falsification of Documents (Art. Y...)”].
 - Date charges filed in court.
- **Court Proceedings:**
 - Court name and case number.

- Timeline: [e.g., “Trial held on 10–12 Oct 2025 in [Court]. Inspector and two witnesses testified.”]
- Outcome (Date of judgment): [e.g., “Guilty on all counts” or “Guilty on some, acquitted on others” or “Not guilty”].
- Sentence: [e.g., “Company fined US\$100,000; accountable manager sentenced to 3 months imprisonment (suspended for 1 year); court order to CAA to revoke AOC for 6 months.”].
- If not guilty or case dismissed, note reasons if known (e.g., lack of evidence, legal technicality).
- **Post-Judgment Actions by CAA:**
 - Penalties/Orders executed: [e.g., “Fine paid on 01/12/2025; AOC formally reinstated on 01/06/2026 after compliance check.”].
 - Follow-up inspections: [e.g., “Conducted follow-up audit on 15/04/2026 to verify compliance improvements – satisfactory.”].
 - Communication: [“Case outcome circulated to industry via Safety Bulletin 02/2026” or “No public disclosure due to ongoing appeal”].
- **Lessons Learned:**
 - [Bullet points on what went well or challenges: e.g., “Need to involve legal team earlier – will do so in future.”, “This case sets a precedent for handling unairworthy operations, will reference in future enforcement.”, “Training needed on evidence handling – identified and planned.”]
- **Attachments:**
 - [List of key documents attached to this summary if any, like judgment copy, etc.]
- **Prepared by:** [Inspector Name], **Date:**
- **Reviewed/Approved by:** [Manager or Director Name], **Date:**

(End of Case Summary Template)



ICAO MID

SAFETY

MID-RASP

MIDDLE EAST REGIONAL AVIATION SAFETY PLAN



Third Edition

2026-2028

EXECUTIVE SUMMARY

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MIDDLE EAST REGIONAL AVIATION SAFETY PLAN (MID-RASP)



THIRD EDITION 2026–2028

PART I- PLANNING



SECTION 1. INTRODUCTION

1.1 Overview of the RASP

MID Region is committed to enhancing aviation safety, to the resourcing of supporting activities and to increasing collaboration at the regional level. The MID Regional Aviation Safety Plan (MID-RASP) presents the strategic direction for the management of aviation safety at the regional level. It constitutes the regional safety plan for MID Region, setting out the strategic priorities, main risks affecting the regional aviation system and the necessary actions to mitigate those risks to further improve aviation safety.

The purpose of this MID-RASP is to continually reduce fatalities, and the risk of accidents, through the development and implementation of regional SEIs. A safe, resilient and sustainable aviation system contributes to the economic development of MID Region, the States which comprise it and their industries.

The MID-RASP promotes the effective implementation of safety oversight systems of States in MID Region, a risk-based approach to managing safety at the regional level, as well as a coordinated approach to collaboration between States in the region, international organizations and industry. All stakeholders are encouraged to support and implement the MID-RASP as the regional strategy for the continuous improvement of aviation safety.

In addition, MID-RASP is to create a common focus on regional aviation safety issues as a continuation of the MID Region work to improve aviation safety and to comply with ICAO standards. This approach complements the existing system of developing safety regulations, complying with them and investigating accidents and serious incidents when they occur.

The MID-RASP is in alignment with the International Civil Aviation Organization (ICAO) *Global Aviation Safety Plan* (GASP, Doc 10004) and the national aviation safety plans of States in the region.

1.2 Structure of the MID RASP

The MID- RASP presents the regional direction for the management of aviation safety at the regional level, for a period of three years (2026-2028). It comprises seven sections. In addition to the introduction, sections include: the purpose of the MID-RASP, the regional operational safety risks, the regional organizational challenges, MID region's strategic direction for the management of aviation safety at the regional level, and a description of how the implementation of the safety enhancement initiatives (SEIs) listed in the MID-RASP is going to be monitored.

- **Part I. Planning** provides an introduction, which describes how MID-RASP is structured, developed and monitored and includes the MID region's strategic safety priorities. It consists of **sections 1 to 3**.
- **Part II. Implementation** contains safety performance measurement & monitoring and the detailed list of MID-RASP safety actions. It consists of **sections 4 and 5**.
- Both parts are supported by a number of appendices providing further details or assisting the reader.

Part-I. Planning

Part I provides an introductory explanation. Sections 1 and 2 explain how MID-RASP is structured, developed, monitored; presents the structure of the document; operational context; and the main purpose of this MID-RASP. Section 3 presents MID region's safety priorities:

Part-II. Implementation

Part II contains MID region's strategic direction for the management of aviation safety and safety actions. It consists of sections 4 and 5. Section 4 presents the MID Region safety performance monitoring and measurement (SPMM).

In respect of **section 5**, it facilitates the identification of SEIs and their respective actions relevant for each Goal identified in the MID Region Safety performance measurement and monitoring as follows:

- Goal 1: Achieve a continuous reduction of operational safety risks
- Goal 2: Strengthen States' safety oversight capabilities
- Goal 3: Establish & manage effective State safety Programmes (SSP)
- Goal 4: Strengthen collaboration at the regional & national levels to address safety issues
- Goal 5: Strengthen aviation safety planning (RASP & NASP)
- Goal 6: Expand the use of industry safety assessment and safety data sharing Programmes.

The MID Region SPMM includes six (6) Goals in line with GASP 2026-2028 Edition. For each Goal established in the MID Region SPMM, identified SEI(s) is mapped to it including their respective actions and the following information is provided:

Goal: Goal supports the region's strategic approach to managing safety at the regional level.

- **Goal #**Number & name
- **SEI# Number:** Description of the SEI
- **Target.** Target which serves to fulfil respective Regional Goal (Refer to MID Region SPMM)
- **Rationale** behind the safety issue (why it has been identified as an issue)
- **What it is to be achieved** (objective)
- **How we intend to monitor improvement/implementation of SEI** in the future
- **How we intend to achieve** the objective; here, the various actions contributing to mitigate the identified risk in that area are described
- **Actions:** The tasks required for the implementation of the SEI. The actions support the SEI and Targets of the Regional Goal
- **References:**
 - Indicates key existing global documents from which the SEI is adopted, if applicable.

Stakeholders:	Stakeholders in MID region
Example Action 1:	Description of the action to be taken
Responsible entity:	Appointed Group/State(s)/Organization(s) to develop details for implementation of the respective action
Priority:	Low, Medium, High
Completion Date:	The year(s) in which the respective action is expected to be implemented
Status:	new, ongoing, on hold, completed. (Provide also updated progress if any)
EXPECTED OUTPUT	
Deliverable	TIMELINE
Description of result to be achieved	The year in which the Target is expected to be achieved

1.3 Process for the MID RASP development, implementation and monitoring

The RASG-MD is the governing body responsible for the development, implementation and monitoring of the MID-RASP, in collaboration with the ICAO MID Office, international and regional organizations and with the aviation

industry. The MID-RASP was developed in consultation with States, regional organizations, and other stakeholders in the region, and in alignment with the 2026-2028 of the GASP. If required, RASG-MID would seek the support of MIDANPIRG and RASFG-MID, other sub-groups, States, regional organizations, and industry to ensure the timely implementation of SEIs to address safety deficiencies and mitigate risks. Through close monitoring of the SEIs, SEIG would make adjustments to the MID-RASP and its initiatives, if needed, and update the MID-RASP document accordingly.

Furthermore, the MID-RASP is to be reviewed by SEIG every year mainly to include new identified SEIs, review/update the existing SEIs, and their respective safety actions. In addition, the MID-RASP is to be updated/endorsed by RASG-MID at least every three years and as deemed necessary.

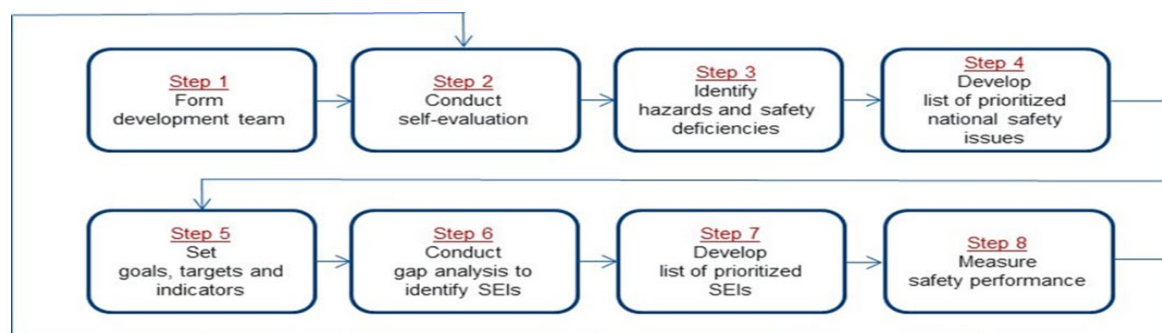
The SEIG is established to assist RASG-MID to develop and monitor the implementation of SEIs related to identified regional operational risks, Regional organizational challenges, and emerged issues. In addition, the SEIG takes the lead and ensures that SEIs are implemented in a timely, effective and efficient manner in coordination with RASG-MID, MIDANPIRG, and RASFG-MID groups and sub-groups (ASRG, SPIG, AIIG, ATM-SG,...etc), States, regional organizations, and industry.

As a first step towards establishing this system and to facilitate MID-RASP implementation, it is necessary to enhance the communication and flow of safety data and information, as well as coordination processes, among RASG-MID and its subsidiaries, States, and regional organizations. There is also the need to continue to enhance collaboration with MIDANPIRG through coordinated processes to sustain the collection and sharing of regional air traffic management (ATM) data and the sharing and resolution of safety issues. This, in turn, would support the implementation of Aviation System Block Upgrade (ASBUs) and ensure that their implementation accounts for and properly manages existing and emerging issues, e.g. approaches with vertical guidance (APV) to mitigate risks associated with CFIT and runway excursions.

The MID-RASP was developed with the aim of addressing the MID region's safety issues in a timely manner, as applicable. It is expected that this approach would facilitate MID States' support and participation in the implementation of these SEIs and their respective actions at both the regional and national levels. The three-year period of the MID-RASP, i.e. 2026 to 2028, was selected to coincide with the GASP review period of the same duration, to ensure continued alignment with the latest global plans.

States should ensure that a NASP is maintained and regularly reviewed. MID-RASP provides the identified safety priorities in the region and States should identify which top risks and key issues mentioned in the GASP and MID-RASP which apply to their national context and identify suitable mitigation actions within their NASP. States should also add/consider other safety issues which are unique to their operational context. Furthermore, States to establish their NASPs taking into account the GASP and MID-RASP; and based on their operational safety needs.

The key contents of the MID-RASP were developed using an eight-step process recommended by the GASP to develop RASPs and NASPs as indicated below:



1.4 Regional safety issues, goals and targets

MID-RASP has been developed in full alignment with the Global Aviation Safety Plan (GASP), actively supporting its aspirational goal of achieving zero aviation fatalities by 2030, as well as its overarching objectives, targets, and performance indicators. Furthermore, the MID Region, its States, and industry stakeholders are committed to reducing the aviation accident rate by 2028, measured through a 5-year rolling average using 2025 as the baseline year.

Key Features of MID-RASP Implementation:

- a. **Structural Alignment with GASP:** MID-RASP adheres rigorously to the framework and strategic priorities outlined in GASP, ensuring harmonized global and regional safety efforts.
- b. **Comprehensive Gap Analysis:** A systematic review was conducted to identify gaps between RASG-MID initiatives and ICAO Doc 10131 (Manual on Regional and National Aviation Safety Plans), enabling targeted enhancements to align with global standards.
- c. **Integration of SPMM:** The MID Region Safety Performance Monitoring and Mechanism (SPMM), aligned with the GASP 2026-2028 Edition, has been updated and incorporated as an appendix within MID-RASP to ensure continuity and measurable progress tracking.
- d. **Strategic Selection of SEIs:** Safety Enhancement Initiatives (SEIs) for MID-RASP were prioritized based on regional relevance, GASP 2026-2028 guidance, and actionable outcomes from key forums (DCGA, RASG-MID, MIDANPIRG, and RASFG-MID). Notably, GASP SEIs focused on domestic State/industry responsibilities were excluded, as these will be addressed through individual National Aviation Safety Plans (NASPs) developed by MID States.

The MID Regional Aviation Safety Plan (MID-RASP) aims to enhance the MID Region's commitment to improving safety oversight capabilities, reducing operational risks, and establishing effective State Safety Programmes (SSP). It serves as a key framework for raising awareness of safety risks and their consequences among States, industry, and stakeholders. MID-RASP encourages the allocation of financial, human, and technical resources to improve safety management, oversight, and operational performance. Additionally, it facilitates information sharing among relevant stakeholders to support timely action and collaborative problem-solving.

At the regional level, MID-RASP commits RASG-MID to the following strategic priorities:

- a. **Continuous reduction of regional operational risks:** Updating and developing new SEIs to address Regional High-Risk Categories (R-HRCs) such as Loss of Control In-Flight (LOC-I), Controlled Flight into Terrain (CFIT), Mid-Air Collision (MAC), Runway Incursion (RI), and Runway Excursion (RE), along with other safety priorities.
- b. **Strengthening Safety Oversight:** Supporting States in enhancing their safety oversight capabilities notably for AIG, AGA, and ANS areas and resolving any Significant Safety Concerns (SSCs).
- c. **SSP and SMS Implementation:** Assisting States in developing and implementing SSPs and Safety Management Systems (SMS) for service providers, including the formulation of National Aviation Safety Plans (NASPs).
- d. **Promoting Regional Collaboration:** Encouraging States and Industry to share safety information and best practices.
- e. **Aerodrome Safety and Certification:** Enhancing the implementation of Aerodrome Certification, SMS, Runway Safety Programmes, Runway Safety Teams (RSTs), and the Global Reporting Format (GRF) methodology.
- f. **Integrating UAS and AAM:** Supporting States in addressing challenges and opportunities related to the integration of Unmanned Aircraft Systems (UAS) and Advanced Air Mobility (AAM) into national and global aviation ecosystems.
- g. **Managing cross-sector risks:** Helping States mitigate risk interdependencies including cybersecurity threats, GNSS interference/spoofing, 5G interference with radio altimeters, aviation health safety risks, conflict zone hazards, and security risks impacting aviation safety.
- h. **Supporting MENA ARCM Activities:** Providing continuous assistance for the activities of the MENA

Aviation Regional Cooperation Mechanism (MENA ARCM).

i. **Advance the operation of MENA RSOO:** Assisting States in setting up and operationalizing the MENA Regional Safety Oversight Organization (MENA RSOO).

j. **Capacity Building and Implementation Support:** Conducting capacity building activities including resource mobilization, developing guidance material and sharing best practices to enhance State and industry capabilities.

k. **Promoting Safety Data Management:** promote the implementation of a regional framework for safety data collection, analysis, and sharing to enable proactive risk management and evidence-based decision-making.

Through these initiatives, MID-RASP reinforces a proactive and collaborative approach to aviation safety, ensuring continuous improvement and resilience in the MID Region.

Commitment of States and Industry: States and industry are dedicated to the following efforts to enhance aviation safety in the MID Region:

- a. **Implementation of SEIs:** Strategically and timely implement the GASP and MID-RASP SEIs, as appropriate, along with their respective actions.
- b. **Strengthen state oversight system** to address deficiencies notably for AIG, AGA, &ANS
- c. **Resolution of Significant Safety Concerns (SSCs):** States with SSCs identified under the ICAO Universal Safety Oversight Audit Programme – Continuous Monitoring Approach (USOAP CMA) should prioritize their resolution. This includes utilizing available resources, such as technical assistance from other States and Regional Programmes, to address SSCs promptly.
- d. **Developing and implementing Safety Management:** Prioritize the implementation of State Safety Programmes (SSP), Safety Management Systems (SMS), and National Aviation Safety Plans (NASP).
- e. **Data-Driven Risk Mitigation:** Use data-driven methodologies to identify Regional High-Risk Categories (R-HRCs) and associated safety issues. Implement collaborative solutions to reduce accident rates and fatalities while prioritizing the implementation of relevant SEIs.
- f. **Leveraging Industry Safety Programmes:** Explore and utilize ICAO-recognized industry assessment Programmes, such as:
 - IATA Operational Safety Audit (IOSA)
 - IATA Safety Audit for Ground Operations (ISAGO)
 - IATA Standard Safety Assessment Programme (ISSA)
 - ACI Airport Excellence (APEX) Programme

States and industry should consider options ranging from recognizing these Programmes to encouraging registration by applicable operators to enhance safety management and compliance.

1.5 Operational context

The Middle East's aviation market is poised for significant growth in the coming years, driven by increased passenger demand, substantial investments, and strategic initiatives by regional carriers and governments.

Aviation Industry Overview

The Middle East's aviation industry is experiencing a transformative phase characterized by several key developments:

- **Fleet Expansion and Modernization:** Airlines in the region are investing heavily in expanding and modernizing their fleets. For instance, Etihad Airways plans to invest up to \$1 billion in upgrading the cabins

of its Boeing 787 and 777 planes, introducing high-speed internet and new entertainment systems. (*Business Insider*)

- Emergence of New Carriers: The region is witnessing the launch of new airlines, such as Saudi Arabia's Riyadh Air, set to begin passenger flights in 2025. (*Arab News*)
- Infrastructure Investments: Governments are investing in infrastructure to support the anticipated growth. The UAE, for example, has initiated mapping air corridors for air taxis and cargo drones, aiming to integrate advanced air mobility into the nation's infrastructure. (*Reuters*)
- Maintenance, Repair, and Overhaul (MRO) Growth: The fleet expansion is set to drive MRO spending from \$16 billion in 2025 to \$20 billion by 2035. (*Fast Company, oliverwyman.com*)

Passenger Market Forecast

In February 2025, airlines operating in the Middle East recorded a 3.3% year-on-year increase in passenger demand, with total flight capacity rising by 1.3% during the same period. This growth is part of a broader trend, as the region's aviation market is expected to reach USD 28.38 billion in 2025 and grow at a compound annual growth rate (CAGR) of 4.4% to reach USD 35.19 billion by 2030. Additionally, air passenger traffic in the Middle East is projected to surge by 300% to 1.1 billion passengers by 2040. (Arab News, IATA; Mordor Intelligence Airside International, Moodie Davitt Report)

These developments underscore the Middle East's commitment to becoming a global aviation hub, leveraging its strategic location and investing in both fleet and infrastructure to meet growing passenger demand.

The global scheduled commercial international operations accounted for approximately 35.25 million departures in 2023, compared to 31.2 million departures in 2022; which showed a high increase after covid-19 pandemic. The MID Region shows a slight increase in traffic volumes during 2023. Total scheduled commercial departures in 2023 accounted for approximately 1.33 million departures compared to 1.31 million departures in 2019. In terms of an aircraft accident, the MID Region had no accidents in 2023. The 5-year average accident rate for 2019-2023 is 1.77, which is below the global average rate (2.18) for the same period.

USOAP-CMA audits had identified that State's inability to effectively oversee aviation operations remains a global concern. In respect of MID Region, the regional average overall Effective Implementation (EI) (13 out of 15 States have been audited) is approx. 76.8 %, which is above the world EI 69.68% (as of 10 August 2024). Three (3) States are currently below EI 60%. (*13th MID ASR*)

The Middle East's complex geopolitical landscape significantly influences the safety and operations of commercial air transport. Ongoing conflicts, political tensions, and military activities in the region present various challenges for airlines, regulatory authorities, and passengers. The interplay between geopolitical tensions and aviation safety in the Middle East necessitates continuous monitoring, proactive risk management, and effective communication among airlines, regulatory authorities, and flight crews to ensure the safe operation of commercial air transport in the region. Furthermore, the political/security situation in some States, the cross-national variation in aviation development, impede the provision of technical assistance, implementation of regional projects and the achievement of the regional safety, air navigation and Security targets as well as the insufficient financial and human resources in some States.

SECTION 2. PURPOSE OF MID'S REGIONAL AVIATION SAFETY PLAN

The MID RASP is the master planning document containing the strategic direction of the region for the management of aviation safety for a period of three years (2026 to 2028). This plan lists regional safety issues, sets regional safety goals and targets, and presents a series of safety enhancement initiatives (SEIs) to achieve those goals.

2.1 Relationship between MID-RASP and GASP and other Plans

Aviation's contribution towards the United Nations 2030 Agenda for Sustainable Development and to maximize the benefits of aviation, the priorities of the aviation sector should be integrated and reflected in State's economic and

social development planning with an appropriately balanced development of transport modes, including multi-modal and urban planning initiatives. In addition, recognizing that air transport is a catalyst for sustainable development and that it represents an essential lifeline for Least Developed Countries (LDCs), and especially for Landlocked Developing Countries (LLDCs).

ICAO Business Plan takes into consideration all of the work mandated to be undertaken by ICAO, regardless of source of funding. The Business Plan sets out the Strategic Goals and priorities to guide the activities of the Organization to support Members States in their attainment of a safe, secure, efficient, economically viable and environmentally responsible air transport network.

ICAO's global plans are essential in supporting safe, secure, efficient, economically viable and environmentally responsible air transportation. They provide a means to advance ICAO's Strategic Goals. The ICAO global plans include: the GASP, the GANP and the Global Aviation Security Plan (GASeP).

The GASP presents the global strategy for the continuous improvement of aviation safety. The purpose of the GASP is to continually reduce fatalities, and the risk of fatalities, by guiding the development of a harmonized aviation safety.

The purpose of the Global Air Navigation Plan (GANP) is to drive the evolution of the global air navigation system to meet the ever-growing expectations of all sectors in the aviation community by equitably accommodating all airspace user operations in a safe, secure and cost-effective manner while reducing the environmental impact on aviation. To this end, GANP provides a series of operational improvements to increase capacity, efficiency, predictability and flexibility, while ensuring interoperability of systems and harmonization of procedures. The implementation of the GANP is enabled by promoting the effective implementation of safety oversight and a safety management approach to oversight, including SRM to permit innovation in a managed way.

GASP complements GANP by providing States and industry with the tools to implement a safety management approach through their SSP and SMS. The GANP, through the evolution of the system described in the conceptual roadmap and the operational improvements detailed in the technical frameworks, supports the goals within the GASP and the GASeP by enhancing safety and security of the air navigation system as reflected in the performance ambitions.

The GASP goals and targets support GASeP by providing the best practices and models that can be as effective in managing security as they are in safety management. These include effective oversight, organizational culture, risk management and assurance processes. GASeP in turn supports GASP's vision of zero fatalities.

The MID RASP has been developed using the goals and targets, and the global high-risk categories of occurrences (G-HRCs), and the global organizational challenges from the ICAO GASP (www.icao.int/gasp). Moreover, MID-RASP considers and supports the objectives and priorities of GASP. The purpose of GASP is to continually reduce fatalities, and the risk of accidents, by guiding the development of a harmonized aviation safety strategy and the development and implementation of regional and national aviation safety plans. A safe aviation system contributes to the economic development of States and their industries. GASP promotes the effective implementation of SSP and SMS including NASP, a state's safety oversight system, and a risk-based approach to managing safety as well as a coordinated approach to collaboration between States, international organizations, and industry. One of the GASP goals is for States to improve their effective safety oversight capabilities and to progress in the implementation of SSPs including NASPs. Thus, GASP calls for States to put in place robust and sustainable safety oversight systems that should progressively evolve into more sophisticated means of managing safety.

Assembly Resolution A40-1 also calls for each State to develop and implement a national aviation safety plan (NASP), in line with the GASP goals, targets and the global high-risk categories of occurrences (G-HRCs). The NASP should also be developed having close regard for the RASP, while acknowledging that each State may have its own, specific safety issues and priorities, including addressing significant safety concerns (SSCs).

Relationship between GASP, RASP and NASP

In addition, to addressing systemic safety issues, GASP addresses Global high-risk categories (G-HRC) of occurrences, which are deemed global safety priorities. These categories were determined based on actual fatalities from past accidents, high fatality risk per accident or the number of accidents and incidents. The following G-HRCs have been identified for the 2026-2028 edition of the GASP: controlled flight into terrain (CFIT); Loss of control in flight (LOC-I); Mid-air collision (MAC); runway excursion (RE); and runway incursion (RI). The GASP G-HRCs are addressed in MID-RASP.

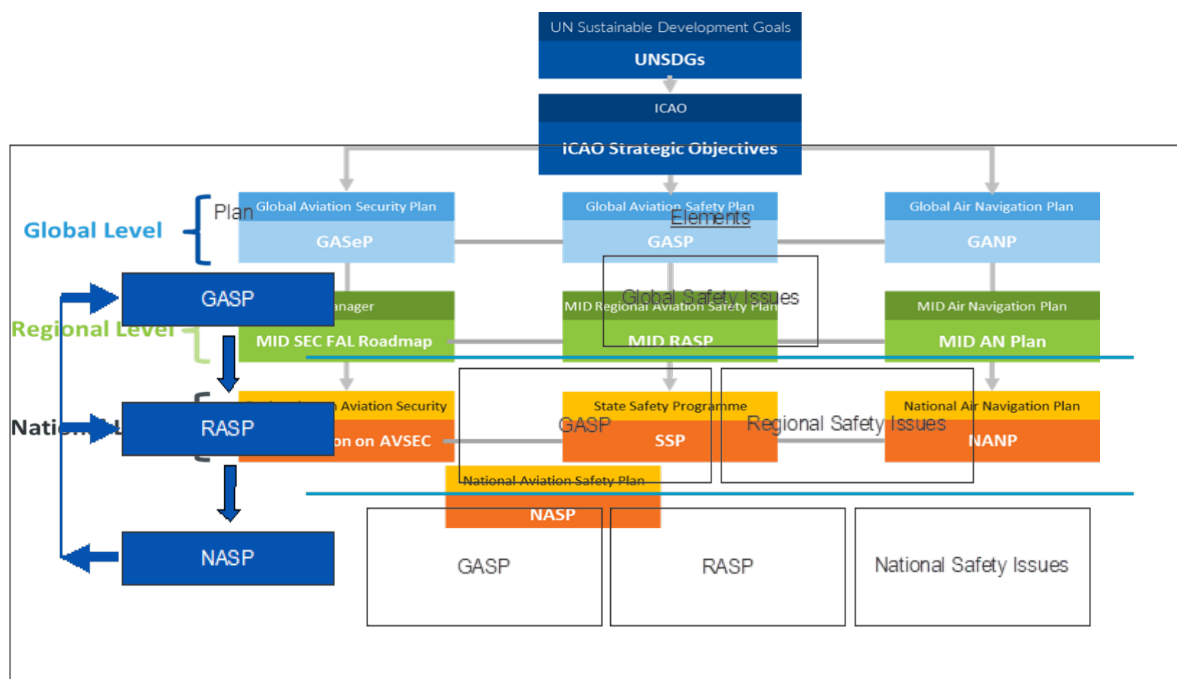
The MID-RASP considers the objectives and priorities of the GASP to enhance the level of safety in aviation and to better prepare the Member States for the ICAO Universal Safety Oversight Audit Programme (USOAP) audits including State Safety Programme.

The SEIs listed in the MID RASP form the action plan that supports the regional safety strategy. Ultimately, they support the improvement of safety at the individual State level, for States in the region, and contribute to the enhancement of safety at the wider international level. The MID RASP includes several actions to address specific safety issues and recommended SEIs for individual States in the region. It is expected that States in the region adopt these SEIs and include them in their respective national aviation safety plans

The 2026-2028 Edition of the GASP includes a new set of goals, targets and indicators, in line with the United Nations' 2030 Agenda for Sustainable Development.

In respect of MID Region SPM, the GASP provides global strategic direction while the MID region SPM provides regional specific goals and supports the region's strategic approach to managing safety at the regional level. Consequently, MID region safety indicators and targets were aligned with the 2026-2028 GASP goals and targets as relevant in the MID Region. Furthermore, the RASG-MID would continuously monitor the implementation of the identified SEIs in the MID-RASP and measure safety performance of the regional civil aviation system, to ensure the intended targets are achieved, using the MID Region safety performance measurement & monitoring to this plan. Moreover, MID safety performance measurement & monitoring Goals support the region's strategic approach to managing safety at the regional level. Therefore, for each Goal established in the MID region SPM identified SEI(s) is mapped to it including their respective actions.

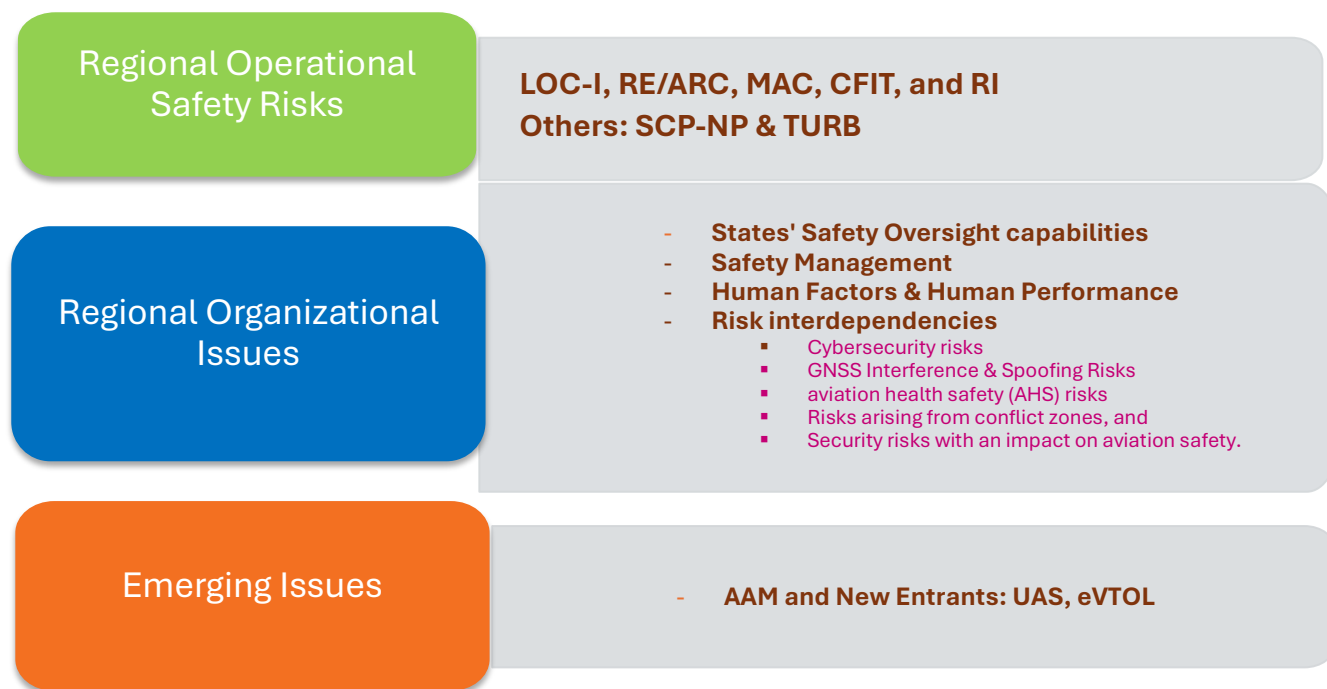
The MID Region SPM is included as an integral part of MID-RASP *at Appendix B*.



Relationship between MID-RASP and other Plans

SECTION 3. MID REGION'S STRATEGIC SAFETY PRIORITIES

The MID-RASP presents the safety priorities that were developed based on the ICAO GASP's including organizational challenges, operational safety risks and emerging issues as well as MID region-specific issues identified by a safety risk assessment and published in MID Region Annual Safety Reports and RASG-MID activities. Additionally, the MID region's strategic approach to managing safety at the regional level is to address the region's safety issues in a timely manner. Therefore, the MID-RASP strategic approach would focus on regional organizational challenges/issues, regional operational safety risks, and emerging issues as indicated in the graph below.



Therefore, the MID-RASP adopts three focus areas approach:

First focus area: Mitigation of Regional Operational Safety Risks

The GASP envisions achieving and sustaining zero fatalities in commercial operations by 2030 and beyond. To support this vision, the first focus area prioritizes the effective mitigation of regional operational safety risks, particularly: Loss of Control In-Flight (LOC-I), Controlled Flight Into Terrain (CFIT), Mid-Air Collision (MAC), Runway Incursion (RI), Runway Excursion (RE).

Addressing these risks at the regional level requires a structured and integrated approach that includes:

- **Effective mitigation strategies:** Promote and develop effective mitigations strategies at the regional level to address operational safety risks (LOC-I, CFIT, MAC, RE, and RI)

- **Safety Data Collection & Analysis:** Promote data-driven insights to identify safety issues and address them in an effective way.
- **Improve the Implementation of Safety Management:** Strengthen State Safety Programs (SSP) to incorporate data-driven safety risk management in line Annex 19 requirements
- **Foster regional collaboration:** Foster regional collaboration, including information exchange and best practice sharing as well as collaboration between regulators and service providers.
- **Collaborative Safety Enhancement Initiatives:** Encouraging joint efforts among States, industry, and stakeholders to address the regional operational safety risks.
- **Continuous Safety Promotion & Training:** Ensuring ongoing education and awareness for aviation professionals.

This approach creates a closed-loop system where data informs action, stakeholders collaborate, and adaptive strategies drive continuous improvement. By focusing on regional priorities while leveraging global best practices, this initiative ensures a comprehensive and sustainable reduction in LOC-I, CFIT, MAC, RI, and RE risks.

Second focus area: Strengthening Regional Safety Oversight and Management

The second focus area focuses on enhancing regional mechanisms to strengthen effective safety oversight capabilities, improve the establishment and implementation of safety management, and address risk interdependencies. Key regional challenges in aviation safety include regulatory oversight challenges, resource constraints, and deficiencies in safety management implementation. Addressing these issues requires a structured governance framework, capacity-building initiatives, and enhanced regional collaboration to ensure sustained safety improvements.

Strengthening Safety Oversight and Capacity Building

- Organizing and conducting regional technical assistance missions, capacity-building and Training Initiatives, and safety promotion activities.
- Enhancing human factors and human performance management.
- Supporting the establishment of an effective SSP and service providers' SMS.
- Manage risk interdependencies: Addressing interconnected risks such as cybersecurity risks, GNSS interference & spoofing risks, aviation health safety (AHS) risks, risks arising from conflict zones, and security risks with an impact on aviation safety.

Enhancing Regional Coordination and Cooperation

- Strengthening regional collaboration with States and regional organizations to support the implementation of MID-RASP SEIs.
- Enhancing communication and safety information sharing between States, international organizations, and industry stakeholders.
- Actively engage with donors, States and international organizations to mobilize the necessary financial and technical support.

Supporting and leveraging Regional Safety Initiatives

- Providing continuous support for MENA ARCM activities.
- Supporting the operation of the MENA Regional Safety Oversight Organization (MENA RSOO).

This structured mechanism ensures a systematic and effective approach to addressing regional safety oversight challenges, strengthening safety governance, and fostering collaborative risk management across the MID Region.

Third focus area: Integration of Emerging Technologies

Emerging technologies such as Advanced Air Mobility (AAM), Unmanned Aircraft Systems (UAS), and electric Vertical Take-Off and Landing (eVTOL) aircraft are reshaping the aviation industry. However, their integration into existing airspace presents significant regulatory, operational, and safety challenges. To support States in addressing these challenges, efforts will focus on:

- Conducting capacity building initiatives to promote a structured, safe, and harmonized approach.
- Promoting regional cooperation among states, organizations, and industry.
- Supporting the Development of a regional roadmap for the integration of AAM and new entrants.

Key Pillars for Safe Integration: A structured mechanism must address the following critical areas:

- **Regulatory and Policy Frameworks:** establishing clear regulations, policies, and guidelines for AAM and UAS operations.
- **Airspace Integration & Traffic Management:** Developing strategies for safe and efficient integration into controlled and uncontrolled airspace.
- **Safety Oversight & Risk Management:** Implementing robust safety oversight mechanisms and risk mitigation strategies.
- **Infrastructure Development & Certification:** Facilitating the development of vertiports, communication systems, and necessary certification processes.
- **Public Acceptance & Cybersecurity:** Addressing societal concerns, cybersecurity risks, and overall system resilience.

By leveraging global best practices and fostering regional collaboration, this initiative aims to ensure the safe, efficient, and sustainable integration of AAM and new entrants into the MID Region's aviation ecosystem.

3.1. REGIONAL OPERATIONAL SAFETY RISKS

The vision of the GASP is to achieve and maintain the goal of zero fatalities in commercial operations by 2030 and beyond. To do so, regional operational safety risks need to be identified and addressed. In line with the vision of the GASP, regional operational safety risks are listed in this section of the MID RASP. They addressed through the action plan presented in Section 5 of this document.

The RASG-MID produces and publishes an Annual Safety Report, available on the ICAO MID Office website. The RASG-MID Annual Safety Report is a timely, unbiased, and transparent source of safety-related information essential for all aviation stakeholders interested in having a tool to enable sound decision-making on safety-related matters.

The summary of accidents and serious incidents that occurred in MID Region as state of occurrence involved in scheduled commercial operations involving aircraft having a Maximum Take-off Weight (MTOW) above 5700 kg, is shown in the tables below.

Year	Fatal accidents	Non-fatal accidents	Serious incidents
2019 - 2023	1	7	287

The MID region (8) eight accidents occurred between 2019 and 2023. One fatal accident occurred respectively during the year 2020. The 5-year average accident rate for 2019-2023 is 1.77, which is below the global average rate (2.18) for the same period.

The MID Region had no fatal accident in 2023. However, the 5-year average fatal accident rate for 2019-2023 is 0.28 is slightly higher than the global average rate (0.21) for the same period. The MID Region had no fatal accidents in 2019, 2021, 2022, and 2023. However, one fatal accident occurred in 2020. The 2020 accident caused 176 fatalities.

The GASP 2026-2028 Edition identifies the G-HRCs as LOC-I, CFIT, MAC, RE and RI. In the MID Region in 2019-2023 the topmost frequent accidents related to the security and runway safety, which includes RE and ARC during Landing. In terms of fatality risk, the fatal accidents for the period 2019- 2023 were attributed to security related. Thus, based on the analyses of reactive and proactive safety information, it is concluded that the regional operational safety risks including the identified safety issues for the MID Region for the triennium 2026-2028 are:

1. Loss of Control-In Flight (LOC-I);
2. Runway Safety (RS); mainly (RE and ARC during landing);
3. Mid-Air Collision (MAC);
3. Controlled Flight into Terrain (CFIT); and
5. Runway incursion (RI).

Other regional risk categories of occurrences: SCF-NP and TURB.

In addition, safety issues which could lead to the potential outcomes of LOC-I, CFIT, MAC, RE, and RI including the security related issue have been identified in the MID ASR and should be also considered by the States while developing their NASP as well as the industry as indicated at *Appendix A*.

Aircraft Upset in Flight (Loss of Control-Inflight)

Aircraft upset or loss of control inflight is the most common accident outcome for fatal accidents in CAT aero plane operations. It includes uncontrolled collisions with terrain, but also occurrences where the aircraft deviated from the intended flight path or intended aircraft flight parameters, regardless of whether the flight crew realized the deviation and whether it was possible to recover or not. It also includes the triggering of stall warning and envelope protections. This key risk area has been raised by some MID States that make it an area of concern. Therefore, the prevention of loss of control is a strategic priority.

Controlled Flight into Terrain (CFIT)

It comprises those situations where the aircraft collides or nearly collides with terrain while the flight crew has control of the aircraft. It also includes occurrences, which are the direct precursors of a fatal outcome, such as descending below weather minima, undue clearance below radar minima, etc. There was no fatal accident involving MID States operators during this period. This key risk area has been raised by some MID States and in other parts of the world that make it an area of concern. However, additional data is needed for further analysis to identify the underlying safety issues.

Mid-Air Collision (MAC)

Refers to the potential collision of two aircraft in the air. It includes direct precursors such as separation minima infringements, genuine TCAS resolution advisories, or airspace infringements. During 2020, no mid-air collision accident has been recorded. However, the flight crew received TCAS RA and applied high rate of climb according to the TCAS display to prevent Mid-air collision with military aircraft which caused injuries to some persons on board. In addition, this key risk area has been raised by some MID States specifically in the context of the collision risk posed by military aircraft operating over the high seas which are not subject to any coordination with related FIRs for airborne operation. This is one specific safety issue that is the main priority in this key risk area. However, additional safety data and safety information are needed for further analysis to identify the underlying safety issues.

Runway Excursion

Runway excursion covers materialized runway excursions, both at high and low speed, and occurrences where the flight crew had difficulties in maintaining the directional control of the aircraft or of the braking action during landing, where the landing occurred long, fast, off-centred or hard, or where the aircraft had technical problems with the landing gear (not locked, not extended or collapsed) during landing. During the period 2019-2023, Runway Excursions and abnormal runway contact accidents and serious incidents mainly occurred in the landing phase of flight. In addition, High Airspeed and Low Engine Thrust identified as key contributing factors to the Unstable Approaches Events.

Runway Incursion (RI)

A Runway Incursions refers to the incorrect presence of an aircraft, vehicle or person on an active runway or in its areas of protection. Their accident outcome is runway collisions. While there were no fatal accidents or accidents involving MID States operators in the last years involving runway collision, the risk of the reported occurrence demonstrated to be very real. In addition to this, MID States should provide further data analysis regarding runway incursion to identify the root causes and associated safety issues.

3.2 REGIONAL ORGANIZATIONAL CHALLENGES/ISSUES

Organizational challenges are systemic issues which take into consideration the impact of organizational culture, policies and procedures on the effectiveness of safety risk controls. The MID RASP has included the identified regional organizational challenges/issues. The deficiencies have been identified mainly from RASG-MID Annual Safety Report, USOPA Data, technical assistance mission. These are given priority in the MID RASP since they are aimed at enhancing and strengthening the management of aviation safety at the regional level.

To accelerate progress, a structured regional approach is needed, leveraging collaboration, capacity-building,

regulatory alignment, and data-driven decision-making. It is crucial that States' safety oversight capabilities and safety management should keep pace with these regional safety issues. Therefore, for the triennium of 2026-2028, the MID region should continue to focus its efforts on addressing the following top regional organizational issues:

- a. **Low USOAP EI scores:** Addressing persistently low Universal Safety Oversight Audit Programme (USOAP) Effective Implementation (EI) scores, particularly in States scoring below 60%, as well as in Accident Investigation (AIG)- (slow progress in establishing independent aircraft accident investigation authorities), Aerodrome & Ground Aids (AGA), and Air Navigation Services (ANS) domains.
- b. **Slow SSP and NASP Implementation:** Accelerating the development and implementation of SSP, including the formulation of NASP.
- c. **Delayed SMS Implementation & Oversight:** Enhancing the acceptance and regulatory surveillance of SMS for service providers.
- d. **Gaps in State Safety Risk Management (SRM):** Developing a holistic State Safety Risk Management framework to support data-driven decision-making, safety performance management, and effective resource allocation for risk mitigation.
- e. **Challenges in Safety Data Management & Sharing:** Addressing the lack of resources, expertise, and formal mechanisms for collecting, managing, and sharing safety data and intelligence at both State and regional levels.
- f. **Human Factors & Human Competence:** Strengthening initiatives to enhance human factors management, human performance optimization, and personnel competency development.
- g. **Manage risk interdependencies:** Addressing interconnected risks such as cybersecurity risks, GNSS interference & spoofing risks, aviation health safety (AHS) risks, risks arising from conflict zones, and security risks with an impact on aviation safety.
- h. **Slow Implementation of Safety Enhancements:** Accelerating the adoption of RASG-MID conclusions, MID-RASP Safety Enhancement Initiatives (SEIs), and other safety actions/tools to mitigate identified safety issues and deficiencies.
- i. **Airspace Structure & Geopolitical Challenges:** Mitigating risks associated with airspace restrictions and rerouting, ensuring safe and efficient traffic flow amid the complex geopolitical landscape of the Middle East.

3.2.1 Strengthening of States' Safety Oversight Capabilities

Safety oversight is defined as a function by means of which States ensure effective implementation of the safety-related SARPs, and associated procedures contained in the Annexes to the Convention on International Civil Aviation and related ICAO documents. States have overall safety oversight responsibilities, which emphasize a state's commitment to safety in respect of the State's aviation activity. An individual State's responsibility for safety oversight is the foundation upon which a safe global air transport system is built. States that experience difficulties in carrying out safety oversight functions can impact the state of International Civil Aviation.

The eight critical elements (CEs) of a safety oversight system are defined by ICAO. MID Region is committed to the effective implementation of these eight CEs among all States in the region, as part of overall safety oversight responsibilities, which emphasize MID region's commitment to safety in respect of its aviation activities. The eight CEs are presented in the figure below.

USOAP-CMA audits had identified that State's inability to effectively oversee aviation operations remains a global concern. In respect of MID Region, the regional average overall Effective Implementation (EI) (13 out of 15 States have been audited) is approx. 76,8 %, which is above the world EI 69.68% (as of 10 August 2024). Three (3) States

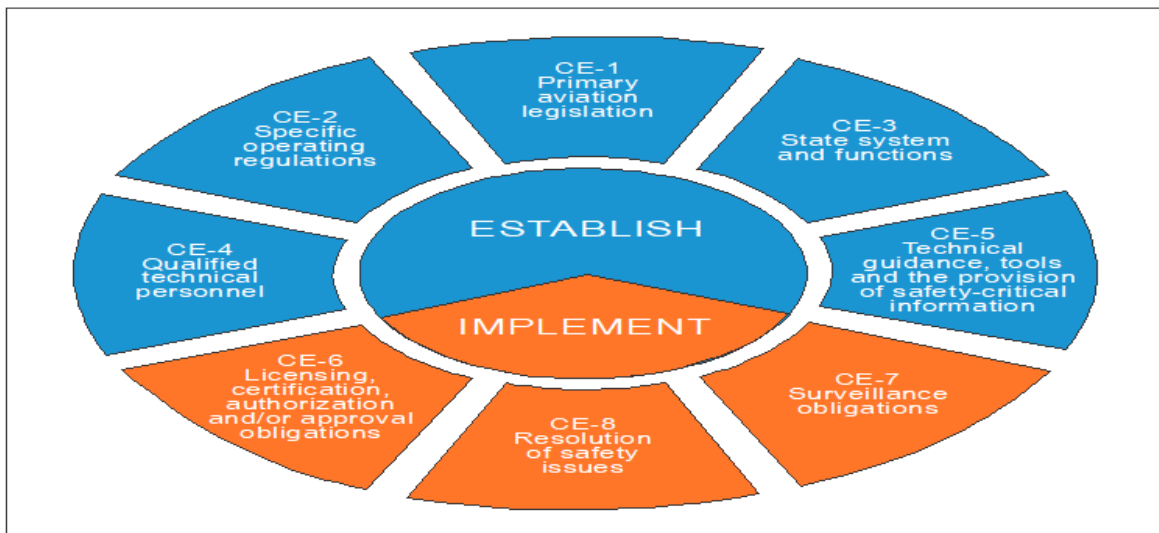
CE-1	85.6			95.2		76.3	84.2	78.6
CE-2	71.6		90.5	84.9	93.5	78.3	75.7	85
CE-3		67.1	89.3	86.7	89.1	59.4	70.2	69.2
CE-4		81.5	69	75.4	81.7	43.8	52.4	51.5
CE-5	85.7	92.9	90.6	88.4	91.7	69.5	81.5	76.8
CE-6			86	80.7	88.9		76	72.2
CE-7			71.8	63.1	79.1		67.2	67.3
CE-8			64.7	57.7	81.4	66.3	44.3	53.4
	LEG	ORG	PEL	OPS	AIR	AIG	ANS	AGA

are currently below EI 60%.

All eight areas and 5 CEs have an EI above 60%. For CE-4: AIG- 43.8%, AGA- 51.5%; and ANS- 52.4%. For CE-8: AGA – 53.4% and ANS – 44.3% respectively. However, the areas of AIG, AGA and ANS and CE4 and CE8 still need more improvement.

Moreover, the establishment in terms of training and effective implementation in certification, surveillance, and resolution of Safety concerns need to be improved.

The latest ICAO activities, which aim to measure the effective implementation of the eight CEs of States' individual safety oversight systems, as part of the ICAO Universal Safety Oversight Audit Programme (USOAP), have resulted



in the following scores, compiled as an average for the region of MID region as indicated in the table below.

The lowest EI areas in the region were aircraft accident and incident investigation (AIG), aerodrome & ground handling (AGA), and Air Navigation services (ANS) and identified as the organizational challenges/issues at the regional level considered of the utmost priority because they impact States' safety oversight and safety management capabilities and, consequently aviation safety at the regional level. They were identified based on analysis from USOAP data analysis, accident and incident investigation reports, technical assistance activities as well as based on regional analysis conducted by RASG-MID groups. These issues are typically systemic in nature and relate to challenges associated with the conduct of States' safety oversight functions, implementation of SSP at the regional level and the level of SMS implementation by industry in the region. Most of these organizational challenges/issues

are in line with those listed in the GASP 2026-2028 Edition.

3.2.2 Improve the development and implementation of Safety Management

States should build upon fundamental safety oversight systems to fully implement SSPs according to Annex 19; States shall require that applicable service providers under their authority implement an SMS. The average EI for SSP foundation PQs for States in the MID Region is 78, 59%.

Proactive safety management considering all known safety data and information has proven essential for the ability of the aviation system to deal with disruptive events. SSP will be increasingly instrumental within MID region aviation safety management system, not only in ensuring that safety issues are addressed at the right level, but also in guaranteeing the availability of required data and safety intelligence to support the identification of hazards and safety issues. Establishing.

safety risk management capabilities in a collaborative manner is key to the safe development of aviation. Safety management also entails the management of human factors and human performance issues, fostering capable and streamlined oversight and establishing a safety promotion programme. In addition, An SSP requires increased collaboration across operational domains to identify hazards and manage risks. Aviation authorities and organizations should anticipate new emerging threats and associated challenges by developing SRM principles. Implementation of SSP is one of the main challenges faced by the State in the MID Region. The RASG-MID addresses the improvement of SSP implementation in the MID Region as one of the top Safety Enhancement Initiatives (SEIs). Moreover, the RASG-MID also supported the establishment and activation of the MENA RSOO, with a primary objective to assist member States to develop and implement SSP; and Several capacity building activities have been conducted to support the implementation of SSP & SMS as well as NASP and address the challenges and difficulties as well as the sharing of experiences and best practices.

Therefore, support to States with SSP, SMS and NASP development and implementation considered a strategic priority at the regional as they impact States' safety oversight and safety management capabilities and, consequently aviation safety at the regional level.

3.2.3. Human Factors and Human Performance

The performance of the aviation system, including its safety performance, depends on humans and on the effective integration of the human factors into the management systems in place. Accordingly, focus on human factors and human performance should form an integral part of any safety management approach, be it at regional, State or industry level.

Human Factors as a discipline has traditionally served as a special focus area in aviation safety management. With the fast-evolving aviation industry, the large variety of operating conditions and business models, but also in the face of disruptive events affecting the entire aviation ecosystem, it is increasingly important for aviation stakeholders to adopt a systems' view on safety. This requires sound knowledge and understanding of how and where people work within the aviation system and what may positively or negatively affect their performance.

The associated strategic goal is to improve the management of Human Factors/Human Performance issues at the level of States and industry by promoting a thorough understanding of Human Factors/Human Performance principles and their relevance in safety management. With this we aim at maximizing the ability for humans to make a positive contribution to system performance, while reducing the exposure of the aviation system to Human Factors/Human Performance related safety issues. This will improve safety performance as well as operational performance.

As new technologies emerge on the market and the complexity of the system continues increasing, it is of key importance to have the right competencies and adapt training methods to cope with new challenges. The top three key risk areas related to human factors (HF) and human performance (HP) are LOC-I, MAC, and RI.

3.2.4 Manage Risk Interdependencies

The COVID-19 crisis demonstrated that safety, security, health safety and other risks can no longer be managed in isolation. The aviation community has realised that continuing to develop tools and specific guidance for each situation and for each domain affected by transversal risks may delay not only the implementation of mitigation measures, but also the development of an enabling framework to support integrated, collaborative risk management.

Managing some of the risks of interdependencies considered a strategic priority at the regional as they impact on aviation safety at the regional level.

3.2.4.1 Cybersecurity Risks

The global civil aviation ecosystem is accelerating towards more digitalisation. This implies that any exchange of information within any digital workflow of the aviation community needs to be resilient to information security threats which have consequences on the safety of flight or the availability of airspace and beyond. Aware of the complexity of the aviation system and of the need to manage the cybersecurity risk the MID Region needs to consider and address information security risks in a comprehensive and standardised manner across all aviation domains. In addition, it is essential that the aviation industry and civil aviation authorities share knowledge and learn from experience to ensure systems are secure from individuals/organisations with malicious intent.

3.2.4.2 Security Risks with an Impact on Aviation Safety

The implementation of aviation security measures can have a direct impact on safety aspects of aerodrome or aircraft operations. Airport security, aircraft security or in-flight security are the areas where the interdependencies are highly visible and where any security requirements should also consider potential impacts on aviation safety. States should consider where interdependencies between civil aviation safety and security exist.

Therefore, an integrated approach to the management of safety and security risks across the spectrum of aviation activities would bring benefits such as a complete overview of risks, a better sharing of security information and the closure of gaps in the security system while focusing on increasing the overall level of safety. Consequently, this would allow ensuring synergies where security measures can have an impact on safety and vice versa; thereby avoiding incompatible actions and strengthening the overall safety and security of civil aviation.

3.2.4.3 Risks Arising from Conflict Zones

The crash of flight MH17 immediately raised the question why the aero plane was flying over an area where there was an ongoing armed conflict. Similar events had occurred in the MID Region. This is why it's important for governments, aircraft operators, and other airspace users such as air navigation service providers (ANSPs), to work together to share the most up-to-date conflict zone risk-based information possible to assure the safety of civilian flights. Similar events had occurred in the MID Region on Jan 2020 involving Ukraine International Airlines flight PS752. The tragic accident with the downing of Ukraine International Airlines Flight 752 highlighted once more the importance of information sharing and risk assessments.

3.2.4.4 GNSS Interference & spoofing Risks

Global Navigation Satellite System (GNSS), which involves systems such as Global Positioning System (GPS), Russia's GLONASS, China's, BeiDou, Europe's Galileo includes navigation satellite infrastructures and constellations which provide position, navigation, and timing (PNT) information supporting aircraft and air traffic management operations and support navigation applications in all phases of flight as well as surveillance application like ADS-B. GNSS is also used in safety nets like the EGPWS (Enhanced Ground Proximity Warning Systems) and provides the time reference that is used to synchronize systems and operations in ATM.

GNSS jamming and spoofing incidents have increasingly threatened the integrity of Positioning, Navigation, and Timing services across Eastern Europe and the Middle East. Similar incidents have been reported in other locations globally.

Jamming' blocks the GNSS signal, whereas 'spoofing' sends false information to the aircraft's receiver. There is a high safety risk as GPS spoofing has made backup inertial navigation systems unreliable by corrupting GPS data. This threat turns off the entire navigation system by tricking the Flight Management System into indicating that the aircraft is off-track. The aircraft's Inertia Reference System fails, leading to corrupted navigation systems. GPS jamming, while problematic, is a different risk level from GPS Spoofing, as it only blocks GPS signals. Still, the sensor fusion software can use other sources of information to provide continuous, precise navigation.

The analysis utilized data from the Flight Data Exchange (FDX) showed a total of 46444 'GPS signal in the MENA region from January 2023 to December 2023 with the rate of 98.76 compared to global average of 30.19 per cent.

3.2.4.5 Aviation Health Safety (AHS) Risks

The COVID-19 pandemic has shown that the harmonisation of health policies affecting aviation, and in particular the CAT domain, has become an important topic to help overcome the pandemic. The objective is to minimise the impact of health safety threats in CAT. Health safety threats should be included in the management of risk interdependencies. COVID-19 is unlikely to be the last pandemic we will be faced with. It is crucial to continue supporting the European aviation industry competitiveness by offering the safest aircraft interior environment to reduce the risk of disease transmission between continents and States, restore public trust and facilitate future responses to events of similar nature.

3.3 EMERGING ISSUES

3.3.1 Advanced Air Mobility (AAM) and New Entrants

ICAO identified AAM and new entrants as one priority focus area out of seven. In terms of Regulatory Development for AAM, the 41st Session of the ICAO Assembly recognized that the rapidly evolving AAM ecosystem calls for work to be undertaken by ICAO, as well as the potential need for a globally harmonized framework. In addition, Urban air mobility is new revolution in transportation system and transforming urban transportation by leveraging advanced air vehicles to alleviate traffic congestion and provide efficient transportation solutions. AAM is integrating with urban infrastructure to enable seamless aerial transportation, connecting urban centers and offering new mobility options for passengers. AAM is experiencing rapid technological advancements, including electric vertical take-off and landing (eVTOL) aircraft, advanced air traffic management systems, and autonomous flight capabilities.

Available evidence demonstrates an increase of drones coming into close proximity with manned aviation (both aeroplanes and helicopters) and the need to mitigate the associated risk. The civil aviation authority is responsible for, inter alia, ensuring aviation safety and protecting the public from aviation hazards.

The safe integration on the basis of granting fair access to airspace of all new entrants into the airspace network will be one of the main challenges in relation to the integration of UAS technologies and related concepts of operation.

Enabling the safe integration of UAS, being a fast evolving and emerging market segment, as well as of (initially manned) VTOL-capable aircraft, also intended for Advanced Air Mobility (AAM) operations, continue to be priority activities.

At the regional level to support states in establishing a comprehensive regulatory framework and Airspace Integration and Traffic Management for UAS and manned VTOL-capable aircraft.

PART-II. IMPLEMENTATION

Section 4. MID region's strategic direction for the management of aviation safety



4.1 Monitoring implementation

This section presents an outline of the safety performance indicators reflecting the MID Region strategic safety priorities in the area of safety. The RASG-MID would use the indicators listed in the MID Region SPMM at **Appendix B** to measure safety performance and monitor each regional safety target. Furthermore, the MID Region SPMM includes six (6) Goals in line with GASP 2026-2028 Edition.

The RASG-MID would continuously monitor the implementation of the identified SEIs in the MID-RASP and measure safety performance of the regional civil aviation system, to ensure the intended targets are achieved, using the MID Region SPMM to this plan. Therefore, for each Goal established in the MID Region SPMM, identified SEI(s) be mapped to it including their respective actions.

MID region safety indicators and targets were aligned with the 2026-2028 GASP goals and targets as relevant in the MID Region. A MID Region Annual safety report would be annually published to provide stakeholders with relevant up-to-date information on the progress made in achieving the regional safety goals and targets, as well as the implementation status/progress of the SEIs.

In the event that the regional safety goals and targets are not met, the causes would be addressed and presented to stakeholders. If RASG-MID identifies critical operational safety risks, reasonable measures would be taken to mitigate them as soon as practicable, possibly leading to an earlier revision of the MID-RASP by SEIG.

The monitoring of safety performance and its enhancement is achieved through identification of relevant Goals and Safety Indicators, taking into consideration the GASP 2026-2028 and regional specific objectives and priorities, as well as the adoption and attainment of Safety Targets with a specific timeframe.

The MID Region Safety performance measurement and monitoring includes the following Goals:

Aspirational Goal: Zero fatality by 2030, the GASP aspirational goal of ‘zero fatalities in commercial operations by 2030 and beyond’.

Goal 1: Achieve a Continuous Reduction of Operational Safety Risks: This relates to GASP Goal 1 for 2026-2028 and aligns with ICAO's high-level safety metrics, enabling a direct comparison of the MID region's performance with global averages. Risk area indicators are identified using the MID region risk assessment methodology and are detailed in the MID Annual Safety Report (MID ASR). These operational safety indicators will continue to be monitored through the MID ASR.

Goal 2: Strengthen States' safety oversight capabilities: This is related to 2026-2028 GASP Goal 2. The monitoring will be based on the available data published through USOAP-CMA (OLF). The regional average overall Effective Implementation (EI) in the MID Region (13 out of 15 States have been audited) is 76.8 %, which is above the world average 69.68% (as of 10 August 2024). Three (3) states are currently below EI 60%. The objective is aligned with the 2026-2028 GASP requiring all states by 2028, to commit to national aviation safety plans that allocate to each safety oversight authority sufficient financial resources to meet national and international obligations, with at least 70% of States having sufficient financial resources, improve their EI score for qualified technical personnel (CE-4) for aircraft accident and incident investigation (AIG) and for aerodromes and ground aids (AGA), and improve their EI score for the resolution of safety issues (CE-8) in AGA.

Goal 3: Establish & manage effective State safety Programmes (SSP): This is related to 2026-2028 GASP. Related indicators will mainly be based on data available through USOAP-CMA (OLF). Feedback provided by Member States would also be considered. MID Office will in addition collect relevant documentation and information from States (SSP and NASP). The objective is aligned with the 2026-2028 GASP requiring all States by 2026, to assess the level of implementation of their SSP and by 2028, all States to establish an SSP.

Goal 4: Strengthen collaboration at the regional & national levels to address safety issues: This is related to 2026-2028 GASP. Related indicators will mainly be based on data available through USOAP-CMA (OLF) and MID Office data. Feedback provided by States would be also considered. The objective is aligned with the 2026-2028 GASP requiring by 2026, all regions to identify States that need assistance to address safety issues; by 2028, all regions to facilitate the required assistance, to identified States, to address safety issues; and by 2027, all regions to implement a mechanism to make use of the information on operational safety risks and emerging issues for the purpose of aviation safety planning.

Goal 5: Strengthen aviation safety planning (RASP & NASP): This is related to 2026-2028 GASP. Related indicators will mainly be based on data available through MID Office data. Feedback provided by States would be also considered. The objective is aligned with the 2026-2028 GASP requiring by 2026, all regions to publish an updated RASP, taking into consideration the 2026-2028 edition of the GASP and by 2026, all States to publish an updated NASP, taking into consideration the 2026-2028 edition of the GASP and their corresponding RASP.

Goal 6: Expand the use of industry safety assessment and safety data sharing Programmes: This is related to 2026-2028 GASP. Related indicators will mainly be collected from IATA and other international and regional organizations. Feedback provided by States would also be considered. The objective is aligned with the 2026-2028 GASP requiring by 2028, industry to maintain an increasing trend in its use of industry safety assessment and safety data sharing Programmes.

4.2 Communication of Progress to RASG-MID and Regional Stakeholders

Effective communication of MID-RASP progress is essential for transparency, accountability, and continuous improvement in aviation safety. A structured communication framework will ensure that RASG-MID, States, industry partners, and other regional stakeholders are regularly updated on:

- Safety performance trends
- Challenges encountered
- Milestones achieved

To maintain clear and consistent communication, the following reporting mechanisms will be established:

MID Region Annual Safety Report: Published annually, this report will provide up-to-date insights on regional safety performance, progress toward achieving safety goals and targets, and the implementation status of Safety Enhancement Initiatives (SEIs) and their respective safety actions.

Regular Progress Reports: A comprehensive report on the status of MID-RASP SEI implementation and safety performance achievements will be presented at:

- Safety Enhancement Initiatives Group (SEIG) meetings
- RASG-MID meetings
- Regional safety seminars and workshops

Key Aspects Covered in Progress Reports: Each progress report will include:

- Overview of MID-RASP Implementation:** A summary of the overall progress and key developments.
- Challenges and Delays in SEI Implementation:** Analysis of implementation barriers and any corrective actions required.
- Evaluation of Safety Goals & Targets:** If regional safety goals and targets are not met, the root causes would be addressed and presented to the relevant stakeholders.

By ensuring regular and structured communication, this framework will enhance collaboration, data-driven decision-making, and continuous improvement in aviation safety across the MID Region.

SECTION 5: Safety Actions

This section addresses system-wide problems that affect aviation safety in MID region including the SEIs and their respective actions. In most scenarios, these problems are related to regional organizational processes and procedures, regional operational safety risks, and emerging issues. The safety actions in this section are driven principally by the need to maintain or increase the current level of safety in the aviation sector for the region.

This section also facilitates the identification of SEIs and their respective actions relevant for each Goal established in the MID Region Safety performance measurement and monitoring as follows:

Goal 1: Achieve a continuous reduction of operational safety risks

Goal 2: Strengthen States' safety oversight capabilities

Goal 3: Establish & manage effective State safety Programmes (SSP)

Goal 4: Strengthen collaboration at the regional & national levels to address safety issues

Goal 5: Strengthen aviation safety planning (RASP & NASP)

Goal 6: Expand the use of industry safety assessment and safety data sharing Programmes

5.1 Regional Operational Safety Risks

5.1.1 Goal 1: Achieve a continuous reduction in Operational Risks

5.1.1.1 G1-SEI-01: Aircraft upset in flight (LOC-I)

Target: The safety targets of this goal are indicated in the MID Region safety strategy at **Appendix B**.

Rationale: Loss of control usually occurs because the aircraft enters a flight regime which is outside its normal envelope, usually, but not always, at a high rate, thereby introducing an element of surprise for the flight crew involved. Prevention of loss of control is a strategic priority. In addition, Aircraft upset or loss of control is the key risk area with the highest risk related to fatal accidents in CAT aeroplane operations having a maximum take-off weight above 5700 kg. It includes uncontrolled collisions with terrain, but also occurrences where the aircraft deviated from the intended flight path or intended aircraft flight parameters, regardless of whether the flight crew realized the deviation and whether it was possible to recover or not. It also includes the triggering of stall warning and envelope protections.

What we want to achieve: Increase safety by continuously assessing and improving risk controls to mitigate the risk of loss of control.

How we monitor improvement: Continuous monitoring of safety issues identified in the MID Region annual safety report for CAT aeroplane above 5,700 kgs.

How we want to achieve it: States should set up a regular dialogue with their national aircraft operators on flight data monitoring (FDM) Programmes, with the objectives of: promoting the operational safety benefits of FDM, fostering an open dialogue on FDM Programmes that takes place in the framework of just culture, encouraging operators to include and further develop FDM events relevant for the prevention of LOC-I, or other issues identified by the SSP.

States to include LOC-I in national SSPs: LOC-I should be addressed by the States on their SSPs and included in NASPs. This should include as a minimum agreeing a set of actions and measuring their effectiveness.

Actions:	A1-A2-A3-A4-A5-A6
A1- Guidance material on flight crew proficiency	
A2- Advisory Circular: Mode Awareness and Energy State Management Aspects of Flight Deck Automation	
A3- Promote and conduct Upset Recovery Capacity building activities	
A4- Conduct Wildlife Hazard Management Control capacity building Activities	
A5- Promote DG capacity building activities including Lithium batteries fire/smoke risk in cabin	
A6- Promote Data-Driven Safety Management – Use flight data monitoring (FDM) to identify precursors to LOC-I events and develop targeted interventions	

References:

- GASP 2026-2028 Goal 1 “Achieve a Continuous Reduction of Operational Safety Risks”.

- GASP SEI-10 (Region) – Mitigate contributing factors to LOC-I accidents and incidents at the regional level.

Stakeholders: RASG-MID, States, industry, international organizations	
Action 1: Develop Guidance material on flight crew proficiency	
Responsible entity:	IATA and industry
Priority:	Medium
Completion Date:	2026
Status:	Ongoing
Action 2: Develop Advisory Circular: Mode Awareness and Energy State Management Aspects of Flight Deck Automation	
Responsible entity:	IATA and industry
Priority:	High
Completion Date:	2026
Status:	ongoing
Action 3: Conduct Upset Recovery Capacity building activities	
Responsible entity:	ICAO, IATA, Industry.
Priority:	High
Completion Date:	2026
Status:	Ongoing
Action 4- Conduct Wildlife Hazard Management Control capacity building Activities	
Responsible entity:	ICAO
Priority:	Medium
Completion Date:	2026
Status:	New
Action 5: Promote DG capacity building activities including Lithium batteries fire/smoke risk in cabin	
Responsible entity:	ICAO
Priority:	Medium
Completion Date:	2026
Status:	New
Action 6: Promote Data-Driven Safety Management during workshops and meetings	
Responsible entity:	ICAO
Priority:	Medium
Completion Date:	2026
Status:	New
EXPECTED OUTPUT	
Deliverable	Timeline

5.1.1.2 G1-SEI-02: Runway Safety- Runway Excursion

Target: The safety targets of this goal are indicated in the MID Region SPMM at **Appendix B**.

Rationale: Runway excursion covers materialized runway excursions, both at high and low speed, and occurrences where the flight crew had difficulties in maintaining the directional control of the aircraft or of the braking action during landing, where the landing occurred long, fast, off-centred or hard, or where the aircraft had technical problems with the landing gear (not locked, not extended or collapsed) during landing. During 2019-2023, Runway Excursions and abnormal runway contact accidents and serious incidents mainly occurred in the landing phase of flights.

What we want to achieve: Increase safety by continuously assessing and improving risk controls to mitigate the risk of RE.

How we monitor improvement: Continuous monitoring of safety issues identified in the MID Region annual safety report for CAT aeroplane above 5,700 kgs.

How we want to achieve it: States to set up a regular dialogue with their national aircraft operators on flight data monitoring (FDM) Programmes, with the objectives of: promoting the operational safety benefits of FDM, fostering an open dialogue on FDM Programmes that takes place in the framework of just culture, encouraging operators to include and further develop FDM events relevant for the prevention of REs.

States to include Runway Excursions in national SSPs: REs should be addressed by the States on their SSPs and included in NASPs in close cooperation with the aircraft operators, air traffic control, and airport operators. This should include as a minimum agreeing a set of actions and measuring their effectiveness.

Actions:	A1-A2-A3-A4
A1-	Support States to implement the Global Reporting Format (GRF) Methodology through capacity building activities
A2-	Support States on the implementation of the ICAO Annex 14 requirements to achieve compliance with regards to Aerodrome Design and Operations, through capacity building activities.
A3-	Conduct Runway Safety Go-Team (RST) assistance missions
A4-	Enhance capacity building for States CAAs and Airport operators related to Aerodromes Certification through capacity building activities.

Stakeholders: RASG-MID, MIDANPIRG, States, industry, international organizations

Reference:

GASP 2026-2028 Goal 1 “Achieve a Continuous Reduction of Operational Safety Risks”.

GASP SEI-12 (Region) – Mitigate contributing factors to RE accidents and incidents at the regional level

Action 1: Support States to implement the Global Reporting Format (GRF) Methodology through capacity building activities (Reference: G3-SEI-02)

Responsible entity: ICAO, ACI, and industry

Priority: Medium

Completion Date: 2025

Status: Ongoing

Action 2: Support States on the implementation of the ICAO Annex 14 requirements

Responsible entity: ICAO

Priority: High

Completion Date: 2026

Status: ongoing

Action 3: Conduct Runway Safety Go-Team (RST) assistance missions

Responsible entity: ICAO

Priority: High

Completion Date: 2026

Status: ongoing

Action 4: Enhance capacity building for States CAAs and Airport operators

Responsible entity: ICAO

Priority: High

Completion Date: 2026

Status: ongoing

EXPECTED OUTPUT

Deliverable	Timeline
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Mitigate contributing factors to RE accidents and incidents	2028
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5.1.1.3 G1-SEI-03: Runway Safety- Runway Incursion

Target: The safety targets of this goal are indicated in the MID Region SPMM at **Appendix B**.

Rationale: Collision on the runway covers collisions between an aircraft and another object (other aircraft, vehicles, etc.) or person that occurs on a runway of an aerodrome or other predesignated landing area; it does not include collisions with birds or wildlife. While there were no fatal accident or accident involving MID States operators in the last years involving runway collision, the risk of the reported occurrence demonstrated to be very real.

What we want to achieve: Increase safety by continuously assessing and improving risk controls to mitigate the risk of RI.

How we monitor improvement: Continuous monitoring of safety issues identified in the MID Region annual safety report for CAT aeroplane above 5,700 kgs.

How we want to achieve it: States to include Runway Incursions in national SSPs: RIs should be addressed by the States on their SSPs and included in NASPs in close cooperation with the aircraft operators, air traffic control, and airport operators. This should include as a minimum agreeing a set of actions and measuring their effectiveness.

Action:	A1-A2-A3-A4-A5
A1-	Promote the establishment and implementation of States' runway safety Programmes and runway safety teams
A2-	Certification of aerodromes in accordance with Annex 14
A3-	Promote the identification and publication in AIP of hot spots at aerodromes during workshops and sub-groups meetings
A4-	Promote suitable strategies to remove hazards or mitigate risks associated with identified hot spots during workshops and sub-groups meetings
A5-	Promote the use of standardized Phraseology & ATC Procedures through capacity activities.
A6-	Promote the effective use of suitable technologies to assist the improvement of situational awareness, such as improved resolution A-SMGCS, stop bars and ARIWS

References:

- GASP 2026-2085 Goal 1 "Achieve a Continuous Reduction of Operational Safety Risks".
- GASP SEI-13 (Region) – Mitigate contributing factors to RI accidents and incidents at the regional level.

Stakeholders: RASG-MID, MIDANPIRG, States, industry, international organizations	
Action 1: Promote the establishment and implementation of States' runway safety Programmes and runway safety teams	
Responsible entity:	ICAO
Priority:	High
Completion Date:	2026
Status:	New
Action 2: Certification of aerodromes in accordance with Annex 14 – Aerodromes	
Responsible entity:	ICAO
Priority:	High
Completion Date:	2026
Status:	Ongoing
Action 3: Promote the identification and publication in the AIP of hot spots at aerodromes	
Responsible entity:	ICAO
Priority:	High
Completion Date:	2026
Status:	New
Action 4: Promote suitable strategies to remove hazards or mitigate risks associated with identified hot spots	
Responsible entity:	ICAO
Priority:	High
Completion Date:	2026
Status:	New
Action 5: Promote the use of standardized Phraseology & ATC Procedures through workshops and meetings	
Responsible entity:	ICAO
Priority:	High

Completion Date:	2026
Status:	New
Action 6: Promote the effective use of suitable technologies to assist the improvement of situational awareness	
Responsible entity:	ICAO
Priority:	High
Completion Date:	2026
Status:	New
EXPECTED OUTPUT	
Deliverable(s)	Timeline
Mitigate contributing factors to RI accidents and incidents	2028

5.1.1.4 G1-SEI-04: Airborne Conflict (Mid-Air Collisions)

Target: The safety targets of this goal are indicated in the MID Region SPM at **Appendix B**.

Rationale: Airborne collision includes all occurrences involving actual or potential airborne collisions between aircraft, while both aircraft are airborne, and between aircraft and other airborne objects. This also includes all separation-related occurrences caused by either air traffic control (ATC) or cockpit crew, AIRPROX reports and genuine ACAS alerts. It includes direct precursors such as separation minima infringements, genuine TCAS resolution advisories or airspace infringements.

Although there have been no aeroplane mid-air collision accidents in recent years within the MID States, this risk area has been raised by some MID States specifically in the context of the collision risk posed by military aircraft operating over the high seas which are not subject to any coordination with related FIRs for airborne operation. This is one specific safety issue that is a main priority in this key risk area.

States must have due regard for the safety of civil aircraft and must have established respective regulations for national State aircraft.

Some States have reported an increase in incidents involving close encounters between civil and military aircraft and more particularly an increase in non-cooperative international military traffic over the high-sea waters. The States could consider the following recommendations:

1. Fully apply the ICAO Manual on Civil-Military Cooperation in Air Traffic Management (Doc 10088)
2. Closely coordinate to develop, harmonize and publish operational requirements and instructions for State aircraft to ensure that 'due regard' for civil aircraft is always maintained
3. Support the development and harmonization of civil/military coordination procedures for ATM at MID Region level and beyond if possible; and
4. Report relevant occurrences.

What we want to achieve: Increase safety by continuously assessing and improving risk controls to mitigate the risk of MAC.

How we monitor improvement: Continuous monitoring of safety issues identified in the MID Region Annual Safety Report for CAT aeroplane above 5,700 kgs.

How we want to achieve it: States to include MACs in national SSPs: MACs should be addressed by the States on their SSPs and included NASPs. This should include as a minimum agreeing a set of actions and measuring their effectiveness.

States to reinforce the appropriate reactions of flight crew in response to an airborne collision avoidance system (ACAS) resolution advisory (RA), which would help to mitigate the risk of mid-air collisions by providing safety promotion material and clear messages to pilots on the need to follow the instructions of the ACAS in high-risk situations.

Actions: A1-A2-A3-A4-A5
A1- Promote Civil-Military cooperation through capacity building activities

A2- Promote awareness among stakeholders related to the potential risk of MAC over high seas through capacity building activities.
A3- Promote guidance to ensure aircraft are equipped with ACAS, in accordance with Annex 6 – Operation of Aircraft during workshops, meetings, seminars.
A4- Promote airspace among stakeholders, including complexity of airspace design, Free Route Airspace (FRA) concept, route layout, and proximity of military operational or conflict zones, establishment of FUA's through capacity building activities.
A5- Promote the improvement of ATC systems, procedures and tools to enhance conflict management

References:

- GASP 2026-2028 Goal 1 "Achieve a Continuous Reduction of Operational Safety Risks".
- GASP SEI-11 (Region) – Mitigate contributing factors to MAC accidents and incidents at the regional level.
- ICAO Doc 10088 'Manual on Civil/Military Cooperation in Air Traffic Management'

Stakeholders: RASG-MID, MIDANPIRG, States, industry, international organizations

Action 1: Promote Civil-Military cooperation through capacity building activities

Responsible entity: ICAO, IATA, and States

Priority: High

Completion Date: 2026

Status: Ongoing

Action 2: Promote awareness among stakeholders related to the potential risk of MAC over high seas through capacity building activities

Responsible entity: ICAO and States

Priority: High

Completion Date: 2026

Status: Ongoing

Action 3: Promote guidance to ensure aircraft are equipped with ACAS

Responsible entity: ICAO and States

Priority: High

Completion Date: 2026

Status: New

Action 4: Promote airspace among stakeholders, including complexity of airspace design, route layout, and proximity of military operational or conflict zones through capacity building activities

Responsible entity: ICAO and States

Priority: High

Completion Date: 2026

Status: New

Action 5: Promote the improvement of ATC systems, procedures and tools to enhance conflict management

Responsible entity: ICAO and States

Priority: High

Completion Date: 2026

Status: New

EXPECTED OUTPUT

Deliverable(s)

Timeline

Mitigate contributing factors to MAC accidents and NMAC incidents

2028

5.1.1.5 G1-SEI-5: Controlled Flight into Terrain (CFIT)

Target: The safety targets of this goal are indicated in the MID Region SPMM at **Appendix B**.

Rationale: It comprises those situations where the aircraft collides or nearly collides with terrain while the flight crew has control of the aircraft. It also includes occurrences, which are the direct precursors of a fatal outcome, such as descending below weather minima, undue clearance below radar minima, etc. There was no fatal accident involving MID States operators during this period. This key risk area has been raised by some MID States and in other parts of the world that make it an area of concern.

What we want to achieve: Increase safety by continuously assessing and improving risk controls to mitigate the risk of CFIT.

How we monitor improvement: Continuous monitoring of safety issues identified in the MID Region annual safety report for CAT aeroplane above 5,700 kgs.

How we want to achieve it: States to set up a regular dialogue with their national aircraft operators on flight data monitoring (FDM) Programmes, with the objectives of: promoting the operational safety benefits of FDM, fostering an open dialogue on FDM Programmes that takes place in the framework of just culture, encouraging operators to include and further develop FDM events relevant for the prevention of CFIT or other issues identified by the SSP.

States to include CFITs in national SSPs: CFIT should be addressed by the States on their SSPs and included in NASPs. This should include as a minimum agreeing a set of actions and measuring their effectiveness.

Actions:	A1-A2-A3
A1-	Advisory Circular: Instrument Approach Procedures Using Continuous Descent Final Approach Techniques
A2-	Advisory Circular: Crew Resource Management Training Programme (CRM)

References:

- GASP 2023-2025 Goal 1 “Achieve a Continuous Reduction of Operational Safety Risks”.
- GASP SEI-9 (Region) – Mitigate contributing factors to CFIT accidents and incidents at the regional level.

Stakeholders:	ICAO, RASG-MID, MIDANPIRG, States, industry, international organizations
Action 1:	Advisory Circular: Guidance for Operators on Training Programme on the use of GPWS
Responsible entity:	IATA and industry
Priority:	Medium
Completion Date:	2026
Status:	ongoing
Action 2:	Advisory Circular: Crew Resource Management Training Programme (CRM)
Responsible entity:	IATA and industry
Priority:	High
Completion Date:	2026
Status:	ongoing

EXPECTED OUTPUT

Deliverable(s)	Timeline
Mitigate contributing factors to CFIT accidents and incidents	2028

5.2 Regional Organizational Challenges/issues**5.2.1 Goal 2: Strengthen States’ Safety Oversight Capabilities**

The States safety oversight capabilities remain an issue mainly for AIG, AGA, and ANS areas. The inappropriate effective oversight remains an issue and the difficulties experienced by some authorities in properly discharging their oversight responsibilities is a concern also in the light of the size, scope and complexity of the aviation industry that some of them oversee. Furthermore, while a number of CAAs have reached a suitable and stable level of maturity, certain CAAs continue to underperform and/or struggle in achieving sustainable improvements. Most notably, while progress has been noted in the implementation of Authorities' management systems, effective oversight of undertakings' safety management systems continues to be an area of concern in several domains.

5.2.1.1 G2-SEI-01: Strengthening States' Safety Oversight Capabilities

Target: The safety targets of this goal are indicated in the MID Region SPM at **Appendix B**.

Rationale: The CEs are essentially the safety defense tools of the State Safety Oversight system needed for the effective and sustainable implementation of a safety-related policy and associated procedures. The effective implementation of the CEs is an indication of a State's capability for safety oversight. States must establish CE-1 through CE-5 prior to the implementation of CE-6 through CE-8 to provide effective safety oversight and safety management. An individual State's responsibility for safety oversight is the foundation upon which a safe global air transport system is built. States that experience difficulties in carrying out safety oversight functions can impact the state of International Civil Aviation.

States should work to continually improve their effective implementation of the eight CEs of the State's safety oversight system in all relevant areas, as appropriate to their aviation system complexity. Through collaborative efforts, the level of effective implementation of the CEs of a State's safety oversight system can increase, particularly in those States where a State faces shortages of human, financial or technical resources.

The following elements are considered enablers of a robust safety oversight system, expected to be in place according to the requirements in force:

1. ability and determination to conduct effective oversight
2. ability to identify risks through a process of collecting and analyze data
3. ability to mitigate the identified risks in an effective way, implying measurement of performance and leading to continuous improvement
4. willingness and possibility to exchange information and cooperate with other CAAs
5. ability to ensure the availability of adequate personnel, where 'adequate' includes the notion of sufficient training and proper qualification; and
6. focus on the implementation of effective management systems in industry, wherever required by the regulations in force.

What we want to achieve:

A robust oversight system across the MID Region, where each CAA is able to properly discharge its oversight responsibilities, with particular care to exchange information and cooperate with other CAAs and to the implementation of management systems in all organizations, as well as to ensure the availability of adequate personnel in CAAs. In addition, to support MID Region States' civil aviation authorities to strengthen States' Safety Oversight Capabilities and increase progressively the USOAP-CMA EI results.

How we monitor improvement:

Significant increase of the number of States with an EI above 60% and implementing risk-based oversight.

How we want to achieve it: This SEI should be considered by States for inclusion in their NASPs. Therefore, States to ensure oversight capabilities:

- a) Availability of adequate personnel in CAAs: States shall ensure that adequate personnel are available to discharge their safety oversight responsibilities.
- b) Organizations' management system in all sectors: States shall foster the ability of CAAs to assess and oversee the organizations' management system in all sectors. This shall focus in particular on safety culture, the governance structure of the organization, the interaction between the risk identification/assessment process and the organization's monitoring process, the use of inspection findings and safety information such as occurrences, incidents and accidents and, where applicable, flight data monitoring (FDM). This should lead CAAs to adapt and improve their oversight system.

Actions: A1-A2-A3-A4-A5-A6-A7
A1- Conduct Capacity Building Activities to promote effective implementation of SARPs with focus on AGA, AIG, & ANS areas
A2- Conduct of technical assistance missions to States, to address safety issues and enhance safety with a focus on AGA, AIG, & ANS areas.
A3- Continuous support to strengthen MENA ARCM to best support States in the region

A4- Identify and mobilize resources to support SEIs for States in need to address safety issues and establish effective safety oversight capabilities
A5- Continuous support to strengthen MENA RSOO to best support States in the region
A6- Cooperation and collaboration with key stakeholders to enhance safety in the region
A7- Sharing of safety information via RASG-MID platform to make use of the information on operational safety risks and emerging issues for the purpose of aviation safety planning

References:

- ICAO SARPs & guidance documents and 2026-2028 GASP Goal 2 “Strengthen States’ safety oversight capabilities”
- GASP SEIs : SEI-19, SEI-20, SEI-21, SEI-22, SEI-23, and SEI-24 (Regions).

Stakeholders: RASG-MID, MIDANPIRG, States, international organizations, and industry

Action 1: Conduct Capacity Building Activities to promote effective implementation of SARPs

Responsible entity: ICAO, States, international organizations, and industry

Priority: Medium

Completion date: 2026

Status: Ongoing

Action 2: Conduct technical assistance and NCLB missions to States

Responsible entity: ICAO

Priority: High

Completion date: 2026

Status: Ongoing

Action 3- Continuous support to strengthen MENA ARCM to best support States in the region

Responsible entity: ICAO, States, organizations, and industry

Priority: High

Completion date: 2026

Status: Ongoing

Action 4: Identify and mobilize resources to support SEIs for States in need

Responsible entity: ICAO, States, organizations, industry

Priority: Medium

Completion date: 2026

Status: New

Action 5- Continuous support to strengthen MENA RSOO

Responsible entity: ICAO, States, organizations, industry

Priority: Medium

Completion date: 2026

Status: ongoing

Action 6- Cooperation and collaboration with key stakeholders to enhance safety in the region

Responsible entity: ICAO, States, organizations, industry

Priority:	Medium
Completion date:	2026
Status:	Ongoing
Action 7- Sharing of safety information via RASG-MID platform	
Responsible entity:	ICAO, States, organizations, industry
Priority:	Medium
Completion date:	2026
Status:	New
EXPECTED OUTPUT	
Deliverable(s)	Timeline
MID States to improve their score for the effective implementation (EI)	2028

5.2.1.2 G2-SEI-02: Manage Human Factors and Human Performance

Target/Metrics: The safety targets of this goal are indicated in the MID Region SPMM at **Appendix B**.

Rationale: Human factors and human performance are strategic priorities. As new technologies and concepts of operations emerge on the market and the complexity of the aviation system continuously increases, it is of key importance to properly address human factors and human performance in terms of both limitations and their contribution to delivering safety, as part of the safety management implementation.

What we want to achieve: Ensure continuous improvement in safety management activities as related to human factors and human performance.

How we monitor improvement: Improvement in aviation personnel competence at all levels and feedback from States and MIDASR.

How we want to achieve it: This SEI should be considered by States for inclusion in their NASPs.

Actions: A1-A2
A1- Advisory Circular: Crew Resource Management Training Programme (CRM). (Action addressed under G1-SEI-04: CFIT)
A2- Conduct capacity building activities
A3- Develop practical guides and promotion material on aircrew fatigue

References:

- ICAO SARPs and guidance documents and 2026-2028 GASP Goal 2 “Strengthen States’ safety oversight capabilities”.
- ICAO Human Performance Manual (ICAO Doc 10151) and ICAO Safety Management Manual (ICAO Doc 9859).

Stakeholders: RASG-MID, States, industry, international organizations	
Action 1: Advisory Circular: Crew Resource Management Training Programme (CRM). (Action addressed under G1-SEI-04: CFIT)	
Responsible entity:	ICAO, States, international organizations, and industry.
Priority:	Medium
Completion date:	2026
Status:	ongoing
Action 2: Conduct capacity building activities related HF & HP	
Responsible entity:	ICAO, States, international organizations, and industry

Priority:	Medium
Completion Date:	2026
Status:	ongoing
Action 3: Develop practical guides and promotion material on aircrew fatigue	
Responsible entity:	ICAO, States, international organizations, and industry
Priority:	Medium
Completion Date:	2026
Status:	New
EXPECTED OUTPUT	
Deliverable(s)	Timeline
mitigates risks incurred through the inadequate understanding, regulation and oversight of human factors and mitigate contributing factors to accidents and incidents	2028

5.2.1.3 G2-SEI-03: Manage Risk interdependencies

5.2.1.3.1 G2-SEI-03A: Managing GNSS Interference and spoofing

Target/Metrics: The safety targets of this goal are indicated in the MID Region SPM at **Appendix B**.

Rationale: The management of GNSS interference & spoofing risks within the region that have an impact on safety is a strategic priority.

What we want to achieve: Increase aviation safety by managing the impact of GNSS interference & spoofing risks on safety and mitigating the related safety risks. GNSS jamming and spoofing incidents have increasingly threatened the integrity of Positioning, Navigation, and Timing services across Eastern Europe and the Middle East.

How we monitor improvement: Continuous assessment of safety-related occurrences and mitigations at the regional level and feedback from States.

How we want to achieve it: This SEI should be considered by States for inclusion in their NASPs.

Actions: A1-A2
A1- Raise awareness on the potential safety impact of GNSS interference and spoofing through capacity building activities
A2- Promote civil-military coordination and cooperation activities to facilitate the sharing of relevant information with airspace users
A3-

References:

- ICAO SARPs and guidance documents and 2026-2028 GASP Goal 2 “Strengthen States’ safety oversight capabilities”.
- ICAO Doc 9849, GNSS Manual

Stakeholders: RASG-MID, MIDANPIRG, States, industry, international organizations

Action 1: Raise awareness on the potential safety impact of GNSS interference and spoofing

Responsible entity: ICAO, States, Organizations, industry

Priority: Medium

Completion Date: 2026

Status:	Ongoing
Action 2:	Promote civil-military coordination and cooperation activities
Responsible entity:	ICAO, States, & Organizations
Priority:	High
Completion Date:	2026
Status:	
EXPECTED OUTPUT	
Deliverable(s)	Timeline
Mitigate contributing factors to MAC & CFIT accidents	2028

5.2.1.3.2 G2-SEI-03B: Management of security risks with safety impact

Target/Metrics: The safety targets of this goal are indicated in the MID Region SPM at **Appendix B**.

Rationale: The safety action in this area is aimed at mitigating the security-related safety risks. The implementation of aviation security measures can have a direct impact on the safety aspects of aerodrome or aircraft operations. Airport, aircraft or in-flight security are the areas where the interdependencies are highly visible and where any security requirements should also consider possible potential impacts on aviation safety. Managing the impact of security on safety is a strategic priority in MID region.

What we want to achieve: Increase safety by managing the impact of security on safety and mitigating related safety risks. Increase safety by managing the impact of security measures on safety, avoiding risk transfer and mitigating related safety risks. Encourage an integrated approach to management of safety and security risks across the spectrum of aviation activities

How we monitor improvement: Continuous assessment and mitigation of security threats.

How we want to achieve it: This SEI should be considered by States for inclusion in their NASPs. For MID States, a) to assess the impact of security measures implemented on the ground and in flight on operational safety and performance; b) assess the preparedness of aviation personnel and flight crews to cope with potential conflicting security and safety measures; c) Assess safety risk management techniques that can be applied to the security domain to produce harmonized risk assessment and support integrated policy and decision-making processes at national level.

Actions:
A1- Promote security risks with safety impact through capacity building activities

References:

- ICAO SARPs and guidance documents and 2026-2028 GASP Goal 2 “Strengthen States’ safety oversight capabilities”. ICAO Annex 17.

Stakeholders:	RASG-MID, RASFG-MID, MIDANPIRG, States, international organizations, industry
Action 1:	Promote security risks with safety impact through capacity building activities
Responsible entity:	ICAO, States, Organizations
Priority:	High
Completion date:	2026
Status:	New
EXPECTED OUTPUT	
Deliverable(s)	Timeline
mitigate contributing factors to accidents and incidents	2028

5.2.1.3.3 G2-SEI-03C: Management of the risks arising from conflict zones

Target/Metrics: The safety targets of this goal are indicated in the MID Region SPM at **Appendix B**.

Rationale: Managing the risks arising from conflict zones is a strategic priority for MID region. There is a need to provide information on conflict zones developments and resulting risks to air operators so that they are able to conduct an informed risk assessment to mitigate the risks and threats posed by flying over or in the vicinity of zones where armed conflicts exist.

What we want to achieve: Increase safety by managing the risks arising from conflict zones and mitigation actions. Enable effective information-sharing about risks and possible threats in conflict zones.

How we monitor improvement: Continuous assessment and mitigation of conflict zones risks by air operators.

How we want to achieve it: This SEI should be considered by States for inclusion in their NASPs.

Actions:
A1- Promote risks arising from conflict zones through capacity building activities

References:

- ICAO SARPs and guidance documents and 2026-2028 GASP Goal 2 “Strengthen States’ safety oversight capabilities”.
- ICAO Annex 17.
- Doc 10084 – Risk Assessment Manual for Civil Aircraft Operations Over or Near Conflict Zones
- Doc 10108 – Aviation Security Global Risk Context Statement.

Stakeholders: RASG-MID, RASFG-MID, MIDANPIRG, States, international organizations, industry	
Action 1: Promote risks arising from conflict zones through capacity building activities	
Responsible entity:	ICAO & States
Priority:	High
Completion date:	2026
Status:	Ongoing
EXPECTED OUTPUT	
Deliverable(s)	Timeline
mitigate contributing factors to accidents and incidents	2028

5.2.1.3.4 G2-SEI-03D: Management of cybersecurity risks

Target/Metrics: The safety targets of this goal are indicated in the MID Region SPMM at **Appendix B**.

Rationale: The safety action in this area is aimed at mitigating cybersecurity related safety risks. Assess the safety impact of cybersecurity threats to aviation users, support the development of mitigations and specific Training actions, identify and mitigate the vulnerabilities of aviation products and identify the required changes to aviation standards.

What we want to achieve: Increase safety by managing the impact of cybersecurity on safety and mitigating related safety risks.

How we monitor improvement: Continuous assessment and mitigation of cybersecurity threats.

How we want to achieve it: This SEI should be considered by States for inclusion in their NASPs. For states, to assess the safety impact of cybersecurity threats to aviation users, support the development of mitigation actions and specific training actions, identify and mitigate the vulnerabilities of aviation products and identify the required changes to aviation standards.

Action: A1
A1- Promote Cybersecurity risks through capacity building activities

References: ICAO SARPs and guidance documents and 2026-2028 GASP Goal 2 “Strengthen States’ safety oversight

capabilities". ICAO Annex 17.

Stakeholders: RASG-MID, RASFG-MID, MIDANPIRG, States, international organizations, industry		
Action 1- Promote Cybersecurity risks through capacity building activities		
Responsible entity:	ICAO, States, & Organizations	
Priority:	High	
Completion date:	2026	
Status:	Ongoing	
EXPECTED OUTPUT		
Deliverable(s)		Timeline
mitigate contributing factors to accidents and incidents		2028

5.2.1.3.5 G2-SEI-03E: Manage aviation health safety (AHS) risks

Target/Metrics: The safety targets of this goal are indicated in the MID Region SPMM at **Appendix B**.

Rationale: The COVID-19 pandemic demonstrated that public health emergencies may severely impact the entire aviation environment and in particular crew members and passengers. The objective is to minimize the impact of health safety threats on CAT.

The safety action in this area is aimed at mitigating the COVID-19 or any other pandemic related to safety risks. The safety action in this area would focus on continuous support to the MID-RPTF and sharing of guidance material/best practices to mitigate the risks stemmed from the pandemic

What we want to achieve: Reduce the risk of disease transmission during the travel experience without negative impact on safety, maintain public trust and facilitate future responses to public health emergencies.

How we monitor improvement: Regular assessment of preventive measures used onboard aircraft while at the same time monitoring the emerging public health threats.

How we want to achieve it: This SEI should be considered by States for inclusion in their NASPs.

Actions: A1
A1: Activation of MID-RPTF, as needed

References:

- ICAO SARPs and guidance documents and 2026-2028 GASP Goal 2 “Strengthen States’ safety oversight capabilities”.

Stakeholders: RASG-MID, RASFG-MID, MIDANPIRG, States, international organizations, industry		
Action 1- Activation of MID-RPTF, as needed		
Responsible entity:	ICAO and All stakeholders	
Priority:	High	
Completion date:	2026	
Status:	Ongoing	
EXPECTED OUTPUT		
Deliverable(s)		Timeline
mitigate contributing factors to accidents and incidents		2028

5.2.1.4 G2-SEI-04: AAM and New Entrants

Target/Metrics: The safety targets of this goal are indicated in the MID Region SPMM at **Appendix B**.

Rationale: Enabling the safe integration of UAS, being a fast evolving and emerging market segment, as well as of (initially manned) VTOL-capable aircraft, also intended for Advanced Air Mobility (AAM) operations, continue to be priority activities.

At the regional level to support states in establishing a comprehensive regulatory framework and Airspace Integration and Traffic Management for UAS and manned VTOL-capable aircraft.

What we want to achieve: to ensure safe UAS operations and mitigate the risks, it is important to manage their safe integration into the airspace. In addition, to enable the safe integration of UAS into airspace while maintaining a high and uniform level of safety.

How we monitor improvement: Feedback from states on the effectiveness of the related activities.

How we want to achieve it: This SEI should be considered by States for inclusion in their NASPs.

Actions: A1 – A2
A1: Support States to establish a comprehensive regulatory framework for UAS and manned VTOL-capable aircraft' through capacity building activities
A2: Support States with the implementation of the UTM Regulatory Framework through capacity building activities

References:

- ICAO SARPs and guidance documents and 2026-2028 GASP Goal 2 "Strengthen States' safety oversight capabilities".
- Annex 6-Part IV

Stakeholders: RASG-MID, RASFG-MID, MIDANPIRG, States, international organizations, industry	
Action 1- Support States to establish a comprehensive regulatory framework for UAS and manned VTOL-capable aircraft' through capacity building activities	
Responsible entity:	ICAO and All stakeholders
Priority:	High
Completion date:	2026
Status:	Ongoing
Action 2: Support States with the implementation of the UTM Regulatory Framework through capacity building activities	
Responsible entity:	ICAO and All stakeholders
Priority:	High
Completion date:	2026
Status:	New
EXPECTED OUTPUT	
Deliverable(s)	Timeline
mitigate contributing factors to MAC, LOC-I, CFIT accidents	2028

5.2.2 Goal 3: Establish & manage effective State safety Programmes (SSP)

5.2.2.1 G3-SEI-01: Improve the development and implementation of Safety Management

Target: The safety targets of this goal are indicated in the MID Region SPMM at **Appendix B**.

Rationale: Management of safety in a systematic and proactive way enables authorities and organizations to set up management systems that take into consideration potential hazards and associated risks before aviation accidents occur. This global move is at the core of ICAO Annex 19. This safety area would enable further work to improve reporting processes, occurrence

investigation at organizational level, and also the continued development of integrated data collection taxonomies. The proactive implementation of safety management considering all known safety data and information has proven essential for the ability of the aviation system to deal with safety issues.

What we want to achieve: MID Region States implement SSP and consequently their services providers to implement SMS. In addition, improve the level of safety through the effective implementation of safety management by authorities and service providers.

How we monitor improvement: ICAO Annex 19 framework requiring safety management is in place across all aviation domains, and organizations and authorities are able to demonstrate compliance.

How we want to achieve it: This SEI should be considered by States for inclusion in their NASPs.

States to give priority to the work on SSPs: In the implementation and maintenance of the SSP, States should in particular:

- ensure effective implementation of the Annex 19 Requirements and address deficiencies in oversight capabilities, as a prerequisite for effective SSP implementation
- ensure effective coordination between State authorities having a role in safety management
- ensure that inspectors have the right competencies to support the evolution towards risk- and performance-based oversight
- ensure that policies and procedures are in place for risk- and performance-based oversight, including a description of how an SMS is accepted and regularly monitored
- establish policies and procedures for safety data collection, analysis, exchange and protection
- establish a process to determine safety performance indicators at State level addressing outcomes and processes
- ensure that an approved SSP document is made available and published; and
- ensure that the SSP is regularly reviewed and that SSP effectiveness is regularly assessed.

SMS Assessment

States should make use of the available tools to support risk- and performance-based oversight. States also should regularly monitor status of compliance with SMS requirements of their industry.

SMS international cooperation

States should promote the common understanding of safety management and human factors principles and requirements in different countries, share lessons learned and encourage progress and harmonization, through active participation in the RASG-MID and other safety groups and fora.

FDM precursors of main operational safety risks

States in partnership with industry, other regional and international organizations should complete the good practice documentation which supports the inclusion of main operational safety risks such as RE, RI, LOC-I, CFIT and MAC into operators' FDM Programmes.

States to set up a regular dialogue with their national aircraft operators on flight data monitoring (FDM) Programmes

States to set up a regular dialogue with their national aircraft operators on flight data monitoring (FDM) Programmes, with the objectives of:

- promoting the operational safety benefits of FDM,
- fostering an open dialogue on FDM Programmes that takes place in the framework of just culture,
- encouraging operators to include and further develop FDM events relevant for the prevention of REs, MACs, CFIT and LOC-I, or other issues identified by the SSP

Actions: A1-A2-A3-A4-A5-A6-A7
A1- Conduct SSP & SMS capacity building activities
A2- SRM capacity building activities
A3- Conduct technical assistance missions to facilitate the establishment of SSP
A4- Promote safety management best practices
A5- Identify and mobilize resources to support states in need to establish an SSP
A6- Cooperation and collaboration with key stakeholders to support the establishment of SSPs
A7- Encourage all States to report safety issues via the Secure Portal on Operational Safety Risks and Emerging Issues

References:

- ICAO Annex 19 & Doc 9859 and GASP 2026-2028 Goal 3 “Establish & manage effective State safety Programmes (SSP)”
- GASP SEIs: SEI-38, SEI-39, SEI-40, SEI-41, SEI-42, SEI-43, and SEI-44.

Stakeholders: RASG-MID, States, industry, international organizations	
Action 1- Conduct SSP/SMS capacity building activities	
Responsible entity:	ICAO, supported by organizations, and industry
Priority:	High
Completion Date:	2026
Status:	ongoing
Action 2: Conduct SRM capacity building activities	
Responsible entity:	ICAO, supported by organizations, and industry
Priority:	High
Completion Date:	2026
Status:	ongoing
Action 3- Conduct technical assistance missions	
Responsible entity:	ICAO
Priority:	High
Completion Date:	2026
Status:	New
Action 4: Promote safety management best practices	
Responsible entity:	ICAO, states, organizations, and industry
Priority:	Medium
Completion Date:	2026
Status:	New
Action 5: Identify and mobilize resources to support states in need to establish an SSP	
Responsible entity:	ICAO
Priority:	High
Completion Date:	2026
Status:	New
Action 6: Cooperation and collaboration with key stakeholders to support the establishment of SSPs	
Responsible entity:	ICAO and all stakeholders
Priority:	High
Completion Date:	2026
Status:	New

Action 7: Encourage all States to report safety issues via the Secure Portal on Operational Safety Risks and Emerging Issues	
Responsible entity:	ICAO
Priority:	Medium
Completion Date:	2026
Status:	New

EXPECTED OUTPUT

Deliverable(s)	Timeline
MID States to Establish & manage effective SSP	2028

5.2.3 Goal 4: Strengthen collaboration at the regional and national levels to address safety issues

5.2.3.1 G4-SEI-01: Collaboration and coordination with stakeholders to address safety issues

Target: The safety targets of this goal are indicated in the MID Region SPMM at *Appendix B*.

Rationale: cooperation and collaboration among all stakeholders to identify States that need assistance and facilitate the required assistance to address safety issues through Strategic collaboration with key aviation stakeholders, mobilization of resources, sharing of safety information, and agreeing on joint activities to avoid duplication of effort.

What we want to achieve: States, international organizations, and industry to increase collaboration at the regional and national levels so that to enhance safety.

How we monitor improvement: Reinforce efficient and effective cooperation and collaboration with all stakeholders, avoiding duplication and optimizing the allocation of resources at the regional and national levels.

How we want to achieve it: Joint Programme activities

References:

- GASP 2026-2028 Goal 4 “Strengthen collaboration at the regional and national levels to address safety issues”
- GASP SEIs: SEI-21, SEI-22, SEI-23, and SEI-24 (Regions).

Actions: A1-A2-A3-A4-A5
A1- Develop and agree on joint work activities with all stakeholders through MID RCMs
A2- Continuous support to strengthen MENA ARCM to best support States in the region (Addressed in G2-SEI-01)
A3- Continuous support to strengthen MENA RSOO to best support States in the region. (Addressed in G2-SEI-01)
A4- Identify and mobilize resources to support SEIs for States in need to address safety issues and establish effective safety oversight capabilities. (Addressed in G2-SEI-01)
A5- Sharing of safety information via RASG-MID platform to make use of the information on operational safety risks and emerging issues for the purpose of aviation safety planning. (Addressed in G2-SEI-01)

Stakeholders: RASG-MID, MIDANPIRG, RASFG-MID, States, international organizations, and industry.

Action 1: Develop and agree on joint work activities with all stakeholders through MID RCMs	
Responsible entity:	ICAO, States, international organizations, industry
Priority:	High
Completion date:	2026
Status:	Ongoing
EXPECTED OUTPUT	
Deliverable(s)	Timeline
To increase States USOAP EI and SSP level of maturity.	2028

5.2.4 Goal 5: Strengthen aviation safety planning (RASP & NASP)

5.2.4.1 G5-SEI-01: Development and Implementation of MID-RASP

Target: The safety targets of this goal are indicated in the MID Region SPMM at **Appendix B**.

Rationale: The RASG-MD is the governing body responsible for the development, implementation and monitoring of the MID-RASP, in collaboration with the ICAO MID Office, international and regional organizations and with the aviation industry. MID-RASP is to be reviewed by the Safety Enhancement Implementation Group (SEIG) every year mainly to include new identified Safety Enhancement initiatives' (SEIs), reviewing the existing SEIs, as well as their respective actions.

What we want to achieve: States, international organization, and industry to increase collaboration at the regional level to enhance safety.

How we monitor improvement: MID region to publish an updated regional aviation safety plan (MID-RASP), in line with the 2026–2028 edition of GASP.

How we want to achieve it: This SEIs included in MID-RASP to be considered by States for inclusion in their NASPs.

References:

- GASP 2026-2028 Goal 5: “Strengthen aviation safety planning”
- GASP SEIs: SEI-21, SEI-22, SEI-23, and SEI-24 (Regions).

Action: A1

A1- Development and Implementation of MID-RASP 2026-2028 Edition

Stakeholders: RASG-MID, MIDANPIRG, RASFG-MID, States, International organizations, and industry.

Action 1: Development and Implementation of MID-RASP 2023-2025 Edition

Responsible entity: ICAO MID & SEIG

Priority: High

Completion date: 2025

Status: New

EXPECTED OUTPUT

Deliverable(s)	Timeline
To manage and enhance safety at the regional	2028

5.2.4.2 G5-SEI-02: MID States to develop and publish NASP

Target: The safety targets of this goal are indicated in the MID Region SPMM at **Appendix B**.

Rationale: States should ensure that NASP is maintained and regularly reviewed. MID-RASP provides the identified safety priorities in the region and States should identify which top risks and safety issues mentioned in the GASP and MID-RASP; which apply to their national context and identify suitable mitigation actions within their NASP. States should also add/consider others which are unique to their operational context.

What we want to achieve: MID Region States to develop NASP. Successful implementation of the NASP actions would require the commitment of resources from stakeholders within State, availability of data to effectively monitor the achievement of NASP Targets, and proper project governance. In addition to the actions, NASP shall also consider how to measure their effectiveness.

How we monitor improvement: ICAO GASP requiring States to develop NASP and region to develop RASP. Feedback from RASG-MID and states on NASP implementation.

How we want to achieve it: This SEI should be considered by States for inclusion in their NASPs.

States to establish and maintain a National Aviation Safety Plan (NASP)
States should ensure that a NASP is maintained and regularly reviewed. NASP should:

- Describe how the plan is developed and endorsed, including collaboration with different entities within the State, with industry and other stakeholders
- Include safety objectives, goals, indicators and targets in line with GASP as well as regional safety plan
- Identify the main safety risks at national level in addition to the ones identified in MID-RASP as applicable to the State
- Include series of SEIs to address safety issues
- Reflect the GASP and MID-RASP SEIs as applicable to the State.

Actions: A1-A2
A1- Conduct NASPs capacity building activities & technical assistance missions.
A2- Identify and mobilize resources to support states in need of developing NASP.

References:

- ICAO Annex 19 and GASP 2026-2028 Goal 5: “Strengthen aviation safety planning”
- GASP SEIs: SEI-21, SEI-22, SEI-23, and SEI-24 (Regions).

Stakeholders: RASG-MID, States, industry, international organizations

Action 1- Conduct NASPs capacity building activities & technical assistance missions

Responsible entity: ICAO and states

Priority: High

Completion Date: 2026

Status: Ongoing

Action 2- Identify and mobilize resources to support states in need of developing an NASP

Responsible entity: States, organizations, and industry

Priority: High

Completion Date: 2026

Status: ongoing

EXPECTED OUTPUT

Deliverable(s)	Timeline
MID States to develop and publish NASP	2026

5.2.5 Goal 6: Expand the Use of Industry Programmes and safety information sharing networks

5.2.5.1 G6-SEI-01: Promote the Use of industry Programmes

Target: The safety targets of this goal are indicated in the MID Region SPM at **Appendix B**.

Rationale: What we want to achieve: Work with the civil aviation authorities and organizations to increase the number of service providers participating in the corresponding ICAO recognized industry assessment Programmes.

How we monitor improvement: Increase the number of service providers participating in the corresponding ICAO recognized industry assessment Programmes. RASG-MID, IATA, and ACI will give feedback on the effectiveness of the activities.

How we want to achieve it: Actions

Actions: A1-A2
A1- Encourage IATA's IOSA and ISAGO registrations through safety promotion
A2- Encourage the implementation of ACI Airport Excellence (APEX) in Safety Programme

References:

- This is related to 2026-2028 GASP Goal 6 "Expand the use of industry Programmes and safety information sharing networks"
- GASP SEIs: SEI-21, SEI-22, SEI-23, and SEI-24 (Regions).

Stakeholders: RASG-MID, States, industry, international organizations	
Action 1: Encourage IATA's IOSA and ISAGO registrations through safety promotion	
Responsible entity:	IATA
Priority:	Medium
Completion Date:	2026
Status:	Ongoing
Action 2: Encourage the implementation of ACI Airport Excellence (APEX) in Safety Programme	
Responsible entity:	ICAO and ACI
Priority:	medium
Completion Date:	2026
Status:	ongoing
EXPECTED OUTPUT	
Deliverable(s)	Timeline
Increase the number of service providers participating in ICAO recognized industry assessment Programmes and maintain recurrent APEX Missions in the region:	2028

Appendix A- Identified safety issues as indicated in the 13th MID ASR

Potential Accident Outcome							
Safety Issues	CFIT	LOC-I	MAC	RI	RE/ARC	Injury Damage inflight	Injury Damage on Ground
Monitoring of flight parameters and automation modes	X	X			X		
Adverse Convective weather (Turb, Hail,...etc)	X	X			X	X	
Un-stabilized Approach		X			X		X

Flight planning and preparation	X	X	X	X	X		
Crew Resource Management	X	X	X	X	X		
Handling of technical failure	X	X		X	X		X
Handling and execution of GOA	X	X			X		
Loss of separation in flight/ and/or airspace/TCAS RA			X			X	
Experience, training and competence of Flight Crews	X	X	X		X		
Deconfliction between IFR and VFR traffic			X				
Inappropriate flight control inputs		X			X		
Fatigue	X	X					
Entry of aircraft performance data		X					
Contained engine Failure/Power Plant Malfunctions		X			X	X	
Birdstrike/Engine Bird ingestion		X			X		
Fire/Smoke-non impact		X				X	
Wake Vortex		X				X	
Deviation from pitch or roll attitude	X	X			X		
Security Risks with impact on Safety		X					
Tail/Cross wind/Windshear		X			X		X
Runway Incursion				X	X		X
Maintenance events	X	X				X	
Contaminated runway/Poor braking action					X		X
Turbulence and Mountain Waves		X				X	
GNSS Jamming/Spoofing	X		X				
Carriage and transport of lithium batteries		X					
Effectiveness of safety management	X	X	X	X	X		

Appendix B-MID Region-Safety Performance Measurement & Monitoring (SPMM)

Aspirational Goal: Zero Fatality by 2030

Goal 1: Achieve a Continuous Reduction of Operational Safety Risks

Safety Indicator	Safety Target	Timeline	Mapped with GASP
Number of accidents per million departures	Regional average rate of accidents to be in line with the global average rate	2028	
Number of fatal accidents per million departures	Regional average rate of fatal accidents to be in line with the global average rate	2028	
Number of fatalities per million departures	Number of fatalities per billion passengers carried (fatality rate) to be in line with the global average rate	2028	

Safety Indicator	Safety Target	Timeline	Mapped with GASP
Number of Runway Excursion accidents per million departures	Regional average rate of Runway Excursion accidents to be below the global average rate	2028	Target 1.1 Target 1.2 Target 1.3
Number of Runway Incursion accidents per million departures	Regional average rate of Runway Incursion accidents to be below the global average rate	2028	
Number of LOC-I related accidents per million departures	Regional average rate of LOC-I related accidents to be below the global rate	2028	
Number of CFIT related accidents per million departures	Regional average rate of CFIT related accidents to be below the global rate	2028	
Number of Mid-Air Collision (accidents)	Regional average rate of MID-Air Collision accident	2028	

Goal 2: Strengthen States' Safety Oversight Capabilities

Safety Indicator	Safety Target	Timeline	Mapped with GASP
a. Regional average EI	a. Regional average EI to be above 75%	a. 2026-2028	Target 2.1 Target 2.2 Target 2.3
b. States committed to national allocate to each safety oversight authority sufficient financial resources	b. At least 10 States with a “satisfactory” rating for USOAP PQ: 2.051	b. 2026-2028	
c. Number of audited States with an overall EI over 60%	c. All MID audited States to be above 60% EI	c. 2026-2028	
d. States to improve EI for CE-4 & CE-8	d. Number of MID States average EI for CE-4 & CE-8. (AIG, AGA, ANS) to be above 60%	d. 2026-2028	
e. Regional average EI of PPQs	e. Regional average EI PPQs above 75%	e. 2026-2028	

Goal 3: Establish & manage effective State safety Programmes (SSP)

Safety Indicator	Safety Target	Timeline	Mapped with GASP
Regional Average SSP EI	TBD	2026- 2028	Target 3.1 Target 3.2
States to complete SSP self-assessment	All states	2026	
States to establish an SSP	- At least 10 States established an SSP - At least 10 States established SDCPS - At least 10 established safety data and safety information protection	2026- 2028	

Goal 4: Strengthen collaboration at the regional and national levels to address safety issues

Safety Indicator	Safety Target	Timeline	Mapped with GASP
Number of States in need of assistance, to strengthen their Safety Oversight capabilities through NCLB MID Strategy/Technical assistance	States with SSC as a first priority All States as a second priority having EI below 80%	2026-2028	Target 4.1 Target 4.2 Target 4.3
Number of States in need of assistance to address safety issues and facilitate SSP & NASP implementation through NCLB MID Strategy/Technical assistance	All States	2026-2028	
Percentage of safety enhancement initiatives (SEIs)/Safety Actions completed	80%	2026-2028	
Number of States sharing safety information to support the development of MID ASR	All states	2026-2028	

Goal 5: Strengthen aviation safety planning (RASP & NASP)

Safety Indicator	Safety Target	Timeline	Mapped with GASP
MID Region to publish an updated RASP in consultation with states and industry	2026	2026	Target 5.1
Number of States that have developed and published NASP	At least 10 States	2026	Target 5.5

Goal 6: Expand the use of Industry Programmes and safety information sharing networks

Safety Indicator	Safety Target	Timeline	Mapped with GASP
Use of the IATA Operational Safety Audit (IOSA), to complement safety oversight activities.	a. Maintain at least 60% of eligible MID airlines to be certified IATA-IOSA at all times. b. All MID States with an EI of at least 60% use IOSA to complement their safety oversight activities.	a. 2026-2028 b. 2026-2028	Target 6.1
Use of the IATA Safety Audit for Ground Operations (ISAGO) certification, as a percentage of all Ground Handling service providers	IATA Ground Handling Manual (IGOM) endorsed as a reference for ground handling safety standards by all MID States. Pursue at least 25% increase in ISAGO registration	2026-2028	
Coordinate the ACI Airport Excellence (APEX) in Safety Programme	At least 2 ACI APEX in Safety to be conducted for 2 Airports of the Region per year	2026-2028	

Appendix C: Safety Actions- Consolidated List of SEIs with their respective Actions for follow up- Draft

EI Code	SEI Name	Actions	Owner(s)	Status/Progress	Completion Date	Name & # Activities
Regional Operational Safety Risks						
Goal 1: Achieve a Continuous Reduction in Operational Risks						
G1-SEI-01:	Aircraft Upset in Flight (LOC-I)	A1- Guidance material on flight crew proficiency	States, Organizations, industry		2026- 2028	
		A2- Advisory Circular: Mode Awareness and Energy State Management Aspects of Flight Deck Automation	States, Organizations, industry		2026- 2028	
		A3- Promote and conduct Upset Recovery Capacity building activities	States, Organizations, industry		2026- 2028	
		A4- Conduct Wildlife Hazard Management Control capacity building Activities	States, Organizations, industry		2026- 2028	
		A5- Promote DG capacity building activities including Lithium batteries fire/smoke risk in cabin	States, Organizations, industry		2026- 2028	
		A6- Promote Data-Driven Safety Management – Use flight data monitoring (FDM) to identify precursors to LOC-I events and develop targeted interventions	States, Organizations, industry		2026- 2028	
G1-SEI-02:	Runway Safety- Runway Excursion	A1- A1- Support States to implement the Global Reporting Format (GRF) Methodology through capacity building activities.	ICAO and ACI		2026-2028	
		A2- Support States on the implementation of the ICAO Annex 14 requirements to achieve compliance with regards to Aerodrome Design and Operations, through capacity building activities.	ICAO		2026-2028	

EI Code	SEI Name	Actions	Owner(s))	Status/Progress	Completion Date	Name & # Activities
		A3- Conduct Runway Safety Go-Team (RST) assistance missions	States, ICAO, industry		2026-2028	
		A4- Enhance capacity building for States CAAs and Airport operators related to Aerodromes Certification through capacity building activities.	States, ICAO, industry		2026-2028	
G1-SEI-03:	Runway Safety-Runway Incursion	A1- Promote the establishment and implementation of States' runway safety Programmes and runway safety teams	ICAO, states, industry		2026-2028	
		A2- Certification of aerodromes in accordance with Annex 14	ICAO, states, industry		2026-2028	
		A3- Promote the identification and publication in AIP of hot spots at aerodromes during workshops and sub-groups meetings	ICAO, states, industry		2026-2028	
		A4- Promote suitable strategies to remove hazards or mitigate risks associated with identified hot spots during workshops and sub-groups meetings	ICAO, states, industry		2026-2028	
		A5- Promote the use of standardized Phraseology & ATC Procedures through capacity activities.	ICAO, states, industry		2026-2028	
		A6- Promote the effective use of suitable technologies to assist the improvement of situational awareness, such as improved resolution A-SMGCS, stop bars and ARIWS	ICAO, states, industry		2026-2028	
G1-SEI-04	MID-Air Collision (MAC)	A1- Promote Civil-Military cooperation through capacity building activities	ICAO, states, industry		2026-2028	
		A2- Promote awareness among stakeholders related to the potential risk of MAC over high seas through capacity building activities.	ICAO, states, industry		2026-2028	
		A3- Promote guidance to ensure aircraft are equipped with ACAS, in accordance with	ICAO, states, industry		2026-2028	

EI Code	SEI Name	Actions	Owner(s)	Status/Progress	Completion Date	Name & # Activities
		Annex 6 – Operation of Aircraft during workshops, meetings, seminars.				
		A4- A4- Promote airspace among stakeholders, including complexity of airspace design, Free Route Airspace (FRA) concept, route layout, and proximity of military operational or conflict zones, establishment of FUA's through capacity building activities.	ICAO, states, industry		2026-2028	
		A5- Promote the improvement of ATC systems, procedures and tools to enhance conflict management	ICAO, states, industry		2026-2028	
G1-SEI-05	Controlled Flight into Terrain (CFIT)	A1- A1- Advisory Circular: Instrument Approach Procedures Using Continuous Descent Final Approach Techniques	ICAO, states, industry		2026-2028	
		A2- Advisory Circular: Crew Resource Management Training Programme (CRM)	ICAO, states, industry		2026-2028	

Organizational Challenges/issues

Goal 2: Strengthen States' Safety Oversight Capabilities

G2-SEI-01:	Strengthening of States' Safety Oversight Capabilities	A1- Conduct Capacity Building Activities to promote effective implementation of SARPs with focus on AGA, AIG, & ANS areas	ICAO, States, Organizations, and Industry.		2026-2028	
		A2- Conduct of technical assistance missions to States, to address safety issues and enhance safety with a focus on AGA, AIG, & ANS areas.	ICAO and States		2026-2028	

		A3 - Continuous support to strengthen MENA ARCM to best support States in the region)	ICAO, States, Organizations, and Industry		2026-2028	
		A4- Identify and mobilize resources to support SEIs for States in need to address safety issues and establish effective safety oversight capabilities	ICAO, States, Organizations, and Industry		2026-2028	
		A5- Continuous support to strengthen MENA RSOO to best support States in the region	ICAO, States, Organizations, and Industry		2026-2028	
		A6- Cooperation and collaboration with key stakeholders to enhance safety in the region	ICAO, States, Organizations, and Industry		2026-2028	
		A7- Sharing of safety information via RASG-MID platform to make use of the information on operational safety risks and emerging issues for the purpose of aviation safety planning	ICAO, States, Organizations, and Industry		2026-2028	
G2-SEI-02:	Manage Human Factors and Human Performance	A1- A1- Advisory Circular: Crew Resource Management Training Programme (CRM). (Action addressed under G1-SEI-04: CFIT)	ICAO, States, Organizations, and Industry		2026-2028	
		A2- Conduct capacity building activities	ICAO, States, Organizations, and Industry		2026-2028	
		A3- Develop practical guides and promotion material on aircrew fatigue	ICAO, States, Organizations, and Industry		2026-2028	
G2-SEI-03:	Manage Risk interdependencies					
G2-SEI-03A:	Managing GNSS Interference and spoofing	A1- Raise awareness on the potential safety impact of GNSS interference and spoofing through capacity building activities	States, Organizations, and Industry		2026-2028	

		A2- Promote civil-military coordination and cooperation activities to facilitate the sharing of relevant information with airspace users	States, Organizations, and Industry		2026-2028	
G2-SEI-03B:	Management of security risks with safety impact	A1- Promote security risks with safety impact through capacity building activities	States, Organizations, and Industry		2026-2028	
G2-SEI-03C:	Management of the risks arising from conflict zones	A1- Promote risks arising from conflict zones through capacity building activities	States, Organizations, and Industry		2026-2028	
G2-SEI-03D:	Management of cybersecurity risks	A1- Promote Cybersecurity risks through capacity building activities	States, Organizations, and Industry		2026-2028	
G2-SEI-03E:	Manage aviation health safety (AHS) risks	A1- Activation of MID-RPTF, as needed	States, Organizations, and Industry		2026-2028	

G2-SEI-04:	AAM and New Entrants	A1- Support States to establish a comprehensive regulatory framework for UAS and manned VTOL-capable aircraft' through capacity building activities	States, Organizations, and Industry		2026-2028	
		A2- Support States with the implementation of the UTM Regulatory Framework through capacity building activities	States, Organizations, and Industry		2026-2028	

Goal 3: Establish & manage effective State safety Programmes (SSP)

G3-SEI-01:	Improve the development and implementation of Safety Management	A1- Conduct SSP & SMS capacity building activities	ICAO, States, organizations, & industry		2026-2028	
		A2- SRM capacity building activities	ICAO		2026-2028	

		A3- Conduct technical assistance missions to facilitate the establishment of SSP	ICAO		2026-2028	
		A4- Promote safety management best practices	ICAO		2026-2028	
		A5- Identify and mobilize resources to support states in need to establish an SSP	ICAO, States, organizations, & industry		2026-2028	
		A6- Cooperation and collaboration with key stakeholders to support the establishment of SSP	ICAO, States, organizations, & industry		2026-2028	
		A7- Encourage all States to report safety issues via the Secure Portal on Operational Safety Risks and Emerging Issues	ICAO, States, organizations, & industry		2026-2028	

Goal 4: Strengthen collaboration at the regional and national levels to address safety issues

G4-SEI-01:	Collaboration and coordination with stakeholders to address safety issues	A1- A1- Develop and agree on joint work activities with all stakeholders through MID RCMs	ICAO, States, organizations, & industry		2026-2028	
		A2- Continuous support to strengthen MENA ARCM to best support States in the region (Addressed in G2-SEI-01)	States, organizations, & industry		2026-2028	
		A3- Continuous support to strengthen MENA RSOO to best support States in the region. (Addressed in G2-SEI-01)	States, organizations, & industry		2026-2028	
			States, organizations, & industry		2026-2028	
		A4- Identify and mobilize resources to support SEIs for States in need to address safety issues and establish effective safety oversight capabilities. (Addressed	States, organizations, &		2026-2028	

		in G2-SEI-01)	industry			
		A5- Sharing of safety information via RASG-MID platform to make use of the information on operational safety risks and emerging issues for the purpose of aviation safety planning. (Addressed in G2-SEI-01)	States, organizations, & industry		2026-2028	

Goal 5: Strengthen aviation safety planning (RASP & NASP)

G5-SEI-01:	Development and Implementation of MID-RASP	A1- Development and Implementation of MID-RASP 2026-2028 Edition	States, organizations, & industry		2026-2028	
G5-SEI-02:	MID States to develop and publish NASP	A1- Conduct NASPs capacity building activities & technical assistance missions.	States, organizations		2026-2028	
		A2- Identify and mobilize resources to support states in need of developing NASP.	States, organizations, industry		2026-2028	

Goal 6: Expand the Use of Industry Programmes and safety information sharing networks

G6-SEI-01:	Promote the Use of industry Programmes	A1- Encourage IATA's IOSA and ISAGO registrations through safety promotion	States, organizations, industry		2026-2028	
		A2- Encourage the implementation of ACI Airport Excellence (APEX) in Safety Programme	States, organizations, industry		2026-2028	

Appendix D:

SEIs identified in MID-RASP may be considered by States for inclusion in their NASPs, as appropriate



G1-SEI-01:
LOC-I



G1-SEI-02:
RE



G1-SEI-03:
RI



G1-SEI-04:
MAC



G1-SEI-05:
CFT



G2-SEI-01:
Strengthening of States'
Safety Oversight



G2-SEI-02:
Manage Human Factors
and Human
Performance



G2-SEI-03:
Manage Risk
interdependencies



G2-SEI-04:
AAM and New Entrants



G3-SEI-01:
Implement an effective
Safety Management



G5-SEI-02:
MID States to develop and
publish NASP

Appendix E: Definitions

GLOSSARY

DEFINITIONS

Audit. A systematic, independent and documented process for obtaining evidence and evaluating it objectively to determine the extent to which requirements and audit criteria are fulfilled.

Critical elements (CEs). The critical elements of a safety oversight system encompass the whole spectrum of civil aviation activities. They are the building blocks upon which an effective safety oversight system is based. The level of effective implementation of the CEs is an indication of a State's capability for safety oversight.

Effective implementation (EI). A measure of the State's safety oversight capability, calculated for each critical element, each audit area or as an overall measure. The EI is expressed as a percentage.

Hazard. A condition or an object with the potential to cause or contribute to an aircraft incident or accident.

Safety data. A defined set of facts or values collected for reference, processing or analysis which could be used to maintain or improve safety.

Safety enhancement initiative (SEI). One or more actions to eliminate or mitigate operational safety risks or to address organizational challenges.

Safety information. Safety data processed, organized or analysed in a given context to support safety management and the development of safety intelligence.

Safety oversight. A function performed by a State to ensure that individuals and organizations performing an aviation activity comply with safety-related national laws and regulations.

Safety performance. A State or a service provider's measurable effect on safety achievement.

Safety risk. The predicted probability and severity of the consequences or outcomes of a hazard.

State safety programme (SSP). An integrated set of laws, regulations, policies, objectives, processes, procedures and activities aimed at managing safety, at the State level.

ABBREVIATIONS AND ACRONYMS

AA	Audit area
ACI	Airports Council International
AI	Artificial Intelligence
ANC	Air Navigation Commission
ARC	Abnormal runway contact

ATS	Air traffic service
BARS	Basic aviation risk standard
CANSO	Civil Air Navigation Services Organisation
CAST	Commercial Aviation Safety Team
CE	Critical element
CFIT	Controlled flight into terrain
CICTT	CAST/ICAO Common Taxonomy Team
CMA	Continuous monitoring approach
COSCAP	Cooperative Development of Operational Safety and Continuing Airworthiness Programme
EI	Effective implementation
EUROCONTROL	European Organisation for the Safety of Air Navigation
FSF	Flight Safety Foundation
GANP	Global Air Navigation Plan
GASP	Global Aviation Safety Plan
GASeP	Global Aviation Security Plan
GASP-SG	Global Aviation Safety Plan Study Group
G-HRC	Global high-risk category of occurrence
GNSS	Global navigation satellite system
IATA	International Air Transport Association
IBAC	International Business Aviation Council
IOSA	IATA Operational Safety Audit
ISAGO	IATA Safety Audit for Ground Operations
IS-BAH	IBAC International Standard for Business Aircraft Handling
IS-BAO	IBAC International Standard for Business Aircraft Operations
iSTARS	Integrated Safety Trend Analysis and Reporting System
LOC-I	Loss of control in-flight
MAC	Mid-air collision
NASP	National aviation safety plan
N-HRC	National high-risk category of occurrence
OLF	Online framework
PQ	Protocol Question
PANS	Procedures for Air Navigation Services
RAIO	Regional Accident and Incident Investigation Organization
RASG	Regional Aviation Safety Group
RASP	Regional aviation safety plan
RE	Runway excursion
RFI	Radio frequency interference
R-HRC	Regional high-risk category of occurrence
RI	Runway incursion
RSOO	Regional Safety Oversight Organization
SARPs	Standards and Recommended Practices
SCF-NP	System/component failure or malfunction (non-powerplant)
SDCPS	Safety data collection and processing system
SEI	Safety enhancement initiative
SMS	Safety management system
SOP	Standard operating procedure
SSP	State safety programme
SUPPS	Regional Supplementary Procedures
TURB	Turbulence encounter
USOAP	Universal Safety Oversight Audit Programme

COMMON CHALLENGES AND RECOMMENDED ACTIONS RELATED TO THE IMPLEMENTATION OF THE USOAP-CMA IN THE MID REGION

No.	Challenge	Impact	Recommended Actions
1	Varying Levels of Effective Implementation (EI)	Uneven implementation of ICAO SARPs and inconsistent safety oversight performance across the Region.	a) Provide targeted ICAO assistance and capacity-building activities under the NCLB Strategy; b) Encourage experience-sharing and mentorship between States; c) Enhance cooperation through MENA RSOO and MENA ARCM.
2	Lack of Qualified Technical Personnel	Reduced effectiveness of certification, surveillance, and enforcement activities.	a) Ensure adequate budget allocation and institutional autonomy; b) Develop sustainable recruitment and retention strategies; c) Promote utilization of regional inspector pools and regional cooperation mechanisms.
3	Weak Enforcement and Surveillance Systems	Recurring findings and reduced oversight effectiveness.	a) Strengthen SSP and State oversight systems; b) Establish clear follow-up and corrective action procedures; c) Enhance oversight planning and risk-based surveillance; d) Provide ICAO assistance to strengthen enforcement capabilities.
4	Outdated or Incomplete Aviation Legislation and Regulations	Limits the authority's ability to effectively perform oversight and enforcement functions.	a) Review and update aviation legislation and regulations; b) Establish structured regulatory amendment processes and management of differences.
5	Limited Implementation of SSP	Limited integration of risk-based oversight	a) Accelerate SSP implementation; b) Integrate risk-based oversight

No.	Challenge	Impact	Recommended Actions
		and proactive safety management.	principles; c) Develop National Safety Plans (NASPs).
6	Inadequate Safety Data Management	Limits data-driven decision-making and identification of systemic risks.	a) Establish State safety databases and safety information systems; b) Promote regional safety data sharing initiatives.
7	Fragmented Regional Cooperation	States do not fully benefit from regional harmonization and shared expertise.	a) Strengthen operationalization of MENA RSOO and regional initiatives; b) Encourage participation in collaborative oversight activities.
8	Limited Training and Continuous Professional Development	Variations in inspector competency and oversight quality.	a) Establish competency-based training systems; b) Develop continuous professional development programmes.
9	Resource and Budget Constraints	Reduced sustainability of oversight activities and delayed corrective actions.	a) Secure sustainable funding mechanisms; b) Ensure high-level commitment to prioritizing safety oversight functions.
10	Transition and Institutional Stability Issues	Loss of institutional knowledge and delays in implementation activities.	a) Strengthen governance, documentation, and succession planning; b) Ensure sustained high-level commitment to programme continuity.

Terms of Reference (TOR)

MENA ARCM Coordinator

Purpose

The MENA ARCM Coordinator is responsible for facilitating cooperation and coordination among MENA ARCM Member States in supporting accident and incident investigation capabilities, sharing expertise, and enabling the effective implementation of ICAO Annex 13 and relevant USOAP requirements.

The Coordinator acts as a central communication and liaison point between Member States and ICAO.

Appointment & Tenure

- The Coordinator is nominated from one of the Member States participating in MENA ARCM.
- The nomination is endorsed by the MENA ARCM Member States during an ARCM meeting.
- The term of the
- States' consensus.
- If the Coordinator becomes unable to continue the role, the Member States shall assign a replacement to complete the remaining term subject to Member States' endorsement.

Reporting

- The Coordinator reports directly to:
 - MENA ARCM Chair.
 - MENA ARCM Member States collectively through periodic updates.
- The Coordinator submits bi-annual progress reports and leads coordination meetings as required.

Roles & Responsibilities

The Coordinator shall:

A. Coordination & Communication

- Maintain continuous communication between Member States, ICAO, and partners.
- Manage requests for technical assistance or investigator support between the requester State and the provider State.
- Maintain and update the ARCM capabilities database (investigators, facilities, specializations, tools, etc.).

B. Operational Support

- Track operational performance of provided support and promote standardization of investigation practices.

C. Capacity Building

- Coordinate regional training plans, workshops, and knowledge-sharing initiatives.
- Promote harmonization of policies, processes, and investigator qualifications across the region.

D. Governance & Documentation

- Prepare and maintain administrative documentation related to MENA ARCM processes, including:
 - Technical Assistance Request procedures
 - Points of contact database
 - Terms of Reference
 - Work programs and progress reports
- Ensure compliance with ICAO guidance and MENA ARCM MoUs.

E. Meetings & Representation

- Organize Steering and Technical meetings for MENA ARCM as required.
- Represent MENA ARCM in relevant regional and international events, in coordination with the MENA ARCM Chair.
- Document and circulate meeting outcomes and actions.

Decision-Making Authority

- The Coordinator has no regulatory authority over Member States.
- All decisions remain subject to the approval and voluntary commitment of participating States.
- The Coordinator facilitates consensus-based decision-making.

Confidentiality

- The Coordinator ensures secure handling of sensitive information related to investigations and agreement-based support.

Review of TOR

- These Terms of Reference may be reviewed and updated by Member States with support from ICAO to align with evolving regional collaboration needs.

Expected Deliverables

Deliverable	Frequency
MENA ARCM Work Program	Annual
Progress Reports	Bi-annual
Updated Capabilities & Contacts Database	Continuous
Meeting Coordination & Documentation	As required

MENA ARCM Accidents & Serious Incidents Investigation

Safety Recommendation Platform Roadmap-Draft

1. Objective

The MENA ARCM Safety Recommendations Platform (MENA ARCM SRP) aims to strengthen the regional accident and incident investigation system by:

- Facilitating sharing, tracking, monitoring and analysis of safety recommendations arising from accident, serious incidents and incident investigations or from studies. (tracking mechanism to be specified by SRPWG)
- Promoting safety learning, harmonized internal follow-up, and comprehensive implementation. (State level)
- Enhancing data-driven decision-making for safety risk management at State and regional levels.
- Prevention of recurrence of similar incidents

2. Governance & Scope of Work

MENA ARCM Committee: Approves policy, strategic direction, and annual work Programme for the SRP.

Establishment of Safety Recommendations Platform Working Group (SRPWG):

Composed of experts nominated by MENA ARCM Member States and chaired either by a State-nominated representative or by the MENA ARCM Coordinator, the SRPWG is responsible for ensuring that the platform is developed and maintained in accordance with the following mandate:

The aim of the SRPWG is to develop the Safety Recommendation Platform that includes, but not limited to:

- Develop guidelines for common procedures to be used in the process of Safety Recommendations and the update of related documents (ie responses, assessments, comments, etc.).
- Interact/coordinate with ICAO's E2 for occurrence reporting, including but not limited to the current Taxonomy in use.
- Promote consistent use of SRP among the member states with particular emphasis on quality of data entry and handling

- Develop tools and processes enabling member states SIAs and MENA ARCM Committee to perform any relevant safety analysis in the area of the Safety Recommendations.

3. Policy and Legal Framework

Platform to be established under MENA ARCM MoU.

Operations guided by:

- ICAO Annex 13 and 19 and related guidance (Doc 9756, Doc 10144, Doc 10159).
- ICAO Common Taxonomy for Safety Recommendations (CAST/ICAO).

National laws governing investigation confidentiality and data protection.

4. Platform Design & Workflows

The MENA ARCM SRP will be a secure, web-based, using English language (French & Arabic to be considered) platform allowing authorized MENA ARCM SRPWG to:

- Register, update and categorize safety recommendations issued by MENA ARCM member states.
- Monitor implementation status and effectiveness of entries.
- Generate regional analytics and dashboards.

Note: The NTSC of Saudi Arabia generously offered to host the MENA ARCM SRP and develop its supporting software.

Develop Workflow:

- Entry data, validation, notification to database recipient tracking, closure
- Integration of AI
- MENA ARCM Focal points: Full access for data entry and validation of own safety recommendations in coordination with SRPWG.
- RASG-MID / ASRG & MENA ARCM States: Read-only access for regional safety risk analysis.

5. Technical Specifications

- Consider interoperability with ICAO E2/SRIS2.
- Taxonomy: ADREP (ICAO/CAST)
- Ensure resiliency to cybersecurity
- Define core data fields; to be drafted by the SRPWG.

6. Analytical & Reporting Capabilities

- Define and set performance indicators: Number of recommendations issued per year, Recommendation by Recipient, Recurrence of same safety issue.
- Data analytics: trends analyses, systemic safety hazards
- Regular reports to be submitted to MENA ARCM committee for approval.
- Further details will be drafted by the SRPWG.

7. Protection of safety information & Handling Protocols

Compliance with ICAO Annex 13 provisions on the protection of safety information as well as the NDA included in MENA ARCM MoUs

- Safety recommendations de-identified (before regional sharing).
- No direct publication of confidential accident/incident reports.
- Access governed by role-based permissions.

8. Capacity Building

- Provide training for data managers/ custodian on: Classification and taxonomy, Quality control, Data analytics tools
- Develop SOPs and manuals for SRP management.

9. Implementation Roadmap

The MENA ARCM coordinator in coordination with the SRPWG will present a progress update to the MENA ARCM committee during their biannual meetings.

Phase	timeline	Key Activity	Lead Entity
Phase 1: Planning & Governance Setup	Q4-2025	Establish SRPWG; finalize governance, and policy framework	MENA ARCM Coordinator and COMMITTEE in coordination with ICAO MID and ACAO
Phase 2: Platform Design & Development	Q1- 2026	Define requirements, system design	MENA ARCM Coordinator and COMMITTEE in coordination with ICAO MID and ACAO
Phase 3: Pilot Implementation	Q1 2027	Pilot platform, build testing with 3–5 volunteer States; feedback and improvements	MENA ARCM Coordinator and SRPWG as well as Volunteer States
Phase 4: Regional Rollout	Q2-Q3 2027	Full operationalization across all MENA ARCM Member States	MENA ARCM Coordinator, SRPWG and States

10. Draft Action Plan

Action	Description	Responsibility	Deliverables	Target Date
1	Establish Safety Recommendations Working Group (SRPWG)	MENA ARCM Coordinator & Committee supported by ACAO /ICAO MID	TOR SRPWG	Dec 2025
2	Draft and adopt MENA ARCM SRP governance and data-sharing policy	MENA ARCM Coordinator & SRPWG supported by ACAO & ICAO MID.	MENA ARCM SRP level doc	Mar 2026
3	Develop detailed system requirements and architecture	MENA ARCM Coordinator & NTSC &SRPWG supported by ACAO & ICAO MID. To be presented to MENA ARCM/9 Meeting	System requirements document	Apr 2026

4	Design and prototype the platform	MENA ARCM Coordinator & NTSC & SRPWG supported by ACAO & ICAO MID	Dedicated SR Platform software / tool	2027
5	Conduct pilot project with volunteer States	MENA ARCM Coordinator & SRPWG	Voluntary States list & requirements	2027
6	Evaluate pilot results and refine platform	SRPWG	Report on pilot project implementation	2027
7	Launch regional rollout and capacity-building workshops	MENA ARCM Coordinator	Workshop	2027
8	Establish monitoring and reporting process on SRP performance	SRPWG	SRP Manual	2027 onward
9	Capacity building: conduct dedicated training for Data managers & State focal	SRPWG, MENA ARCM committee	Training	2027 onward

APPENDIX 5.1A

FOLLOW-UP ACTION PLAN ON MIDANPIRG/22 CONCLUSIONS & DECISIONS

No.	CONCLUSIONS AND DECISIONS	CONCERNS/ CHALLENGES (RATIONALE)	DELIVERABLE/ TO BE INITIATED BY		TARGET DATE	STATUS/REMARKS
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.	Endorsement and publication of MID Air Navigation Report-2024	ICAO MID State Letter	MIDANPIRG/22	2025	Completed
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.	Endorsement and publication of MID Air Navigation Plan Volume III	RANP/NANP TF/2	MIDANPIRG/22	2025	Completed
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 published under the ICAO MID Office website.	Endorsement and publication of MID Air Navigation strategy (ICAO MID Doc 002)	RANP/NANP TF/2	MIDANPIRG/22	2025	Completed
C. 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	Endorsement and publication of MID Air Navigation Report-2025	ICAO MID State Letter	MIDANPIRG/23	2026	Completed

No.	CONCLUSIONS AND DECISIONS	CONCERNS/ CHALLENGES (RATIONALE)	DELIVERABLE/ TO BE INITIATED BY		TARGET DATE	STATUS/REMARKS
	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.					
C. 22/5	ARTIFICIAL INTELLIGENCE IN ANS 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.	Explore the Artificial Intelligence (AI) implementation under ANS, and the need for adaptive governance model.	MID States	MIDANPIRG/22	May 2025	Ongoing
C. 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 MIDANPIRG/23 meeting for further deliberation, including the potential expansion of the proposed dashboard to monitor status of other ANS items.	The development of ATM dashboard to support MID States in monitoring the status of ATM related subjects, as start; and to present the outcomes to the MIDANPIRG/23 Meeting for further expansion	Regional ATM monitoring Dashboard	MIDANPIRG/23	June 2026	Actioned Replaced and superseded by Conclusion 23/5

5.1A-3

No.	CONCLUSIONS AND DECISIONS	CONCERNS/ CHALLENGES (RATIONALE)	DELIVERABLE/ TO BE INITIATED BY		TARGET DATE	STATUS/REMARKS
C. 22/7	MID RVSM SMR 2024 That, the MID RVSM Safety Monitoring Report (SMR) 2024 at Appendix 5E, be endorsed.	Endorsement of the MID RVSM SMR 2024	MID RVSM SMR 2024	MIDANPIRG /22	May 2025	Completed
C. 22/8	REPORTING OF LHDS That, in order to assess compliance with Safety Objective 2, the MIDRMA Member States be urged to: 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); 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; c) coordinate with MIDRMA, as required; d) MIDRMA conduct periodic meetings (vis web conference), at least once every 3 months, with the ATC Focal Points; and e) MIDRMA presents the ATM-technical matters to the ATM SG for appropriate actions.	Lack of LHD data provisions for development of SMRs	Training/ awareness	MIDRMA/ MID States	2025	Actioned/Closed
C. 22/9	MID RVSM SMR 2025 That, 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.	Development of the MID RVSM SMR 2025	State Letter Submission of traffic data	ICAO MID MID States	May 2025 1 July 2025	Completed RVSM-SMR 2025 endorsed through Conc. 23/13

No.	CONCLUSIONS AND DECISIONS	CONCERNS/ CHALLENGES (RATIONALE)	DELIVERABLE/ TO BE INITIATED BY		TARGET DATE	STATUS/REMARKS
	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 c) the final version of the MID RVSM SMR 2025 be ready for presentation and endorsement by the MIDANPIRG/23 Meeting.					
D. 22/10	PROJECT 30/10 ROADMAP That, the ATM SG develop roadmap for the implementation of Project 30/10 in the MID Region, including the inter-regional aspects.	develop roadmap for the implementation of Project 30/10 in the MID Region	ATM SG/11 and ASM WG/3 & 4	MIDANPIRG/23		Actioned / Ongoing
C. 22/11	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 provided; and - reduce longitudinal separation down to 30 NM, where no ATS surveillance service provided. ii. be invited to agree with their adjacent FIRs/States on the date of implementation and updating of the LoAs. b) the ATM SG monitors the progress of implementation and undertakes necessary measures to promote its advancement.	Implementation of reduced longitudinal separation	ATM SG/11 and ASM WG/3 & 4 and ICAO APAC & MID SCM in Oman	MIDANPIRG/23		Actioned / Ongoing

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No.	CONCLUSIONS AND DECISIONS	CONCERNS/ CHALLENGES (RATIONALE)	DELIVERABLE/ TO BE INITIATED BY		TARGET DATE	STATUS/REMARKS
D. 22/12	AIRSPACE MANAGEMENT WORKING GROUP (ASM WG) TERMS OF REFERENCE That, the Terms of Reference of the Airspace Management Working Group, at Appendix 5H , is endorsed.	Development of Terms of Reference of the Airspace Management Working Group	ASM WG/1	MIDANPIRG/22		Completed
C. 22/13	FREE ROUTE IMPLEMENTATION GUIDANCE MATERIAL That, the Guidance material for Free Route implementation at Appendix 5I , is endorsed..	To support further implementation of FRA in the MID Region	FRA implementation Guidance material	MIDANPIRG/22	May 2025	Completed
C. 22/14	NATIONAL ATM CONTINGENCY PLAN/ARRANGEMENT That, 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; 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 c) IATA to provide the available operational data and users' requirements to enable proper planning.	To support the development of National ATM Contingency Plan/arrangement, in coordination with Airspace users.	National ATM Contingency Plan	MID States	2026	Ongoing
C. 22/15	STRENGTHENING CAPACITY BUILDING FOR AOP- BBB IMPLEMENTATION IN THE MID REGION That, in order to support the effective implementation of the Basic Building Block (BBB) Framework for Airport Operations, States are urged to provide the ICAO MID Office,					Actioned/Closed SL REF: AN1/7 & AN5/0 -25/132 Dated 24 June 2025

No.	CONCLUSIONS AND DECISIONS	CONCERNS/ CHALLENGES (RATIONALE)	DELIVERABLE/ TO BE INITIATED BY		TARGET DATE	STATUS/REMARKS
	by the third quarter (Q3) of the current year, with information on their capacity building needs for AGA inspectors and airport operator technical personnel, using the standardized template provided in Appendix 5K.					
C. 22/16	MONITORING THE IMPLEMENTATION OF ADVANCED SURFACE MOVEMENT GUIDANCE AND CONTROL SYSTEMS (A-SMGCS) IN THE MID REGION That, in support of the progressive implementation of A-SMGCS services aligned with the ASBU Surface (SURF) thread, States are urged to provide the ICAO MID Office, by the third quarter (Q3) of the current year, with updated information on the status of A-SMGCS deployment plans at aerodromes listed in the RANP Applicability Area, using the reporting template provided in Appendix 5L. The information should be validated by the concerned airport operators and should consider the implementation dependencies outlined in Appendix 5M.					Actioned/Closed SL Ref: AN 5/28 & AN 5/0 – 25/133 dated 24 June 2025
C. 22/17	MONITORING A-CDM IMPLEMENTATION PROGRESS IN THE MID REGION That, with reference to the A-CDM Planning and Implementation Milestones presented in Appendix 5N, States are urged to submit, by the third quarter (Q3) of the current year, the status of their A-CDM Deployment Plans to the ICAO MID Office, as confirmed by aerodromes listed in the Regional Air Navigation Plan (RANP) applicability area, using the standard reporting template provided in Appendix 5O.					Actioned/Closed SL Ref: AN 5/23 – 25/134 dated 24 June 2025
C. 22/18	FACILITATION OF ICAO AOP GO-TEAM MISSIONS FOR A-CDM AND A-SMGCS That, in order to support the establishment and assess the operational performance of Airport Operational Threads including A-CDM and A-SMGCS systems, at selected aerodromes defined at the MID ANP applicability Area,					Actioned / Ongoing SL Ref: AN 5/28 & AN 5/24 – 25/136 dated 24 June 2025

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No.	CONCLUSIONS AND DECISIONS	CONCERNS/ CHALLENGES (RATIONALE)	DELIVERABLE/ TO BE INITIATED BY		TARGET DATE	STATUS/REMARKS
	concerned States be urged to confirm, by the third quarter (Q3) of the current year, their acceptance of ICAO AOP Go-Team missions. This confirmation should follow the formal notification from the ICAO MID Office regarding the aerodromes selected for support. States are further encouraged to facilitate the coordination and logistical arrangements required to enable these missions, in close collaboration with the designated aerodrome operators.					
D. 22/19	MID AMC STG AMENDED TERMS OF REFERENCE That, the amended MID AMC Steering Group Terms of Reference at Appendix 5P, incorporating SWIM infrastructure related activities is endorsed.					Completed (Replaced and superseded by Decision 23/24)
D 22/20	MID NAV-MON ACTION GROUP That, a) NAV-MON Action Group be established to develop a proposal for a Regional Navigational Minimum Operational Network supporting the ANS operations; b) the terms of reference of the NAV-MON Action Group be developed during the first meeting of the Action Group; and c) States support the NAV-MON Action Group through the assignment of CNS and ANS Subject matter experts and sharing states' experience and provision of required data for developing the MID NAV-MON Network.					Closed (Replaced and superseded by Decision 23/31)
D. 22/21	AIMDP TASK FORCE TORs That, the AIMDP Task Force Terms of Reference (ToR) at Appendix 5S endorsed.					Completed

No.	CONCLUSIONS AND DECISIONS	CONCERNS/ CHALLENGES (RATIONALE)	DELIVERABLE/ TO BE INITIATED BY		TARGET DATE	STATUS/REMARKS
C. 22/22	PUBLICATION OF THE PCR IN STATES AIPs That, States be urged to: a) ensure effective coordination between the Aeronautical Information Service Providers (AISP) and Airport Operators (AOs) regarding the publication of the ACR-PCR method; b) establish a well-coordinated National ACR-PCR Publication Plan, providing necessary support to all relevant stakeholders throughout the process; and c) Submit a detailed action plan for the Publication of the new ACR-PCR method to the ICAO MID Office; and regularly update the MID Office on the progress achieved. and AISPs be urged to: a) ensure that all relevant AIS personnel are formally updated about the content of the relevant provisions concerning the PCR values to be published in the AIP (AD 2.8, AD 3.8 and AD 2.12), and on the aerodrome charts, and update the applicable AISP operating procedures and the formal arrangements with AP, as necessary; b) ensure that any software tools used for data handling and aeronautical product publication purposes are able to accommodate the new pavement strength method; c) receive the PCR values by the aerodrome operators, and prepare the relevant information for publication; d) report any delay concerning PCR data to be originated by aerodrome operators to the CAA; and e) ensure that PCR information is published for all aerodromes with priority given to International Aerodromes.	The publication of the ACR/PCR methodology in a timely and uniform manner across the MID Region	Publication of the ACR/PCR in the State AIP <i>A detailed action plan for the Publication of the new ACR-PCR method to the ICAO MID Office</i>	ICAO MID States	2026	Actioned/Closed SL issued Ref: AN 8/2.1 – 25/118 dated 19 June 2025

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No.	CONCLUSIONS AND DECISIONS	CONCERNS/ CHALLENGES (RATIONALE)	DELIVERABLE/ TO BE INITIATED BY		TARGET DATE	STATUS/REMARKS
C. 22/23	PUBLICATION OF GNSS-RELATED INFORMATION IN STATES' AIPs That, a) States that have not yet done so are urged to promptly publish GNSS information in the relevant sections of their AIPs, including AD 2.19 (Radio Navigation and Landing Aids) and ENR 4.3 (Global Navigation Satellite System - GNSS), ensuring compliance with ICAO Standards and Recommended Practices (SARPs) and associated guidelines; and b) ICAO MID monitor the publication status of GNSS-related information in States' AIPs and regularly report progress to the relevant subsidiary bodies of MIDANPIRG	To promote and foster the harmonization and consistency in the publication of GNSS-related information within MID States' Aeronautical Information Publications (AIPs)	Publication of GNSS-related information within MID States' Aeronautical Information Publications (AIPs)	States	2025	Actioned/Closed State Letter Ref.: AN 8/2.1 – 25/107 dated 2 June 2025
C. 22/24	AIM-ING FOR EXCELLENCE WORKSHOP: ADVANCING AERONAUTICAL INFORMATION SERVICES That ICAO MID Office, in collaboration with IATA, Boeing/Jeppesen, and Member States, organize a workshop in 2025 to strengthen States' understanding and capabilities in Aeronautical Information Services, address existing deficiencies, enhance the effectiveness of AIM, and promote regional cooperation through best practices and knowledge sharing.	To organize a targeted workshop that aims to bolster awareness, share best practices, and equip States with actionable strategies to resolve longstanding deficiencies	AIM-ing for excellence workshop	ICAO MID	2025	Completed The Joint ICAO/IATA/Jeppesen AIM-ing for Excellence Workshop, successfully held in Cairo, Egypt, from 10 to 12 November 2025. Outcomes of the workshop are provided at WP36
C. 22/25	PBN SID/STAR CHARTS HARMONIZED AIP PUBLICATION That, ICAO MID Office:	To support	PBN SID/STAR	ICAO MID	2025	Actioned/Closed State Letter Ref.: AN 6/28 – 25/109 dated 2 June 2025

No.	CONCLUSIONS AND DECISIONS	CONCERNS/ CHALLENGES (RATIONALE)	DELIVERABLE/ TO BE INITIATED BY		TARGET DATE	STATUS/REMARKS
	a) promotes the PBN SID and STAR Charting factsheet at Appendix 5T along with the complementary explanatory guidance at Appendix 5U to enhance harmonization in the publication of these procedures across the MID Region, ensuring their widespread dissemination among member states; and b) monitors the implementation status of PBN SID/STAR charts and the harmonized AIP publication and provides progress reports to the relevant subsidiary bodies of MIDANPIRG.	standardization and promote harmonization and consistency in the publication of PBN SID and STAR Charts	charts Harmonised AIP Publication' factsheet			
C. 22/26	GUIDANCE MATERIAL ON RNP APPROACH (RNP APCH) That, ICAO MID promotes the guidance material on RNP Approach (RNP APCH) outlined in EUR Doc 025, at Appendix 5V, and ensuring its widespread dissemination among MID States.	To promote the guidance material on RNP Approach (RNP APCH) outlined in EUR Doc 025	Guidance material on RNP Approach (RNP APCH) outlined in EUR Doc 025	ICAO MID	2025	Actioned/Closed SL Ref: AN 8/4.1 – 25/110 dated 2 June 2025
C.22/27	IFP PROVISIONS AND SAFETY OVERSIGHT WORKSHOP That, a) IFP Provision and Safety Oversight Workshop be organized in 2025; and b) States and stakeholders are encouraged to actively participate in the workshop to exchange experiences, address challenges, and foster collaboration.	To strengthen and support Civil Aviation Authorities (CAAs) in establishing a robust oversight framework for IFP	Workshop on IFP provisions and oversight	ICAO MID	2025	Completed IFP Provision and Safety Oversight Workshop was successfully held in Amman, Jordan, from 7 to 9 December 2025. Outcomes of the workshop are provided at WP37

5.1A-11

No.	CONCLUSIONS AND DECISIONS	CONCERNS/ CHALLENGES (RATIONALE)	DELIVERABLE/ TO BE INITIATED BY		TARGET DATE	STATUS/REMARKS
C. 22/28	WAFS DATA That, the SADIS users be encouraged to prepare their systems for visualizing and creating charts from the new WAFS SIGWX data sets in IWXXM format by using the test data sets available at https://www.metoffice.gov.uk/services/transport/aviation/regulation/wafs-sigwx-test-data & for those with WIFS accounts https://aviationweather.gov/wifs/data/IWXXM_TEST/ .	To harmonize the implementation within the Region	MID States	ICAO MID	2025	Completed SL AN 10/3 – 25/167 July 2025 Disseminated
C. 22/29	IWXXM IMPLEMENTATION DEFICIENCIES That, States that have not implemented IWXXM for OPMET exchange as per ICAO and WMO provisions be included in the list of Air Navigation Deficiencies.	Implementation of IWXXM translation within the MID Region	MID Deficiency List	MID States	2025	On-going
C. 22/30	WORKSHOP ON ENHANCING MET CAPABILITIES That, the ICAO MID Office, in collaboration with WMO and Member States, organize a workshop alongside MET SG/13 in 2025 to support States in addressing MET deficiencies.	Organize a Workshop on enhancing awareness	Workshop	ICAO MID	2025	Completed State Letter ME 3/2.3 – 25/170 Disseminated and workshop conducted
D. 22/31	REVISED MET SG TORS That, the revised Terms of References (TORs) of the MET SG are endorsed as at Appendix 5W .	Publish revised TORs	Updated ToRs	ICAO MID	2025	Completed
C. 22/32	SURVEY ON STATES' COMPLIANCE WITH EXISTING AND FORTHCOMING GLOBAL AND REGIONAL MET REQUIREMENTS That, the ICAO MID Regional Office conduct a survey to assess States' compliance with both current and upcoming global and regional MET requirements.	Conduct a comprehensive Survey	MID States	ICAO MID	2025	Completed SL AN 10/3 – 25/166 Dated 8 July 2025 Disseminated

No.	CONCLUSIONS AND DECISIONS	CONCERNS/ CHALLENGES (RATIONALE)	DELIVERABLE/ TO BE INITIATED BY		TARGET DATE	STATUS/REMARKS
C. 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.	Develop Corrective Action Plan Provide required document for deletion of deficiency Issue the required SL Follow up in MIDANPIRG Subsidiary body	MID States MID States ICAO MID and States ICAO MID	MANDD ICAO MID MIDANPIRG/23 MIDANPIRG/23	2025-2026 2025-2026 2025 2025-2026	Actioned/Ongoing SL AN 2/2-26/050 dated 9 March 2026 issued
D.22/34	REVISED TERMS OF REFERENCE FOR MIDANPIRG SUBSIDIARY BODY 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.					Closed (Replaced and superseded by Decision 23/41)

MID AIR NAVIGATION PLAN

VOLUME III

(June 2026)

MID AIR NAVIGATION PLAN

VOLUME III

RECORD OF AMENDMENTS

Originator	Brief Description	Affected Pages	Date Approved by MIDANPIRG
MID Office	New MID ANP Volume III	All	June 2026

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APPENDICES

[TBD]

MID ANP, VOLUME III

PART 0 – INTRODUCTION

1. INTRODUCTION

1.1 The background to the publication of ANPs in three volumes is explained in the Introduction of Volume I. The procedure for amendment of Volume III is also described in Volume I.

1.2 Aviation is a powerful socio-economic enabler, yet it faces a range of challenges. Global air traffic—encompassing the movement of people and goods—is registering a continuous growth for the next 15 years. At the same time, emerging technologies, new business models, and evolving roles of humans in the system present both challenges and opportunities that require an urgent transformation of the global air navigation system, ensuring that aviation continues to contribute to global prosperity and connectivity.

1.3 The evolution of the air navigation system is a continuous process with no definitive end point. Continuous performance-based improvements are necessary to ensure that the system evolves in response to global, regional and local demands in a timely and orderly manner.

1.4 Modernizing and developing air navigation infrastructure is vital to enable new services and optimize existing ones. Accommodating growing demand and meeting the requirements of the new aviation era calls for strong political commitment and sustained investment.

1.5 The Global Air Navigation Plan (GANP) is the ICAO's highest air navigation strategic document and the plan to drive the evolution of the global air navigation system, in line with the Global Air Traffic Management Operational Concept (GATMOC, Doc 9854) and the Manual on Air Traffic Management System Requirements (Doc 9882). The GANP drives the evolution of the global air navigation system to meet the ever growing expectations of the aviation community. It is updated every six (6) years and endorsed by the ICAO General Assembly. The purpose of the GANP is to equitably accommodate all airspace users' operations in a safe, secure and cost-effective manner while reducing the aviation environmental impact. It aims for a seamless and high-quality provision of air navigation services worldwide through the establishment of regional and national performance objectives aligned with global performance ambitions. To achieve this, States and regions must assess their operational environments and select the most appropriate modernization options based on operational requirements and expected performance gains. This ensures the efficient use of resources while addressing the needs of the aviation community.

1.6 In addition to the core principles of safety, security, economic viability, and environmental sustainability, the air navigation system must meet a range of performance expectations from both society and the aviation community.

1.7 Achieving the required level of performance from the air navigation system will demand strong commitments and tough choices. The system must be shaped in light of anticipated opportunities and challenges, ensuring it can deliver on future performance ambitions.

1.8 Enhancing operational efficiency across all phases of flight—including surface movements—can significantly reduce delays, fuel consumption, CO₂ emissions, and overall environmental impact.

1.9 As new types of aircraft and operations emerge, air navigation services will need to be increasingly flexible and adaptable. They must accommodate diverse and complex air traffic operations while maintaining or enhancing flight safety and efficiency.

1.10 Collaborative decision-making is essential for cost-effective modernization. Engaging all stakeholders—including air navigation service providers, regulators, operators, and industry partners—ensures that modernization is driven by common goals and informed by operational and performance needs.

1.11 Derived from the global strategic level, the global technical level of the Global Air Navigation Plan (GANP) is designed to support technical managers in planning the implementation of basic services and new operational improvements in a scalable and cost-effective manner and according to specific operational and performance needs, while ensuring interoperability of systems and harmonization of procedures. The GANP establishes, under the “Global Technical layer” three (3) technical frameworks to guide States in modernizing their air navigation systems:

- the Basic Building Blocks (BBBs), which define the essential air navigation services required by all States;
- the Aviation System Block Upgrades (ASBUs) framework, which offers modular, scalable improvements based on operational needs; and
- the Performance Framework (PF), which encompasses the key performance areas (KPAs), and key performance indicators (KPIs).

1.12 The ASBU and Performance Frameworks offer modular, scalable improvements based on operational needs; and defines key performance areas (KPAs), indicators (KPIs), and planning targets.

1.13 The ANP Volume III leverages these frameworks to support the planning, implementation, and performance monitoring of air navigation systems at the regional and national levels, ensuring alignment with the GANP’s global ambitions.

1.14 Volume III should contain dynamic/flexible plan elements providing implementation planning guidance for air navigation systems and their modernization taking into consideration emerging programmes such as the ASBUs and associated technology roadmaps described in the GANP. The ANP Volume III would also include appropriate additional guidance, particularly with regard to implementation, to complement the material contained in the ANP Volumes I and II.

1.15 The information contained in Volume III is, therefore, related to:

- Planning: objectives, priorities, targets and needs planned at regional or sub-regional levels;
- Monitoring and reporting: performance and implementation monitoring of the agreed targets. This information should be used as the basis for reporting purposes (i.e.: global and regional air navigation reports and performance dashboards); and/or
- Guidance: providing regional guidance material for the implementation of specific system/procedures in a harmonized manner.

1.16 The ANP Volume III provides a strategic framework for the planning and implementation of air navigation systems and services within ICAO regions. It supports the application of a performance-based approach to enable cost-effective, benefit-driven modernization of the air navigation system, in line with the Global Air Navigation Plan (GANP). As part of this approach, Planning and Implementation Regional Groups (PIRGs) define regional priorities and performance objectives that are aligned with the key performance areas (KPAs) and key performance indicators (KPIs) of the GANP. These objectives are also linked to operational improvements under the Aviation System Block Upgrades (ASBU) framework, and are intended to be implemented by States based on identified needs at the local and national levels.

1.17 Volume III plays a critical role in bridging the GANP with national air navigation plans and initiatives, thereby facilitating the alignment of global, regional, and national efforts. In doing so, it supports the coordinated and performance-driven evolution of air navigation systems. It also reinforces the structured, modular approach of the ASBU framework, which enables harmonized, scalable enhancements to the global air navigation infrastructure.

1.18 MIDANPIRG is responsible for managing and updating Volume III on a regular basis.

MID ANP, VOLUME III
PART I - GENERAL PLANNING ASPECTS (GEN)

1. PLANNING METHODOLOGY

1.1 States should ensure the availability of reliable and up-to-date statistics and forecasts on departures, arrivals, and overflights. These data are essential for supporting national air navigation planning, performance analysis, and prioritization of operational improvements. Where possible, forecasts should be aligned with ICAO forecasting methodologies and coordinated with national civil aviation strategies.

Principles of the Performance-Based Approach (PBA)

1.2 Planning for the modernization of the air navigation system must begin with a thorough understanding of user system requirements; it should consider traffic density and complexity, and the level of sophistication required for the provision of necessary services, among other elements.

1.3 In accordance with the outcomes of the thirteenth and fourteenth Air Navigation Conferences as well as the Assembly Resolutions related to the implementation of the GANP, PIRGs and States are invited to, respectively, embrace and implement a performance-based approach (PBA) for the planning and implementation of air navigation improvements. Although there are several ways to apply a PBA, a globally harmonized process for performance management is recommended. The goal of this process is to identify optimum solutions based on operational requirements and performance needs so that the expectations of the aviation community are met by enhancing the performance of the air navigation system and optimizing the allocation and use of all available resources.

1.4 A PBA focuses on defining desired outcomes and required performance levels (what to achieve), while a performance management process involves ongoing monitoring, measurement, and improvement of actual performance (managing how it's being achieved). States are encouraged to implement a PBA by establishing a performance management process tailored to their specific needs.

1.5 The PBA is a decision-making method based on three principles: a strong focus on desired or required results; reliance on facts and data; and collaborative, justified decision-making. The successful implementation of this process requires:

- a) commitment from all members of the aviation community;
- b) agreement on goals and consensus on the desired performance outcomes to be achieved;
- c) accountability and organization among members of the aviation community in terms of roles and responsibilities;
- d) human resources and knowledge/expertise;
- e) data collection, processing, storage and reporting;
- f) collaboration and coordination; and
- g) appropriate investment.

Performance management process for planning and decision-making

1.6 States are encouraged to apply a performance management process, such as the six-step model described in the ICAO Manual on Global Performance of the Air Navigation System (Doc 9883), or the simplified Plan-Do-Check-Act (PDCA) cycle, as appropriate for their operational and institutional context; and reflect this in their National Air Navigation Plans (NANP).

1.7 The strong focus on desired/required results through adoption of performance objectives and targets requires the following:

- determining the current performance situation;
- defining the most appropriate or desired results; and
- clarifying who is accountable for achieving these results.

1.8 Informed decision making requires decision makers to develop a good understanding of the mechanisms which explain how drivers, constraints, shortcomings, options and opportunities influence the achievement of the required results.

1.9 In the PBA the required results as well as drivers, constraints, shortcomings, options and opportunities are expressed in both quantitative and qualitative terms. This requires fostering a performance measurement culture and necessitates important investments in data collection and management. States should take stock of existing capabilities and identify any gaps.

1.10 To improve performance, organizational commitment to the PBA and collaboration among different stakeholders is important. Organizational commitment implies on-going support from the leadership team to:

- establish a clear vision and strategy;
- secure appropriate resources for the project, including internal support for data and information collection, processing, storage and reporting; and securing the necessary budget; and
- establish a clear communication strategy.

1.11 Collaboration with external stakeholders and involving them early is essential. For each step of the performance management process, the relevant external stakeholders should be identified and the necessary steps to establish collaboration should be taken.

1.12 The planning step of the performance management process is of key importance to the application of a PBA. In this step, States are requested to define the scope and context of the required performance improvements to the national air navigation system as well as the nature of the expected performance improvements. Scope definition is important to avoid misunderstandings, in particular about the performance (improvement) which can be expected within the given scope. By defining the scope of the performance management activity, the limits of responsibility and accountability are also defined. Geographically, the scope could be an Aerodrome, FIR, TMA, CTA, etc., but the scope definition could include additional details such as type of traffic (international, overflight, IFR, VFR), etc.

1.13 It is important to know the air navigation system, its strengths, weaknesses, opportunities and threats as well as how it is performing in order to set objectives. The SWOT analysis plays a key role in identifying and addressing factors that can prevent the implementation of operational improvements. These factors can be either endogenic (within the control of the Organization) or exogenic (out of the control of the Organization). The SWOT analysis should be conducted at national level and if necessary, at local level, such as airport, TMA, etc., with a clearly identified scope and KPA (the eleven Key Performance Areas (KPAs) as identified in the Global Air Traffic Management Operational Concept (Doc 9854) that are part of the GANP global performance framework facilitates the definition of objectives). The potential solutions required to achieve the performance objectives should also be identified.

1.14 The principle of “reliance on facts and data for decision-making” implies that objectives should be specific, measurable, achievable, relevant and time-bound (SMART). The current/past performance (Performance Baseline), expected future performance, as well as actual progress in achieving performance objectives should be expressed by means of Key Performance Indicators (KPIs). In the GANP performance framework, a list of KPIs is linked to relevant objectives and is used to set targets through objective quantification. Performance measurement is therefore done through the collection of data for the supporting metrics. Data collection should be as detailed as possible, as the availability of granular data greatly enhances the effectiveness of the PBA.

1.15 Once a set of potential solutions has been identified, a Multi-Criteria Decision Analysis (MCDA), including a cost-benefits analysis, environmental impact assessment, safety assessment, security/risk assessment and human factor assessment should be performed to identify the optimum solution. This is the part of the process where decision-makers should evaluate available options to mitigate identified gaps and leverage potential opportunities. The list should then be analyzed in a performance-oriented manner to assess/quantify the impact of drivers, constraints, impediments, etc., on the objectives under consideration. Solutions should, in the first instance, be identified from within the ASBU framework, as it provides the globally harmonized and preferred set of aviation system improvements. Where no suitable ASBU solution is available to address the identified need, a non-ASBU solution may then be considered. Depending on the

nature of the project, the output of this process may be either a single preferred solution or a roadmap comprising selected solutions. In all case, decision-makers need to gain a good understanding of the strategic fit, the benefits, cost and feasibility of each option for operational improvement.

1.16 States should consider the operational improvements (ASBU elements) within the ASBU framework as potential solutions to improve performance relative to selected objectives and KPIs within the operational environment under analysis. In order to help States with this task, ICAO has developed the Air Navigation System Performance Analysis (AN-SPA) tool, available for free at: [Log in - ICAO GANP Portal](#). The GANP Portal contains also a “Performance Dashboard” Tab under “Performance Framework”, which is showing for the Capacity, Efficiency and Safety KPAs, what are the KPIs that could be used for the measurement of performance associated to these KPAs and for each KPA/KPI what are the ASBU Elements that could be implemented to improve performance.

1.17 Once the optimum solution(s) has/have been identified, it is time to begin the execution phase of the performance management process. The changes and improvements that have been identified as the optimum solution for the problem during the previous steps are organized into plans, implemented and begin delivering services to achieve the expected performance. During this execution phase, it is important to keep track of the project deployments (time, budget, etc.).

1.18 Once the project (solution(s)) is implemented, it is time to assess the benefits from the implementation. This means measuring the performance of the operational environment under analysis once the solution(s) have been deployed. This begins with data collection to populate the supporting metrics required to calculate the relevant performance indicators. The indicators are then compared with the targets defined during the planning phase to draw conclusions on the speed of progress in achieving the objectives. This step also includes monitoring progress of the implementation projects, particularly in those cases where the implementation of solutions takes several years, as well as checking periodically whether all assumptions are still valid and the planned performance of the solutions is still meeting the (perhaps changed) requirements.

1.19 As part of the process to assess the achievements, States should calculate/estimate the benefits accrued from the implementation of the selected solutions/projects.

2. AIR NAVIGATION PLANNING, REPORTING AND MONITORING

2.1 States should annually report progress and effectiveness against the priorities set out in their National and Regional Air Navigation Plans using a standardized reporting format provided by ICAO (ref. Section 3 “STATES RESPONSIBILITIES AND NATIONAL PLANNING”).

2.2 Effective performance monitoring requires a clearly defined measurement strategy. Activities such as data collection, processing, storage, and reporting in support of identified performance metrics at the regional, national, and local levels are fundamental to the success of performance-based approaches.

2.3 The performance framework for air navigation planning and implementation requires that reporting, monitoring, analysis, and review activities be conducted on an annual, cyclical basis.

2.4 To ensure effective implementation of the performance-based approach, States are encouraged to follow a structured, step-by-step methodology when establishing a robust performance management process. This is particularly important when applying quantitative Key Performance Indicators (KPIs) to measure and track performance over time. States should begin by identifying available data sources to establish a baseline for each selected KPI (i.e., the current measured value), followed by regular updates to monitor progress. KPI targets could be defined in a phased manner—such as Target 1 by Timeline 1, Target 2 by Timeline 2—to reflect incremental improvements and account for evolving operational and institutional capabilities. In situations where the necessary data, tools, or systems are not yet in place to support quantitative performance measurement, States should undertake a qualitative assessment of KPIs. These qualitative measurements can still support performance planning and reporting, and provide a foundation for future quantitative assessments

as national capabilities mature. Both qualitative and quantitative results should be documented and reported using the recommended templates, ensuring transparency and consistency across reporting cycles.

2.5 The results of reporting and monitoring will be analyzed by the MIDANPIRG, States, and the ICAO Secretariat to guide air navigation improvements, implement corrective actions, and, where necessary, review agreed objectives, priorities, and targets. ICAO will also use these results to prepare the annual Global Air Navigation Report.

2.6 The report will enable the international civil aviation community to compare progress across ICAO regions in establishing air navigation infrastructure and implementing performance-based procedures.

2.7 The report will also provide the ICAO Council with detailed annual insights on global service quality and highlight performance areas requiring further attention. These findings will support future adjustments to the GANP.

MID ANP, VOLUME III

PART II – ANS PERFORMANCE FRAMEWORK

1. PERFORMANCE AMBITIONS AND GLOBAL PRIORITIES

1.1 The ICAO vision focuses on safe and sustainable air transport, which stands for environmental protection as well as all the other essential factors, such as affordability and security, that ensure the viability of air transport in the long term. Three Aspirations, drawn from the ICAO LTAG, GASP and GANP, crystallize this vision:

- The long term global aspirational goal of Net-zero carbon emissions by 2050 for international civil aviation operations;
- Achieve Zero fatalities in international aviation from accidents and acts of unlawful interference; and
- Serve as an integral part of a thriving, connected, accessible, inclusive and affordable transport system for people and goods, contributing to socio-economic development, while ensuring no Country is Left Behind.

1.2 The ICAO vision and mission are supported by six (6) strategic goals:

- Environmental Protection: Foster environmental sustainable practices in civil aviation activities and facilitate the cleaner energy transition.
- Aviation safety, capacity and efficiency: Enhance global civil aviation safety while increasing capacity for growing numbers and types of operations and improving efficiency of the global civil aviation system.
- Aviation security: Enhance global civil aviation security, including border and cyber security.
- Air Transport Facilitation and Economic Development: Foster the development of a globally sustainable, sound and economically viable civil aviation system, including for the transport of passengers and goods.
- Rule of law for international civil aviation: Strengthen the common legal and regulatory framework governing international civil aviation.
- No Country Left Behind: Foster the development of international civil aviation in all States through the concerted efforts of the global aviation sector stakeholders and partners to facilitate the enhanced, comprehensive and efficient implementation of the provisions governing air transport.

1.3 In support of the global ICAO aspirations and strategic goals, States and global air navigation community should endeavor to:

- 1) further increase safety levels as traffic becomes more complex to manage;
- 2) enhance the efficiency of air navigation services and ATM operations by optimizing flight trajectories, reducing delays and avoiding any negative impact on environment/minimizing fuel burn;
- 3) scale air navigation capacity to safely and efficiently accommodate growing air traffic;
- 4) enhance the capacity and efficiency of airport infrastructure and operations to safely accommodate future growth in air traffic;
- 5) ensure that data flows effectively and securely across trusted users; and
- 6) address evolving security and defense needs, providing flexibility within a civil-military ATM environment.

To achieve optimal performance, improvements should also be made in the following areas:

- 7) predictability: ensure that flights follow expected patterns and schedules;
- 8) punctuality: relates to on-time departures and arrivals; and
- 9) cost-efficiency: refers to optimum resource allocation, productivity, and effective use of technologies and rationalization (e.g. infrastructure).

2. REGIONAL PRIORITIES AND PERFORMANCE OBJECTIVES

Regional Priorities:

2.1 Based on regional performance and operational needs, differences, constraints and opportunities, MIDANPIRG is responsible for defining Regional Priorities, aligned with the GANP and supporting the global performance ambitions and priorities to guide States and the MIDANPIRG subsidiary bodies in their planning process.

2.2 The MID Region priorities are (the following is a draft that will be further amended in the future):

- 1) Performance-Based Navigation (PBN) implementation
- 2) Continuous Descent Operations (CDO) and Continuous Climb Operations (CCO)
- 3) Improve safety of aerodrome operations
- 4) Enhance efficiency and punctuality of aerodrome operations
- 5) Scale Aerodrome/RWY capacity to safely and efficiently accommodate growing air traffic
- 6) Prevent loss of separation and mid-air collisions
- 7) Enhance Airspace Management
- 8) Enhance civil-military cooperation and flexible use of airspace
- 9) Integrated traffic flow and demand management
- 10) Enhance the interoperability and efficiency of ATM systems by enabling the seamless, automated, and secure exchange of flight data between ATS units (FICE)
- 11) Advance Collaborative Decision-Making (CDM)
- 12) Modernize CNS infrastructure and ensure resilience
- 13) Enable seamless and interoperable global operations
- 14) Enable digital meteorological information exchange
- 15) Foster the transition from AIS to AIM
- 16) Support System-Wide Information Management (SWIM) implementation
- 17) Support Advance Air Mobility (AAM) Integration, including low-level ATM/UTM operations

Regional Performance Objectives:

2.3 To support the achievement of the Regional Priorities, MIDANPIRG is responsible for defining Regional Performance Objectives, linked to the GANP KPA and Focus area, to the operating environment: (Airports, TMAs and En-route); to the ASBU elements (possible solutions) and GANP KPIs.

2.4 The MID Region Performance Objectives are listed in the **Table ANS PF1**. The Table format is available as a downloadable Excel template on the [MIDANPIRG webpage](#).

Note: The following is just a Sample. The **Table ANS PF1** could be maintained as a Regional Database, in that case a hyperlink should be included here. Furthermore, the Regional Priorities (RPs) and Regional Performance Objectives (RPOs) are not necessarily applicable for all States of the Region (but for the majority), and they are not exhaustive, i.e. some States may identify additional priorities and performance objectives; yet, they need to be considered by States in their identification process of local/national priorities and performance objectives.

Table MID Region ANS PF1: Regional Performance Objectives

Column

- (1) Operating Environment
- (2) KPA/ Focus Area (as defined in the GANP)
- (3) Link to Global Ambitions/Priorities (in para. 1.3)
- (4) Nr. of the Regional Performance Objective (preferably linked to one of the Regional Priorities in para. 2.2)
- (5) Text of the Regional Performance Objective
- (6) Possible Solutions (ASBU elements)
- (7) Performance Benefits
- (8) KPI(s) based on the ICAO list of KPIs
- (9) Qualitative assessment of the impact on the KPI(s)

(10) Remarks (additional comment, including Timeline for implementation, as appropriate)

Table ANS PF1: Regional Performance Objectives									
Operating environment	KPA/ Focus Area	Link to Global Ambitions	Regional Performance Objective		Possible Solutions/ (ASBU)	Performance Benefits	KPI	KPI Impact	Remarks
			Nr.	RPO Text					
1	2	3	4	5	6	7	8	9	10
TMA	Efficiency/ Vertical flight efficiency	2	2.1	Reduce fuel burn by not requiring power during descent	APTA B0/4 (CDO Basic) APTA B1/4 (CDO advanced)	1-Reduction of fuel burn; 2-Reduction in noise footprint; 3-Reduce descent inefficiency attributable to altitude constraints imposed by ATM	KPI 19: Level-off during descent	KPI 19 ++	
TMA	Efficiency/ Vertical flight efficiency	2	2.2	Reduce fuel burn by not requiring level-offs during climb	APTA B0/5 (CCO Basic) APTA B1/5 (CCO advanced)	1-Reduction of fuel burn; 2-Reduce permanent (airspace and departure procedure design) and semi-permanent (TCM measures) altitude constraints (level-off) along climb profile of traffic flows, terminal and en-route airspace	KPI 17: Level-off during climb	KPI 17 ++	
En-route	Safety/ Safety Net (mid-air collision)	1	6.1	Improve mid-air collision avoidance (safety)	CAS B1/1	Improve situational awareness of flight crew	KPI 20: Number of aircraft accident KPI 23: Number of airprox/TCAS alerts/loss of separation/ near midair collisions/ midair collisions (MAC)	KPI 20 ++; KPI 23 ++	Mandatory
En-route	Efficiency/ Flight time & distance	2	7.1	Overcome route selection inefficiencies associated with route network design (use of direct routing)	FRTO B0/1 FRTO B0/2	Reduce fuel burn by reducing flight time & distance through direct routing	KPI04: Filed flight plan en-route extension	KPI 04 ++	
En-route	Safety	1	6.2	Avoid vertical & lateral navigation errors during flight (cases of non-conformance with clearance)	FRTO B0/4	Reduce number of mid-air and near mid-air collisions	KPI 20: Number of aircraft accident KPI 23: Number of airprox/TCAS alerts/loss of separation/near	KPI 20 ++; KPI 23 ++	

2.5 MIDANPIRG may agree also on timelines for the implementation of specific Performance Objectives. This could be reflected in the Remarks Column of the **MID Region Table ANS PF1**.

3. STATES RESPONSIBILITIES AND NATIONAL PLANNING

National Planning

3.1 While ICAO provides the strategic framework for air navigation planning at the global and regional levels, the responsibility for planning and implementation at the national level lies with individual States. Each State should develop a National Air Navigation Plan (NANP) tailored to its specific needs, in coordination with regional and global stakeholders. This ensures the integration and harmonization of solutions across all levels of the air navigation system.

3.2 States should establish and maintain NANPs that align with the Global Air Navigation Plan (GANP) and the applicable Regional Air Navigation Plans. These plans form the foundation for implementing global and regional objectives in a manner that reflects local priorities, operational requirements, and performance ambitions.

3.3 As a fundamental obligation under the Convention on International Civil Aviation (Doc 7300), States shall ensure the provision of essential air navigation services, as outlined in the Basic Building Blocks (BBBs) framework. However, these obligations are not limited to the BBBs. They also encompass all Standards and Recommended Practices (SARPs) established under the Convention, as well as the requirements set forth in Air Navigation Plan (ANP) Volumes I and II. Together, these frameworks constitute the foundation of a robust air navigation system, enabling the safe and orderly conduct of international civil aviation and providing the baseline for future advancements.

3.4 Beyond meeting these essential requirements, States should pursue the progressive modernization of their air navigation systems, guided by local operational needs and aligned with regional priorities. This modernization should be detailed in the National Air Navigation Plan (NANP) and coordinated with other

national aviation plans—such as those related to safety, environment, security, and facilitation—within a broader, integrated National Civil Aviation Master Plan (CAMP). Such a master plan provides a strategic vision for the future development of the entire civil aviation sector—addressing policy, legislation, infrastructure, technology, human resources, and institutional development. The National CAMP should also recognize the importance of air transport as a driver of national economic development. It should be also linked to the State’s overarching national development plan, enabling access to public and private investment and fostering public-private partnerships to support implementation.

3.5 A well-defined relationship between the NANP, the GANP, the RANP, the national CAMP, and broader national development strategies enables effective prioritization and optimal resource allocation across sectors. This integrated approach strengthens coherence, avoids duplication, and ensures that aviation development is aligned with national economic and infrastructure goals.

3.6 The NANP serves as a strategic roadmap for the evolution of a State’s air navigation system. It outlines specific performance objectives, timelines, and investment priorities. It enables national stakeholders—including regulators, air navigation service providers (ANSPs), and airport operators—to prioritize initiatives with the highest operational, economic, and environmental returns. Moreover, the NANP supports strategic decision-making by identifying key areas for improvement, setting measurable targets, and ensuring resources are allocated where they will have the greatest impact. It plays a critical role in justifying investments, attracting funding, and engaging with international partners, while promoting coordination among national institutions to support high-impact, non-duplicative projects. In this sense, the NANP is not only a technical planning document but a strategic enabler—a tool to influence decision-making, align stakeholders, and enhance a State’s international credibility. For long-term success and global interoperability, the NANP must remain aligned with ICAO’s GANP and relevant RANP, ensuring that the national air navigation system remains scalable, resilient, and fully integrated into the global aviation ecosystem.

3.7 For the national air navigation planning, States should implement a PBA and performance management process as described in Part I of this Volume (General Planning Aspects), to identify their national priorities and performance objectives, based on local performance and operational needs and taking into consideration global and regional requirements.

Requirements for Performance Monitoring and Reporting

3.8 States are required to monitor the performance of their air navigation systems on a continuous basis and to submit an annual report on the progress achieved to the ICAO MID Regional Office and the MIDANPIRG. This requirement supports the implementation of a performance-based approach (PBA) and ensures that national efforts are aligned with regional and global air navigation priorities, objectives, and targets.

3.9 The report should include the results of the application of performance management process and identification of relevant and timely operational improvements including the identified Aviation System Block Upgrade (ASBU) elements that have been implemented/planned for implementation.

Reporting on ASBU implementation status

3.10 States should report, at least on annual basis, the status of implementation of the different ASBU elements (block 0, 1 and 2); this will be reflected on the Regional/Global ICAO ASBU Implementation Dashboard [\[insert link \(TBD\)\]](#) and in the Annual MID Region Air Navigation Report, as appropriate. The reports by States are reviewed and validated by the MID Regional Office and displayed on the Dashboard. For each ASBU element the status of implementation will be shown as follows:

- **N/A:** Not Applicable;
- **N/P:** Not identified as a Priority;
- **F/I:** Fully Implemented;
- **N/I:** Not Implemented;
- **P/O:** Planned/Ongoing: (Identified as a priority and implementation is planned or ongoing);
- **Start date:** date implementation started or will start (as appropriate) in MM/YY format;
- **End date:** date implementation will be completed in MM/YY format; and
- **M/D:** Missing Data (No data provided).

3.11 The Dashboard includes two (2) levels of granularity:

- the ASBU elements related to State/ANSP; and
- the ASBU elements related to Airport/TMA.

3.12 The Dashboard provides different kind of filtering, by State, Aerodrome, Group of States/Sub-Region, Region, ASBU Element, Thread, Block, etc.

3.13 MIDANPIRG subsidiary bodies may need to go into more detailed technical level related to the implementation of some ASBU elements (enablers, interdependencies, etc.) and collect associated data in specific format/Tables (to be added, if necessary, as **Appendices** to the ANP, Volume III) to ensure harmonized implementation.

Reporting on the implementation of performance objectives

3.14 States should report, on annual basis, on the implementation of their performance objectives to ensure transparency, accountability, and alignment with regional and global air navigation goals. Reporting on performance objectives enables the identification of progress made, challenges encountered, and areas requiring further support or adjustment. It also facilitates evidence-based decision-making by ICAO Regional Offices and PIRGs, allowing them to assess the effectiveness of implementation efforts, monitor regional performance trends, and refine priorities as necessary. Furthermore, consistent reporting contributes to the global performance monitoring framework and supports the development of ICAO's Global Air Navigation Report, providing the international community with a comprehensive view of progress toward the global vision for a harmonized and performance-based air navigation system.

3.15 States should report on the implementation of Performance Objectives using the Template at **Table MID Region ANS PF2**:

Table MID Region ANS PF2: Reporting on Performance Objectives and Operational Improvements implemented by States

Column

- (1) Operating Environment/Operations: Aerodrome, TMA, En-route (provide more specific details e.g. Aerodrome name or ACC Sector, etc.; and the concerned type(s) of operation)
- (2) KPA (from the ICAO defined 11 Key Performance Areas (KPAs)) and Focus Area from the GANP Portal
- (3) Performance Objectives (Ambitions/Expectations)
- (4) KPIs based on the ICAO list of KPIs and associated variant
- (5) The KPI Baseline (measurement of the current performance, if available)
- (6) The KPI Target (measurement of the target performance, if available (at least qualitative measurement))
- (7) Selected ASBU element(s) /Enabler(s) and/or Non ASBU solution(s) for each operational improvement
- (8) Target Implementation date
- (9) Remarks/Progress (this column could contain additional information about the data source(s), progress achieved, etc.)

Note: The following is just a Sample

Operating Environment/ Operations	KPA & Focus Area	Performance Objective	KPI/ Variant	KPI Baseline	KPI Target	Operational Improvements (ASBU Elements/Enablers & Non ASBU)	Target Date	Remarks/ Progress
1	2	3	4	5	6	7	8	9
Aerodrome XXXX (Departure)	Predictability (Punctuality)	Maximize departure punctuality	KPI 01 (Departure punctuality) Variant X	TBD for the concerned Aerodrome	TBD for the concerned Aerodrome	TBD by each State/Airport Operator	TBD for the concerned Aerodrome	
Aerodrome XXXX (Taxi-out)	Efficiency (Flight time/ distance)	Minimize Taxi-out time	KPI 02 (Taxi-out additional time) Variant X	TBD for the concerned Aerodrome	TBD for the concerned Aerodrome	TBD by each State/Airport Operator	TBD for the concerned Aerodrome	
Aerodrome XXXX (Arrival, Departure)	Capacity (Capacity, throughput & utilization)	Increase airport peak arrival capacity	KPI 09 (Airport peak capacity) Variant X	TBD for the concerned Aerodrome	TBD for the concerned Aerodrome	TBD by each State/Airport Operator	TBD for the concerned Aerodrome	
Aerodrome XXXX (Taxi-in)	Efficiency (Flight time/ distance)	Minimize Taxi-in time	KPI 13 (Taxi-in additional time) Variant X	TBD for the concerned Aerodrome	TBD for the concerned Aerodrome	TBD by each State/Airport Operator	TBD for the concerned Aerodrome	
Aerodrome XXXX (Arrival)	Predictability (Punctuality)	Maximize Arrival punctuality	KPI 14 (Arrival punctuality) Variant X	TBD for the concerned Aerodrome	TBD for the concerned Aerodrome	TBD by each State/Airport Operator	TBD for the concerned Aerodrome	
Aerodrome XXXX	Safety	Minimize Number of RWY Incursions Incidents & Accidents	KPI 21 (Nr. of RWY Incursions) Variant X	TBD for the concerned Aerodrome	TBD for the concerned Aerodrome	TBD by each State/Airport Operator	TBD for the concerned Aerodrome	
Aerodrome XXXX	Safety	Minimize Number of RWY Excursions Incidents & Accidents	KPI 22 (Nr. of RWY Excursions) Variant X	TBD for the concerned Aerodrome	TBD for the concerned Aerodrome	TBD by each State/Airport Operator	TBD for the concerned Aerodrome	
TMA/Aerodrome (XXXX) (Arrival)	Efficiency (Vertical efficiency)	Reduce fuel burn by not requiring application or power during descent	KPI 19 (Level-off during descent) Variant X	TBD for the concerned TMA/Aerodrome	TBD for the concerned TMA/Aerodrome	TBD for the concerned TMA/Aerodrome	TBD for the concerned TMA/Aerodrome	
TMA/Aerodrome (XXXX) (Departure)	Efficiency (Vertical efficiency)	Reduce fuel burn by not requiring level-offs during climb	KPI 17 (Level-off during climb) Variant X	TBD for the concerned TMA/Aerodrome	TBD for the concerned TMA/Aerodrome	TBD for the concerned TMA/Aerodrome	TBD for the concerned TMA/Aerodrome	

Operating Environment/ Operations	KPA & Focus Area	Performance Objective	KPI/ Variant	KPI Baseline	KPI Target	Operational Improvements (ASBU Elements/Enablers & Non ASBU)	Target Date	Remarks/ Progress
1	2	3	4	5	6	7	8	9
En-route (ACC Sectors)	Capacity (Capacity, throughput & utilization)	Enhance capacity of ACC Sectors	KPI 06 (En-route Airspace capacity) Variant X	TBD for each ACC Sector	TBD for each ACC Sector	TBD for each ACC	TBD for each ACC	
State (AD, TMA, En-route) (Taxi-in, Taxi-out, Departure, Arrival, En-route)	Safety	Minimize Number of Aircraft Accidents	KPI 20 (Number of Aircraft Accidents) Variant X	TBD for each State	TBD for each State	TBD for each State	TBD for each State	
State/FIR (En-route)	Safety	Minimize Number of Airprox/TCAS Alert/Loss of separation/Near mid Air Collisions/ Mid Air Collisions	KPI 23 (Number of Airprox/TCAS Alert/Loss of separation/Near mid Air Collisions/ Mid Air Collisions) Variants X, Y, Z	TBD for each State/FIR	TBD for each State/FIR	TBD for each State/FIR	TBD for each State/FIR	
State/FIR (En-route)	Efficiency (Flight time/ distance)	Overcome route selection inefficiencies associated with route network design	KPI 04 (Filed flight plan en-route extension) Variant X	TBD for each State/FIR	TBD for each State/FIR	TBD for each State/FIR	TBD for each State/FIR	
State/FIR (En-route)	Efficiency (Flight time/ distance)	Ensure that the right airspace is available at the right time for the mission	KPI 04 (Filed flight plan en-route extension) Variant X KPI 05 (Actual en-route extension) Variant X	TBD for each State/FIR	TBD for each State/FIR	TBD for each State/FIR	TBD for each State/FIR	

Measurement of and Reporting on Air Navigation System Performance Using ICAO KPIs

3.16 The performance-based approach to air navigation planning relies on the systematic measurement and monitoring of operational improvements using Key Performance Indicators (KPIs), in particular those defined by ICAO. These KPIs support the evaluation of progress towards the Global Air Navigation Plan (GANP) objectives and assist stakeholders in identifying areas requiring attention or enhancement.

3.17 ICAO has developed a comprehensive framework of performance indicators categorized under the eleven ICAO Key Performance Areas (KPAs), such as safety, capacity, efficiency, and environmental sustainability. While this provides a global structure for performance measurement, States are encouraged to prioritize and limit the number of KPIs selected to those that are most relevant to their local and national operational contexts, considering the regional context. Resources must be prioritised and it is not necessary to track all KPIs to be effective.

3.18 The purpose of this focused approach is to:

- ensure efficient use of resources and reduce the reporting burden;
- enhance decision-making by focusing on indicators that support actionable insights;
- align performance monitoring with the strategic goals of the State or region; and
- enable more timely and effective management responses to performance gaps.

3.19 It is rare that improvements in operations' efficiency affect one KPI independently from the others. For example, an improvement in capacity may allow for more flexibility in the system while making the system more predictable and operate at a reduced cost. Furthermore, some of the affected indicators such as flexibility and predictability are difficult to quantify and monetise. There are also cases when efforts to maximise utilisation of existing capacity, may come at the expense of flight efficiency and predictability. Given limited resources, States should focus on the causal indicators that are feasible to quantify as priority indicators for implementation in a performance-based system.

3.20 In assessing the value of investing in the data, tools and personnel to track a particular KPI, States/stakeholders should consider the following criteria:

- What is the specific purpose and audience of the KPI?
- Does the KPI lead to informed decision making?
- Does the KPI add value distinct from other KPIs? Can it be shown that management and stakeholders will find inefficiencies from this KPI that would not have been found from existing KPIs?
- Can the KPI be monetised? Monetisation can be used in the cost/benefit process for program acquisition and to communicate priorities to stakeholders.

3.21 To support this, States should:

- select KPIs that best reflect their air navigation system's priorities and challenges;
- ensure that chosen indicators have available, reliable data sources; and
- use the results to inform continuous improvement, investment planning, and operational enhancements.

3.22 This targeted and context-driven use of KPIs helps maintain a sustainable performance management system while contributing to the global objectives of interoperability, safety, efficiency, and environmental responsibility in air navigation.

3.23 To support meaningful analysis and facilitate performance-based decision-making, KPIs should be grouped both by Key Performance Area (KPA)—such as safety, capacity, efficiency, etc.,—and by the

relevant operating environment or level of granularity. This may include performance measurement at the State or FIR level, as well as within specific operational domains such as terminal manoeuvring area (TMA) or aerodrome. The KPI value, when available, should be provided for the previous year and current year as well as the defined KPI Target to allow comparison and identify progress. Such structured categorization allows stakeholders to better identify trends, assess localized performance issues, and target improvements where they are most needed. It also ensures alignment with ICAO's global framework and supports comparability across regions and operational contexts.

3.24 States should report on the implementation of Performance Objectives using the Template at **Table MID Region ANS PF3-1 and ANS PF3-2** (KPIs measured at the State/ANSP level and KPIs measured at the TMA/Aerodrome level):

Table MID Region ANS PF3-1:

TMA/Aerodrome: [name]					
KPA	KPI/ Variant	KPI Value – (Last year)	KPI Value – (Current year)	KPI Target	Remarks
Safety	KPI 21 (RWY Incursions)	Number of runway incursions	Number of runway incursions	Number of runway incursions	
Safety	KPI 22 (RWY Excursions)	Number of runway excursions	Number of runway excursions	Number of runway excursions	
Efficiency/ Environment	KPI 02 (Taxi-out additional time) Variant X	Excess taxi-out time in Minutes/flight	Excess taxi-out time in Minutes/flight	Excess taxi-out time in Minutes/flight	
Efficiency/ Environment	KPI 13 (Taxi-in additional time) Variant X	Excess taxi-in time in Minutes/flight	Excess taxi-in time in Minutes/flight	Excess taxi-in time in Minutes/flight	
Efficiency/ Environment	KPI 17 (Level-off during climb) Variant X	NM/flight and minutes/flight	NM/flight and minutes/flight	NM/flight and minutes/flight	
Efficiency/ Environment	KPI 19 (Level-off during descent) Variant X	NM/flight and minutes/flight	NM/flight and minutes/flight	NM/flight and minutes/flight	
Predictability	KPI 01 (Departure punctuality) Variant X	% of flights	% of flights	% of flights	
Predictability	KPI 14 (Arrival punctuality) Variant X	% of flights	% of flights	% of flights	
Capacity	KPI 09 (Airport capacity) peak	Number of arrivals / departures per hour	Number of arrivals / departures per hour	Number of arrivals / departures per hour	
TMA/Aerodrome: [name]					
KPA	KPI/ Variant	KPI Value – (Last year)	KPI Value – (Current year)	KPI Target	Remarks

Table MID Region ANS PF3-2:

State/FIR: [name]					
KPA	KPI/ Variant	KPI Value – (Last year)	KPI Value – (Current year)	KPI Target	Remarks
Safety	KPI 20 (Number of Aircraft Accidents) Variant X	Number of accidents - Last year	Number of accidents - Current year	Number of accidents - Current year	
Safety	KPI 23 (Number of Airprox/TCAS Alert/Loss of separation/Near mid Air Collisions/Mid Air Collisions) Variant X	Number of airprox/TCAS alert/loss of separation/near midair collisions/midair collisions (MAC)	Number of airprox/TCAS alert/loss of separation/near midair collisions/midair collisions (MAC)	Number of airprox/TCAS alert/loss of separation/near midair collisions/midair collisions (MAC)	
Capacity	KPI 06 (En-route airspace capacity)	Nr. of Movements/ per hour	Nr. of Movements/ per hour	Nr. of Movements/ per hour	
Efficiency/ Environment	KPI 04 (Filed flight plan en-route extension) Variant X	% excess distance	% excess distance	% excess distance	

3.25 In addition to tracking performance through KPIs, States should also report on the tangible benefits accrued from the implementation of operational improvements. This includes outcomes such as reduced flight distances and total CO₂ emissions avoided. Such data provides clear evidence of the value of modernized air navigation systems, especially in supporting global and national environmental and climate goals. Highlighting these achievements, in the Annual MID Region Air Navigation Report (as appropriate), strengthens the case for continued investment in ATM modernization and demonstrates aviation's contribution to environmental sustainability.

APPENDICES

AIR NAVIGATION REPORT

ICAO Middle East Region 2025



**INTERNATIONAL
CIVIL AVIATION
ORGANIZATION**





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EXECUTIVE SUMMARY

The MID Air Navigation Report (ANR) 2025 serves as a key monitoring and assessment tool for the Middle East Air Navigation Planning and Implementation Regional Group (MIDANPIRG), providing a comprehensive overview of the status of air navigation implementation across the MID Region during the reporting period from January to December 2025. Based on information provided by MID States, the Report assesses the implementation of relevant ICAO ASBU Block 0, Block 1 and Block 2 Elements, the development and maintenance of National Air Navigation Plans (NANPs), and the application of the Performance-Based Approach in support of regional air navigation planning and implementation.

The findings of the Report demonstrate the continued commitment of MID States to the implementation of air navigation improvements in support of the objectives of the ICAO Global Air Navigation Plan (GANP) and the Middle East Air Navigation Plan (MID ANP). The analysis indicates a generally positive trend in the implementation of ASBU Elements across the Region, although the level of implementation varies among States, FIRs and aerodromes, and across the different performance improvement areas.

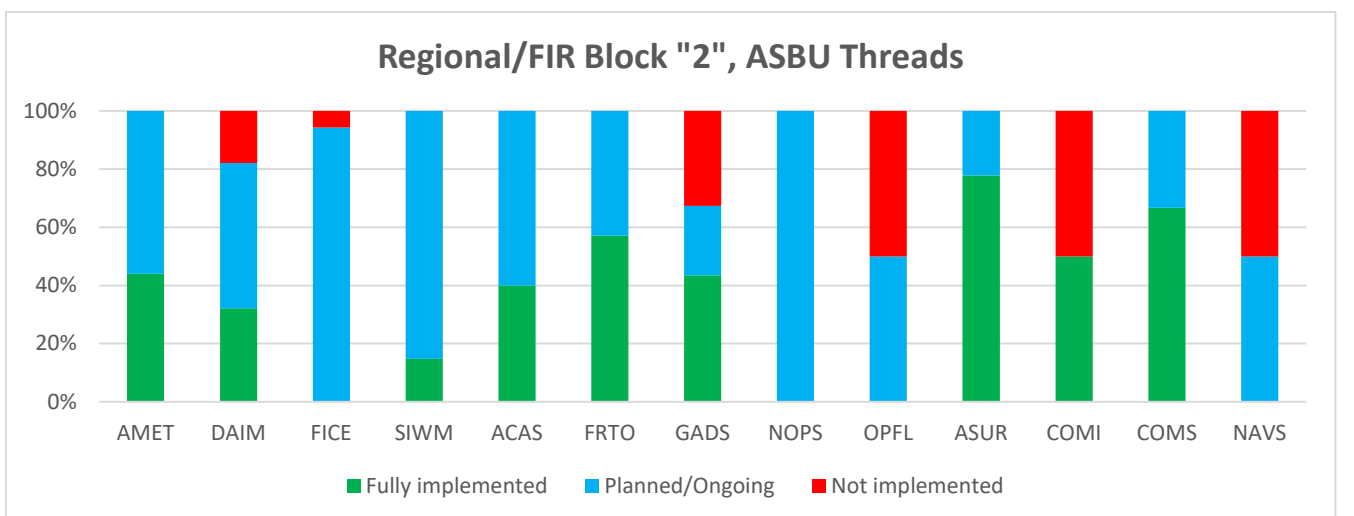
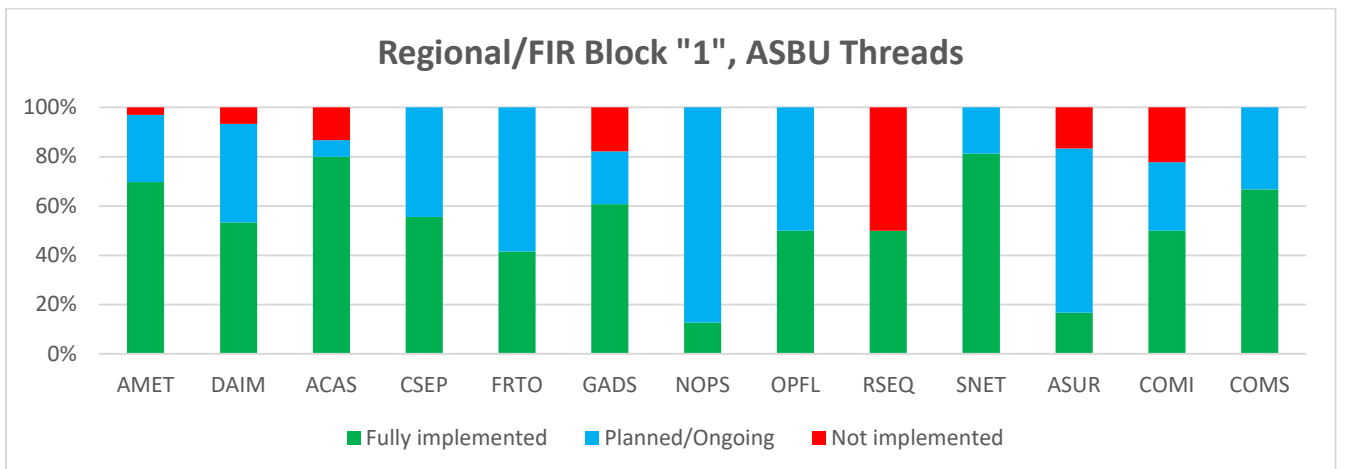
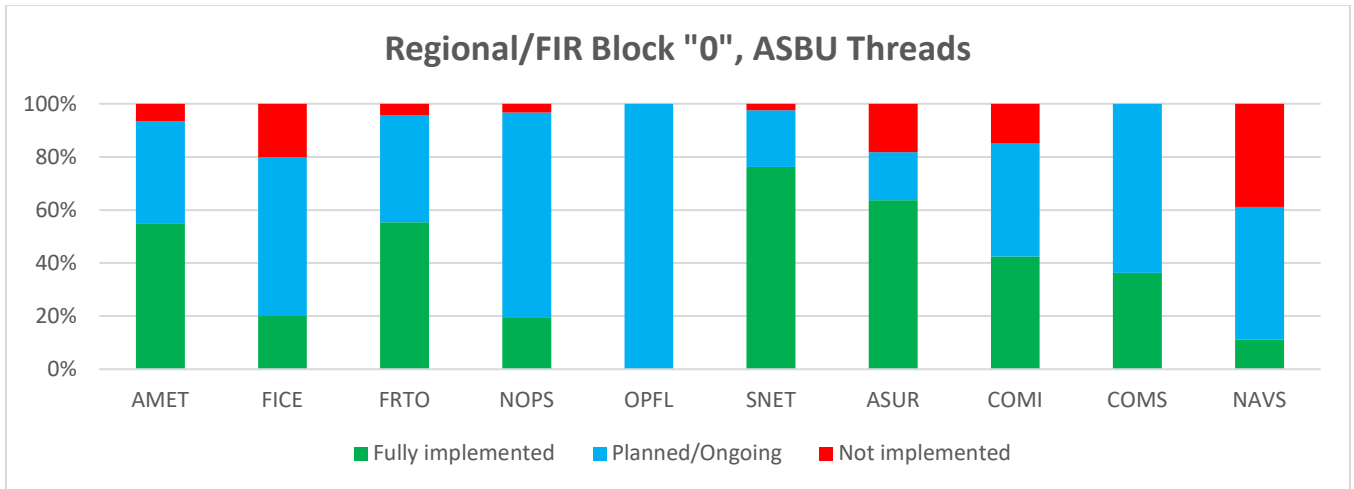
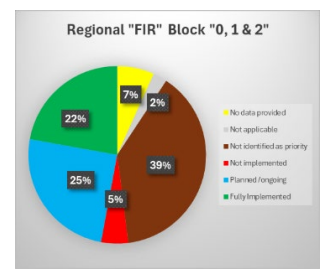
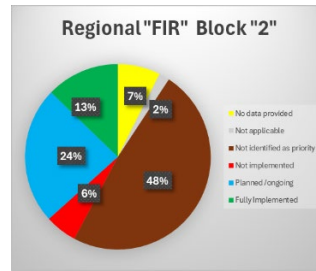
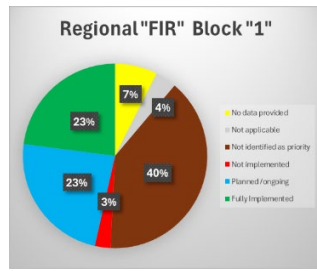
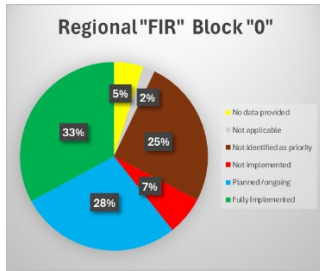
The Report further highlights encouraging progress in the application of the Performance-Based Approach, with an increasing number of States identifying operational needs, implementation priorities and performance improvement objectives. However, the overall level of maturity remains limited, and further efforts are required to fully implement performance-based planning processes, including the systematic measurement of air navigation performance using ICAO Key Performance Indicators (KPIs) and the assessment of benefits accrued from implemented operational improvements.

With regard to National Air Navigation Plans, the Report shows that their development across the MID Region remains at an early stage. While several States have developed or initiated the development of NANPs, the majority of States have yet to establish fully developed plans aligned with the GANP and the MID ANP. Continued support, coordination and capacity-building efforts will therefore be necessary to accelerate the adoption of performance-based planning practices and strengthen the alignment between national, regional and global air navigation planning frameworks.

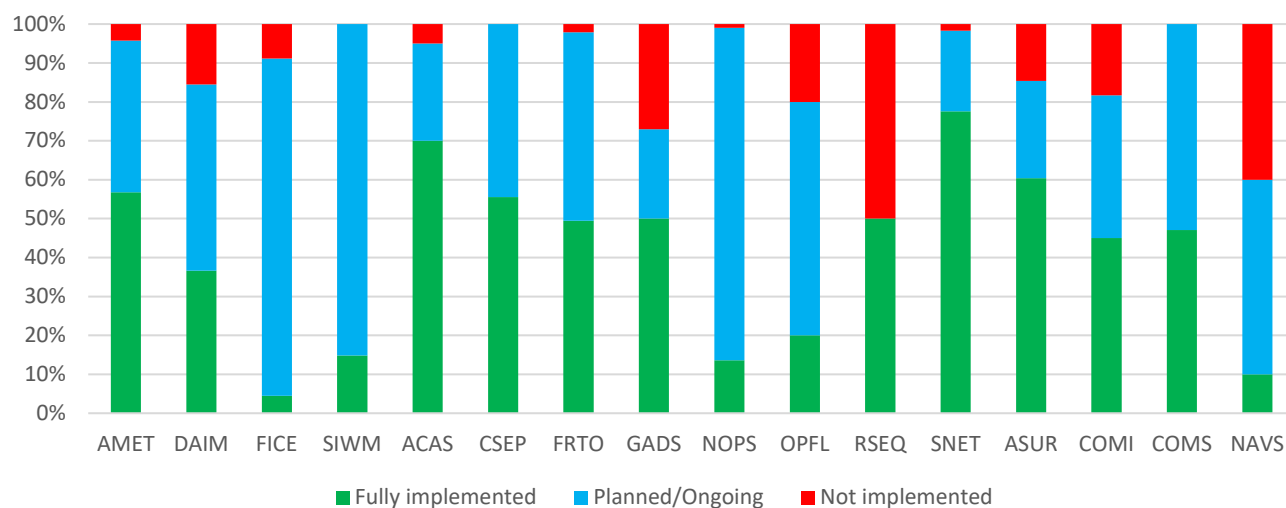
The results and analyses contained in this Report provide MIDANPIRG, States and aviation stakeholders with an evidence-based foundation for decision-making, prioritization of implementation activities, and the identification of areas where additional coordination, implementation support and investment may be required to further enhance the safety, capacity, efficiency, resilience and sustainability of the air navigation system within the MID Region.

Note: The statistics and graphical representations contained in this Report are intended primarily to illustrate implementation status and regional trends. While every reasonable effort has been made to verify the accuracy and consistency of the data presented in this Report, the statistics, percentages and graphical analyses are based on information available at the time of publication and minor discrepancies may exist; therefore, the results should be interpreted as indicative of the overall implementation status and trends.

The following pie charts provide an overview of the distribution of ASBU Elements from each Block across the various implementation status categories: Fully Implemented, Planned/Ongoing, Not Implemented, Not Identified as a Priority, Not Applicable, and No Data Provided. In contrast, the bar charts focus solely on ASBU Elements that are both applicable and identified as a priority, and present their implementation status by Thread, thereby facilitating a more meaningful assessment of implementation progress and performance across the different operational improvement areas. The analysis is provided at two distinct levels of granularity, namely the State/FIR level and the aerodrome level, as applicable.

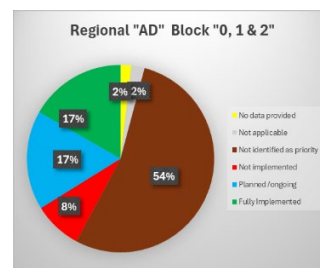
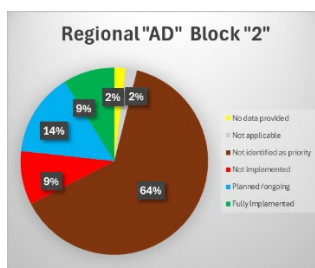
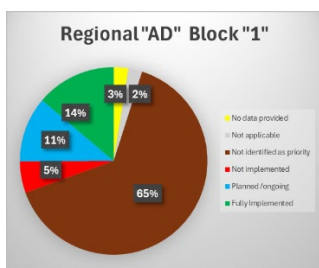
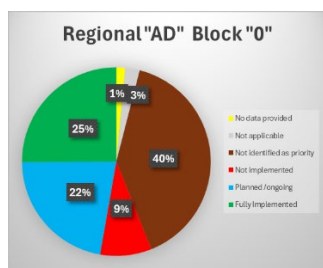


Regional/FIR Blocks "0, 1 & 2", ASBU Threads

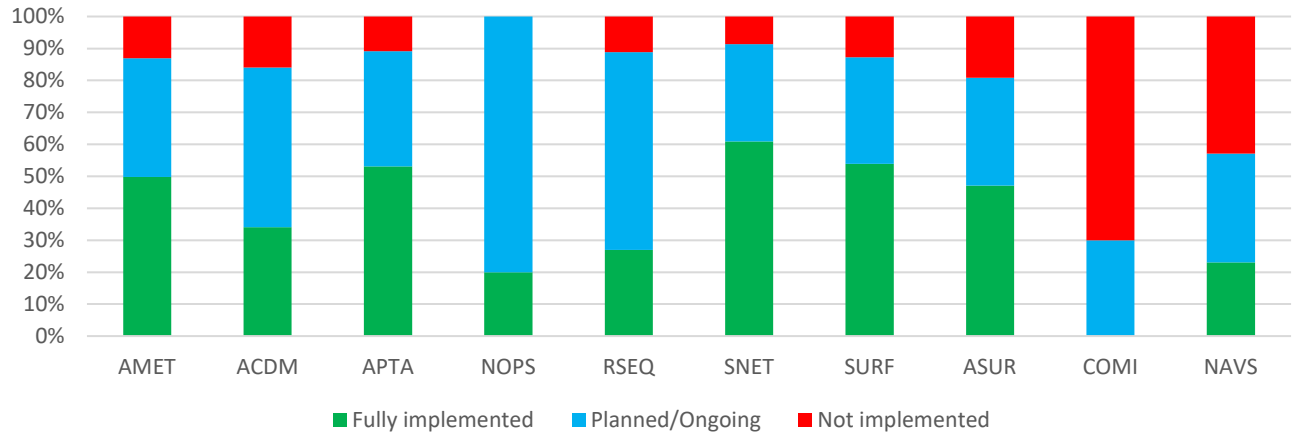


The above graphs indicate that a significant proportion (39%) of the ASBU Elements from Blocks 0, 1 and 2 relevant to States/FIRs have not been identified as a priority by MID States. This percentage increases progressively across the implementation Blocks, from 25% for Block 0 to 40% for Block 1 and 48% for Block 2, reflecting the fact that many of the more advanced operational improvements are either not yet required or do not currently provide sufficient operational benefits within the national context. Conversely, the proportion of ASBU Elements identified as a priority but not yet implemented remains relatively low at 5%. These Elements are primarily associated with ICAO Standards and Recommended Practices (SARPs) or specific regional requirements, highlighting the continued efforts of States to address mandatory implementation obligations.

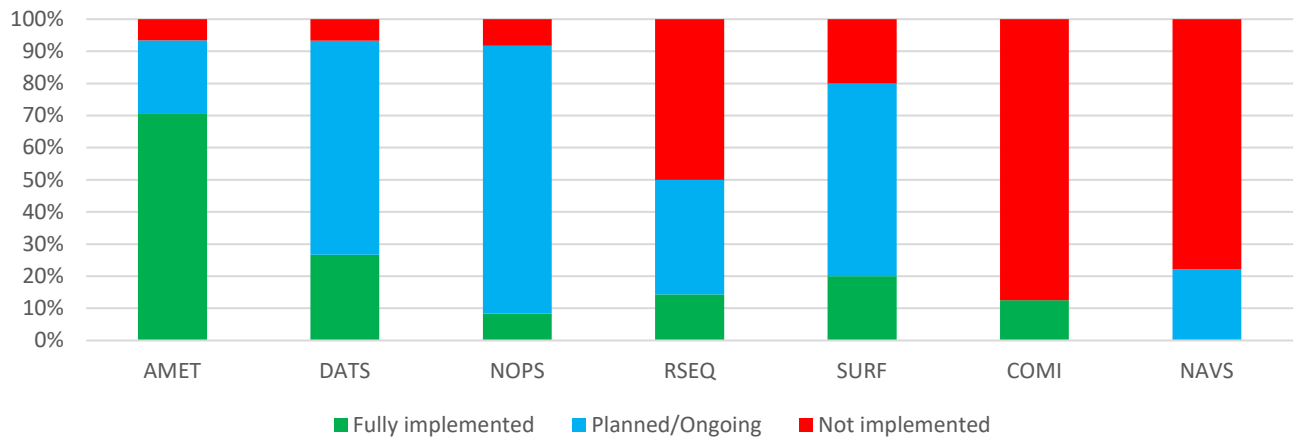
The bar charts, which depict the implementation status of ASBU Elements that are both applicable and identified as a priority, provide further insight into the level of implementation achieved across the different ASBU Threads. The analysis shows a generally high level of implementation in the AMET, ACAS, SNET and ASUR Threads, demonstrating substantial progress in these areas. Lower levels of implementation are observed in the FICE, SWIM, NOPS and OPFL Threads; however, State reports indicate that a significant number of related initiatives are currently in the planning or implementation phases. When both Fully Implemented and Planned/Ongoing activities are considered together, the results suggest a positive implementation outlook and indicate the potential for a substantial increase in the overall level of implementation across the Region in the coming years.



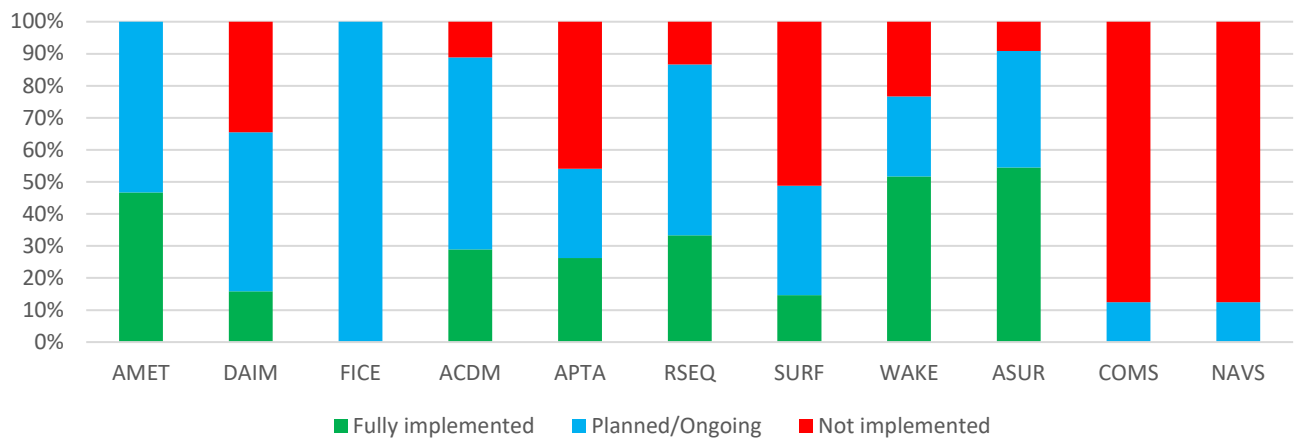
Regional/AD Block "0", ASBU Threads

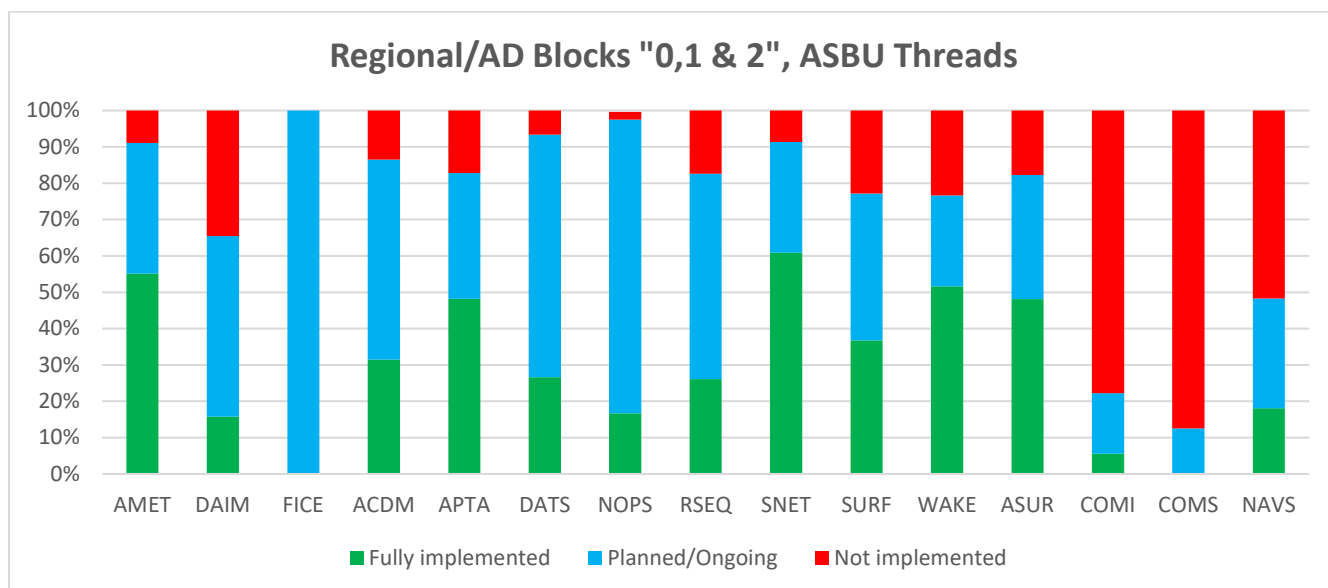


Regional/AD Block "1", ASBU Threads



Regional/AD Block "2", ASBU Threads



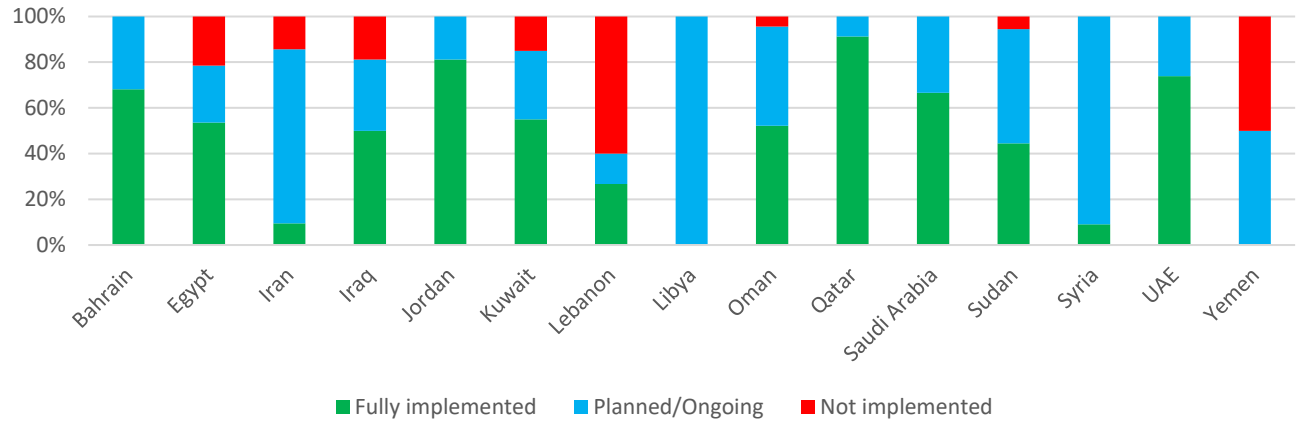


With regard to the implementation of ASBU Elements relevant to aerodromes and terminal manoeuvring areas (TMAs), and similar to the State/FIR level of granularity, the above graphs indicate that a significant proportion (54%) of ASBU Elements from Blocks 0, 1 and 2 have not been identified as a priority by the relevant international aerodromes. This proportion increases progressively across the implementation Blocks, from 40% for Block 0 to 65% for Block 1 and 64% for Block 2, reflecting that many of the more advanced operational improvements are either not yet required or do not currently provide sufficient operational benefit within the local aerodrome context. Conversely, the proportion of ASBU Elements identified as a priority but not yet implemented remains relatively low at 8%. These Elements are primarily associated with ICAO Standards and Recommended Practices (SARPs) or specific regional requirements.

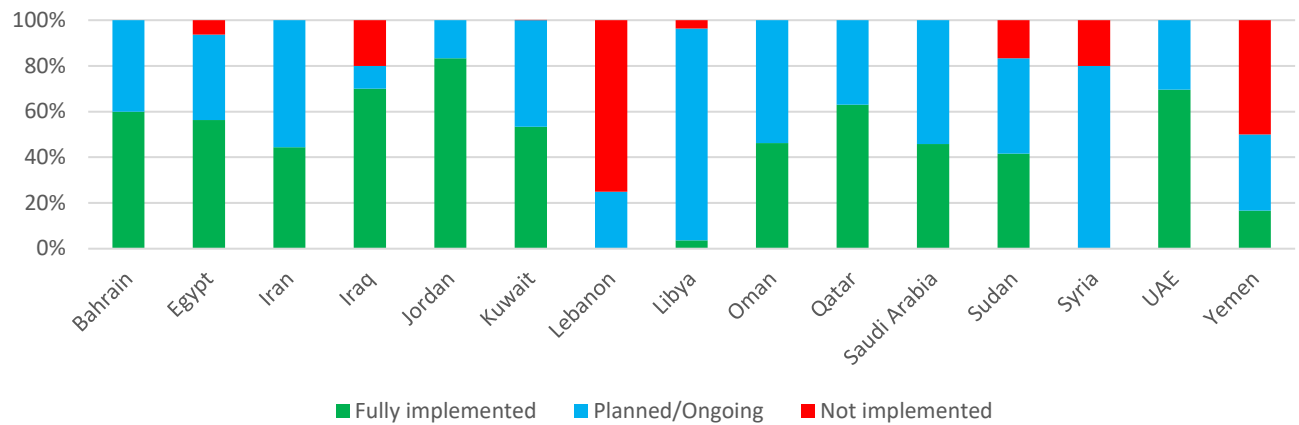
The bar charts, which depict the implementation status of ASBU Elements that are both applicable and identified as a priority for the relevant international aerodromes, provide further insight into the level of implementation achieved across the different ASBU Threads. The analysis indicates a satisfactory level of implementation in the AMET, SNET and WAKE Threads. Lower levels of implementation are observed in the DAIM, NOPS, COMI, COMS and NAVS Threads; however, with the exception of COMI and COMS, State reports indicate that a significant number of related initiatives are currently in the planning or implementation phases. When both Fully Implemented and Planned/Ongoing activities are considered together, the results suggest a positive implementation outlook and point to the potential for a substantial increase in the overall level of implementation across the Region in the coming years.

The following bar charts present the ASBU implementation status for elements that are both applicable and identified as a priority by Block, across the two levels of granularity, namely State/FIR and Aerodromes/TMAs.

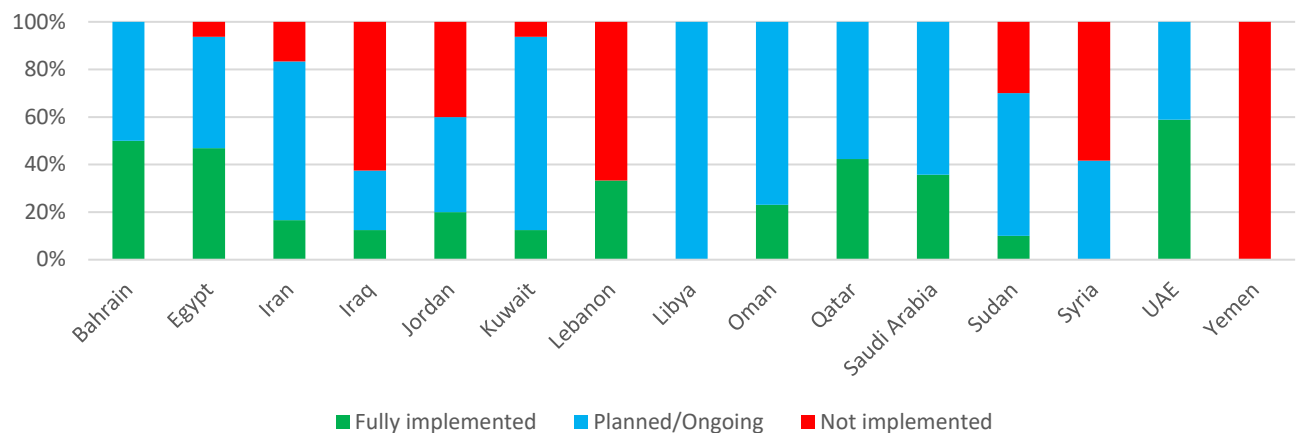
State/FIR Blocks "0", ASBU Elements, implemetaion status



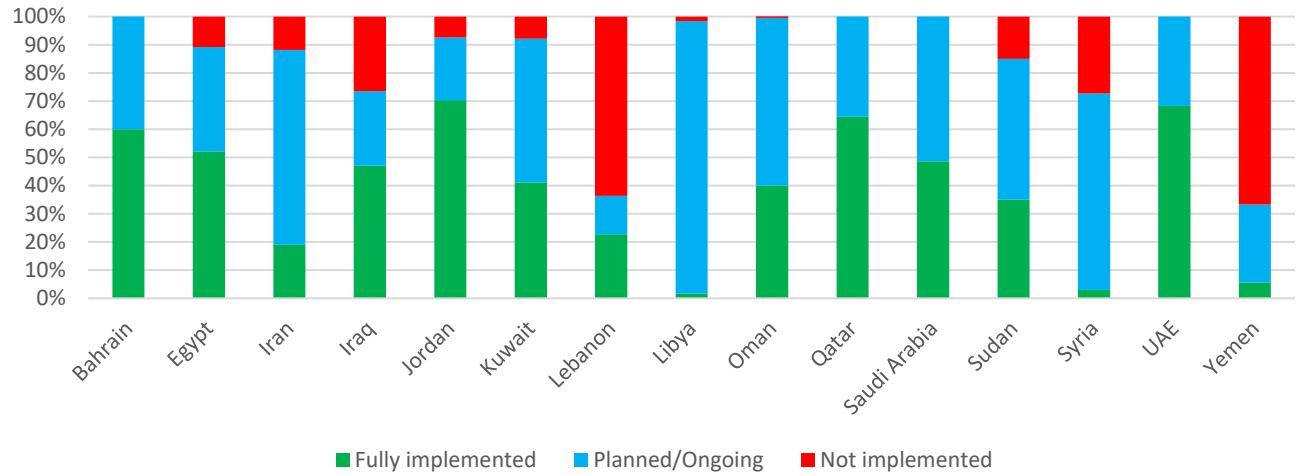
State/FIR Blocks "1", ASBU Elements, implemetaion status



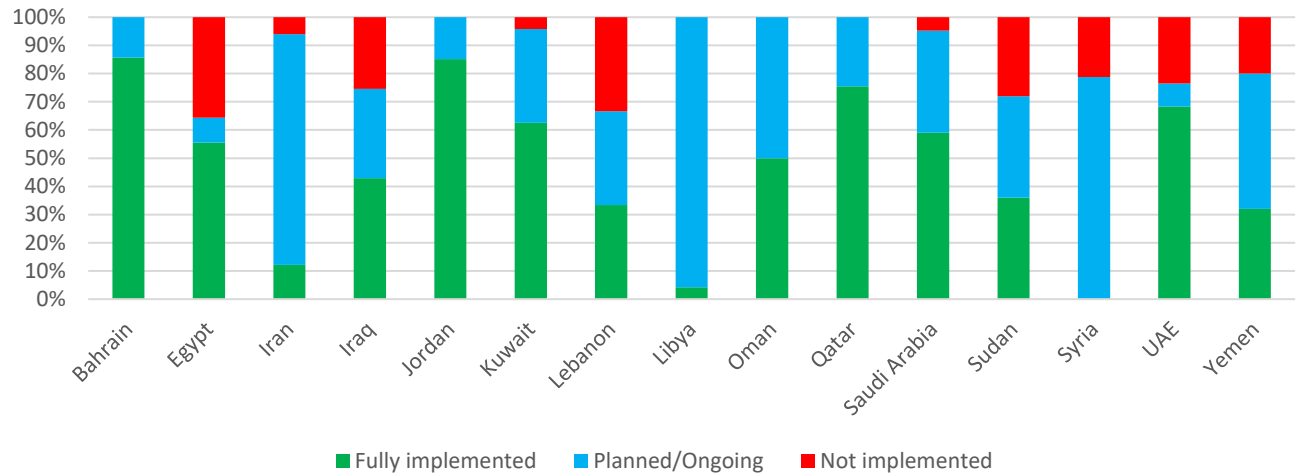
State/FIR Blocks "2", ASBU Elements, implemetaion status



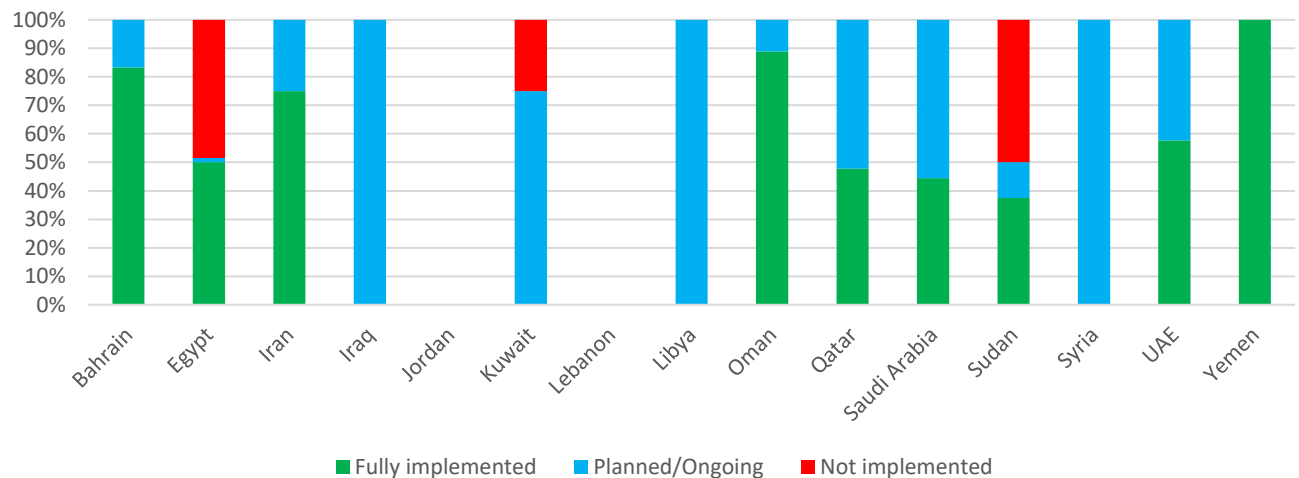
State/FIR Blocks "0, 1 & 2", ASBU Elements, implemetaion status

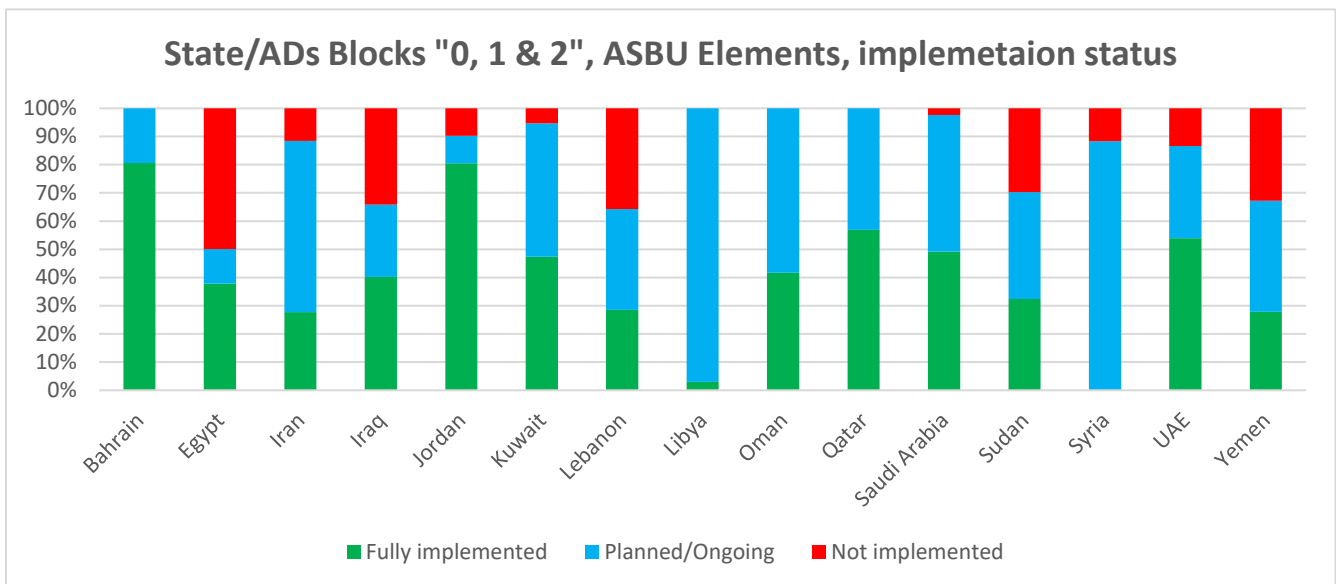
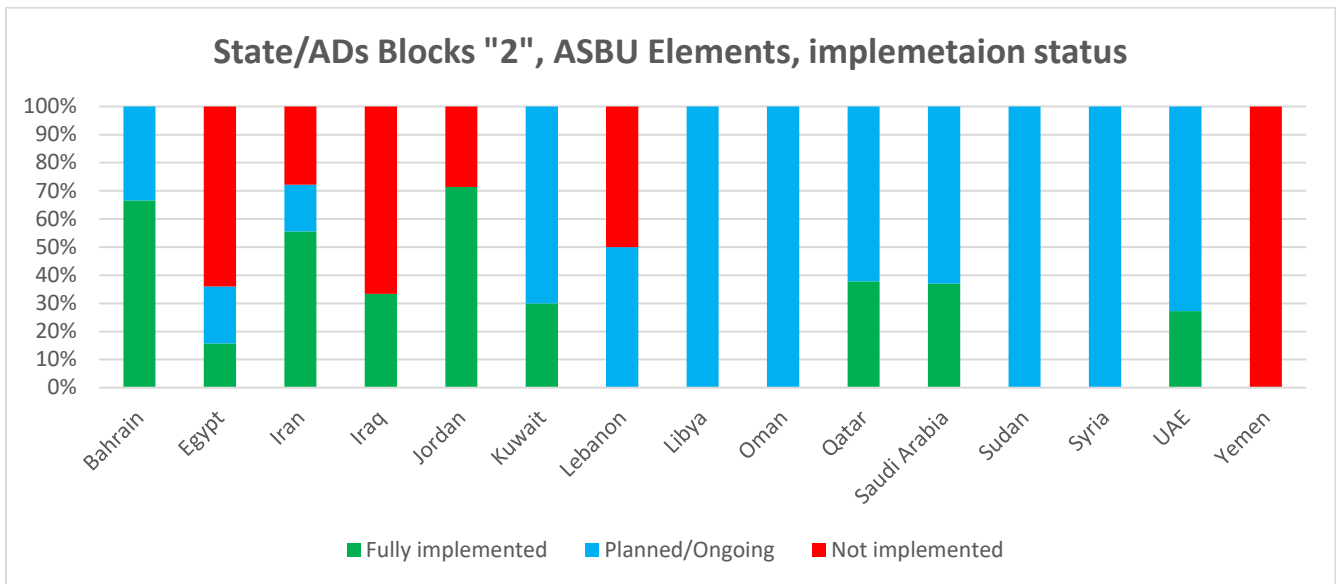


State/ADs Blocks "0", ASBU Elements, implemetaion status



State/ADs Blocks "1", ASBU Elements, implemetaion status





The above bar charts provide an overview of the status of ASBU implementation across MID States for Blocks 0, 1 and 2, assessed at both levels of granularity: State/FIR and Aerodrome/TMA. The results indicate that the implementation of Block 0 Elements is generally well advanced across the Region, while significant progress has also been achieved for many Block 1 elements. In contrast, the implementation of Block 2 elements remains at an early stage in most States, reflecting the longer-term nature and increased complexity of these improvements. A number of States, notably Bahrain, Jordan, Qatar and UAE, have demonstrated substantial progress in implementing ASBU elements and continue to advance toward higher levels of operational maturity. Conversely, Iraq, Lebanon, Libya, Sudan, Syria and Yemen still face significant challenges and require sustained efforts and support to implement the ASBU elements identified as a priority. Continued regional cooperation, targeted implementation support and capacity-building initiatives will be essential to accelerate progress and reduce implementation disparities across the Region.

1. INTRODUCTION

1.1 Background

Aviation remains a key driver of economic growth, social development, and regional integration, enabling the efficient movement of people and goods while supporting trade, tourism, and connectivity. As global and regional air traffic continue to grow, the aviation sector faces increasing demands to enhance capacity, efficiency, safety, resilience, and environmental sustainability. At the same time, the emergence of new technologies, innovative business models, digitalization, automation, and evolving operational concepts presents both challenges and opportunities for the transformation of the air navigation system.

The evolution of the air navigation system is an ongoing process that requires continuous performance-based improvements to ensure that air navigation services and infrastructure respond effectively to changing operational requirements and stakeholder expectations. Achieving this objective requires coordinated action at the global, regional, and national levels, guided by ICAO policies, Standards and Recommended Practices (SARPs), and planning frameworks.

Within the ICAO Middle East (MID) Region, the modernization and development of air navigation infrastructure and services remain essential to accommodate growing traffic demand, support seamless regional and interregional operations, and enable the implementation of emerging aviation technologies and concepts. This transformation requires sustained commitment from States, international organizations, air navigation service providers, airports, airspace users, and other aviation stakeholders, supported by appropriate investments and effective regional cooperation mechanisms.

The ICAO Global Air Navigation Plan (GANP) provides the global strategic framework for the evolution of the air navigation system through the Aviation System Block Upgrade (ASBU) methodology. While the GANP adopts a worldwide perspective, it does not imply that all ASBU Elements should be implemented by every State or Region. Many Block Upgrade Elements are designed to address specific operational needs and should be implemented only where the corresponding requirements exist and where tangible operational benefits can be realized. The flexibility inherent in the ASBU methodology enables States and Regions to select and prioritize those Elements that best respond to their operational environments and development objectives. Using the GANP as a reference, regional and national planners identify the operational improvements required to enhance the performance of the air navigation system. Although the ASBU framework does not prescribe when or where a particular Element should be implemented, harmonized and coordinated implementation remains essential to support seamless operations and interoperability across regions.

The following Table provides the numbers of ASBU Threads and Elements by Block (0, 1 & 2).

ASBU Threads			
Block 0	Block 1	Block 2	Blocks 0, 1 & 2
14	17	18	21
ASBU Elements			
51	44	53	148

The MID Air Navigation Report (ANR) 2025 has been developed to support the monitoring of air navigation implementation activities within the ICAO Middle East (MID) Region. The Report provides information on the status of implementation of the relevant ICAO ASBU Block 0, Block 1 and Block 2 Elements during the reporting period from January to December 2025, as well as the status of development and maintenance of National Air

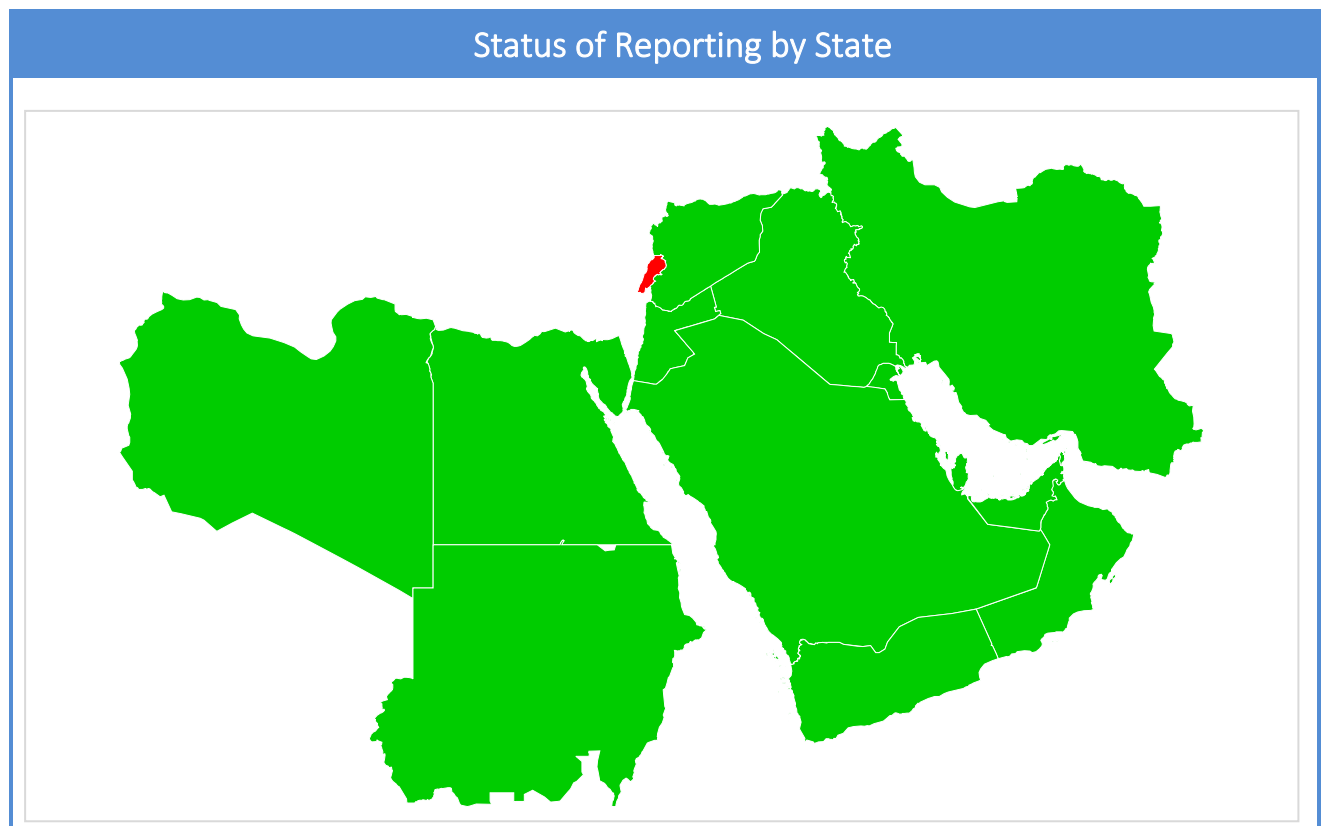
Navigation Plans (NANPs) by MID States. In addition, the Report includes selected State success stories and best practices, providing examples of initiatives that contribute to the advancement of the air navigation system and the achievement of regional and global air navigation objectives.

1.2 Collection of Data

The Twenty Second Meeting of the Middle East Planning and Implementation Regional Group (MIDANPIRG/22), held in Doha, Qatar, 4 – 8 May 2025, through Conclusion 22/4, requested States to provide the ICAO MID Office with required data for the development of the MID Air Navigation Report – 2025. As a follow-up action, the ICAO MID Office issued State Letters to the 15 MID States on 19 February 2026 requesting the following:

- a) update on the status of implementation of ASBU Threads/Elements Block 0, 1 and 2;
- b) progress achieved in the development of National Air Navigation Plan (NANP) and modernization of Air Navigation System; and
- c) State's major achievement(s)/success story(ies) in the air navigation field in 2025.

The status of reporting by States is shown in the following map. The preparation of this Report benefited from the strong cooperation and commitment of MID States, with 14 out of 15 States providing the requested information. This high reporting rate reflects the continued engagement of States in supporting regional monitoring and implementation activities. The data collection and validation process involved close coordination and numerous exchanges with States to ensure the completeness, accuracy and consistency of the information used in the Report.





2. STATUS AND PROGRESS OF ASBU IMPLEMENTATION

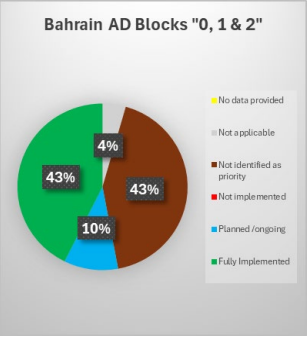
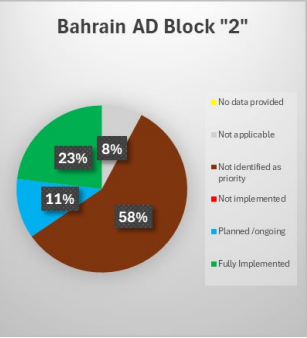
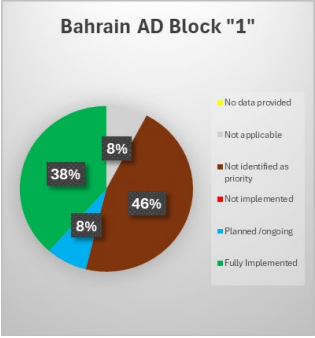
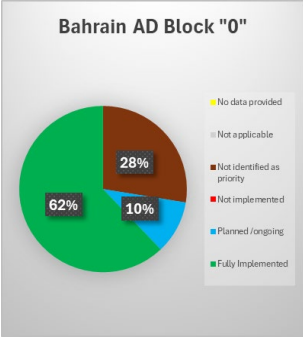
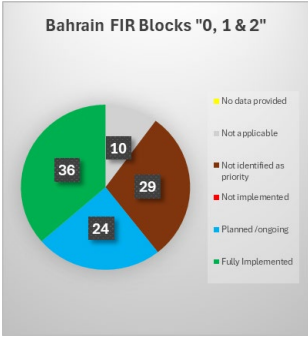
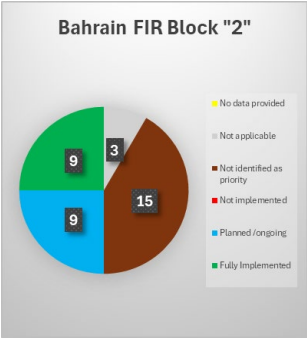
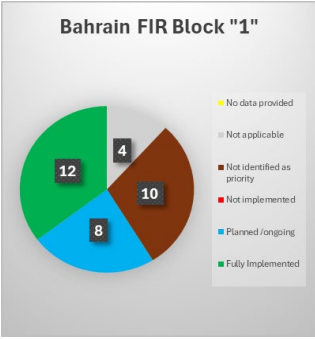
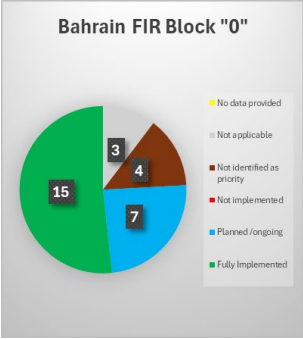
For the purpose of the MID ANR 2025, the implementation status of ASBU Elements is not assessed exclusively at the State level. In recognition of the operational nature of many ASBU Elements and the varying levels of implementation within a State, the assessment is conducted at a more detailed level of granularity, namely the State/FIR and Aerodrome levels, as applicable. The use of this finer level of granularity provides a more representative and operationally meaningful assessment of implementation progress, enabling a more accurate representation of implementation progress across the MID Region by capturing differences in operational environments, infrastructure deployment, and service provision within individual States. It also supports a more precise identification of implementation gaps, priorities, and opportunities for further performance improvements.

The first part of this Section provides an overview of the implementation status of the ASBU Elements from Blocks 0, 1, and 2, at the national level, as reported by MID States and, where applicable, at the FIR and aerodrome levels. The second part presents a consolidated regional assessment highlighting the overall status of implementation of these Elements across the MID Region and providing a regional perspective on implementation progress and remaining gaps.

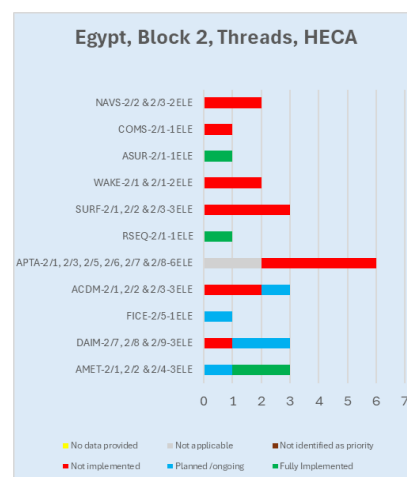
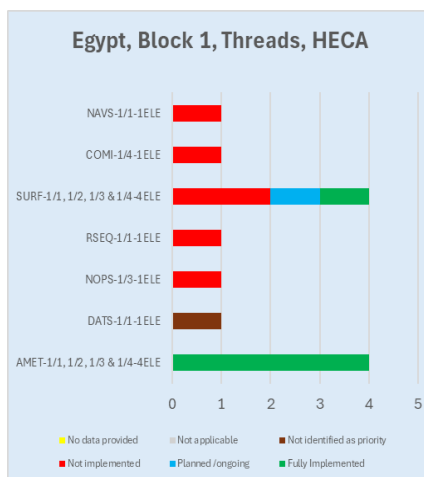
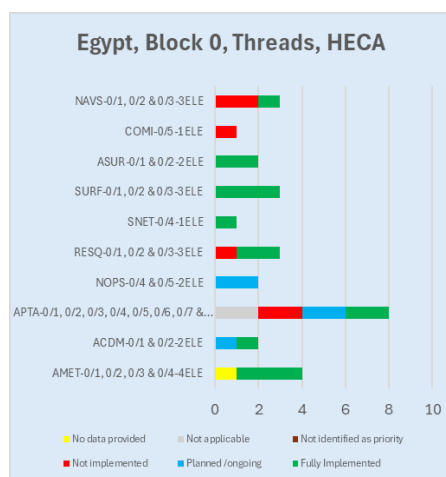
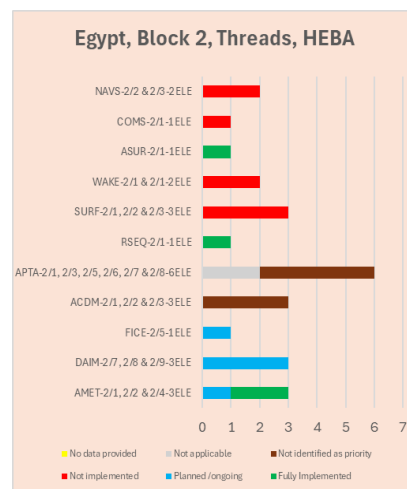
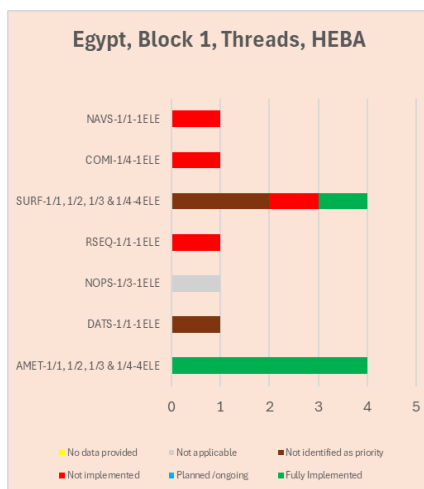
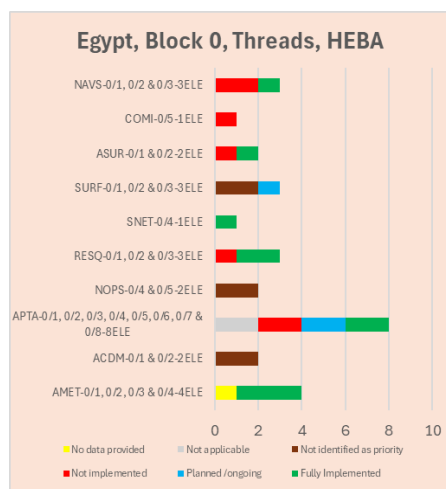
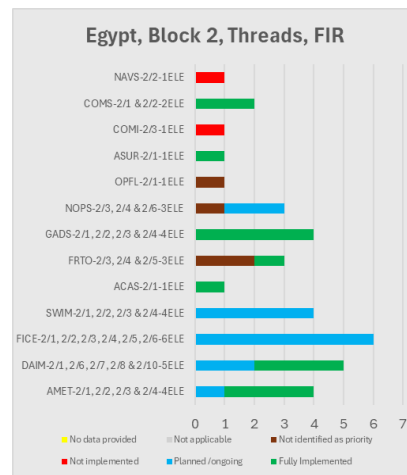
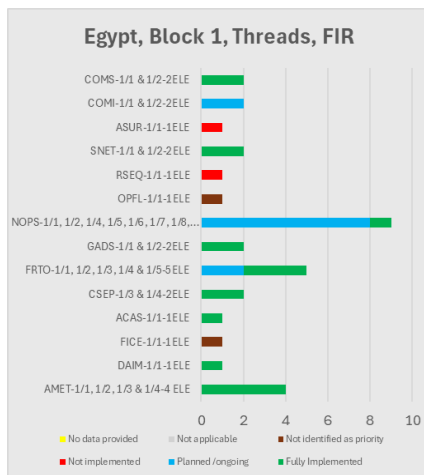
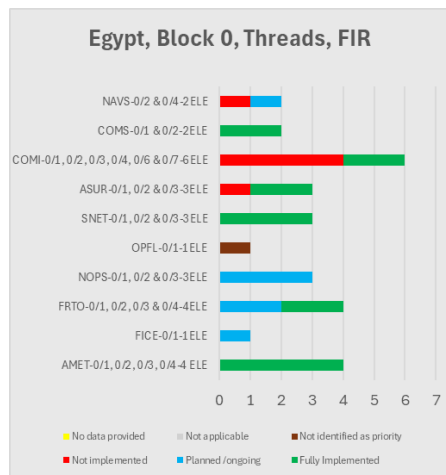
2.1 ASBU Implementation Status at National Level

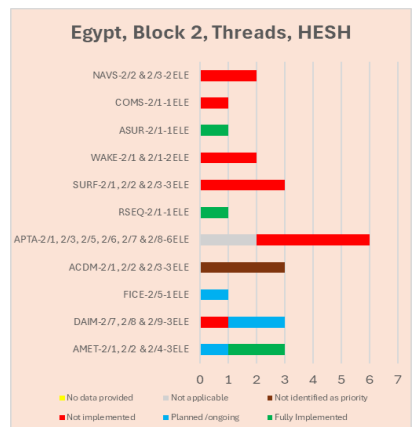
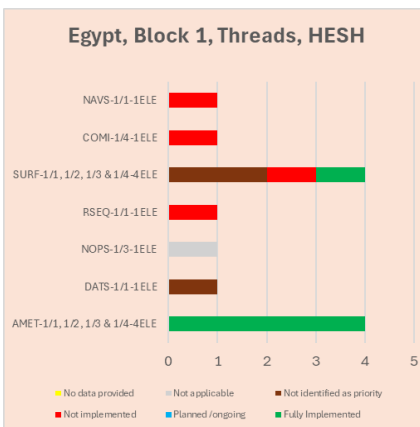
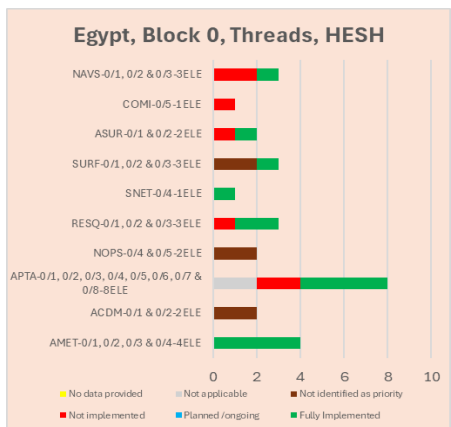
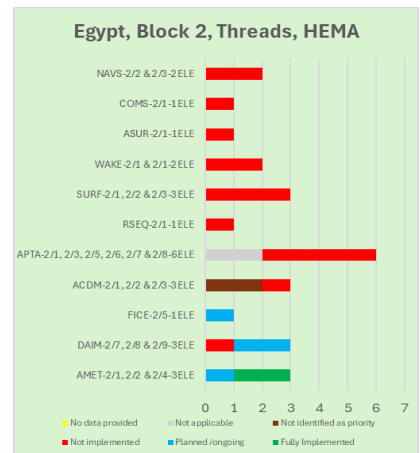
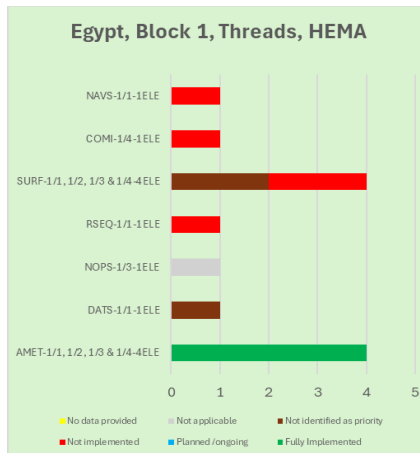
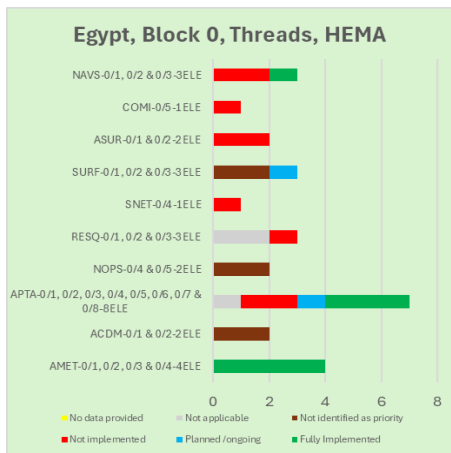
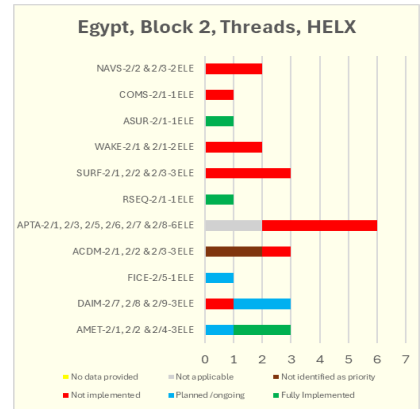
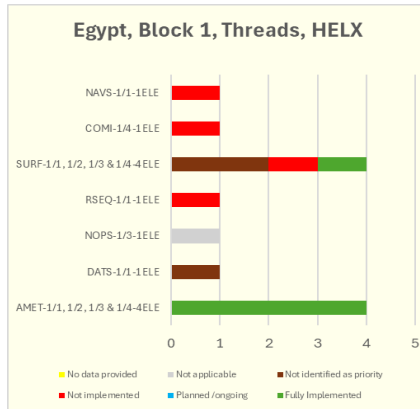
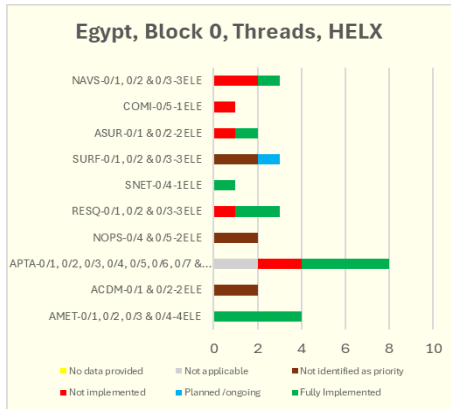
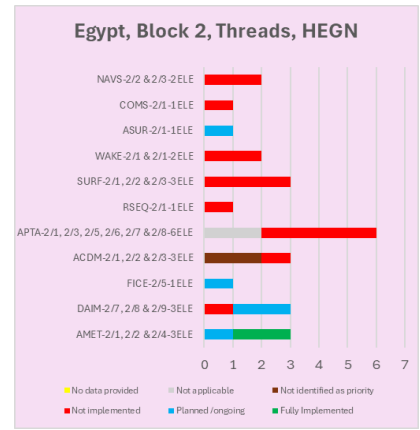
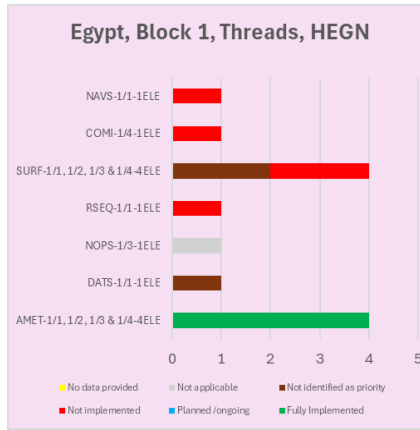
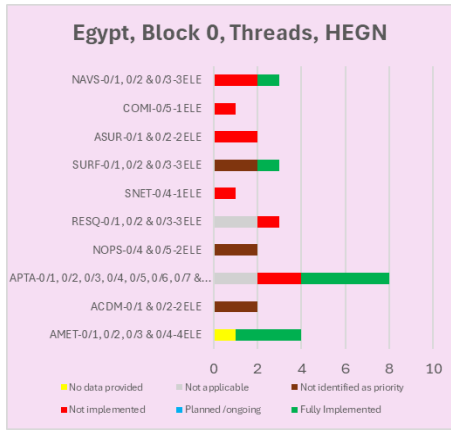
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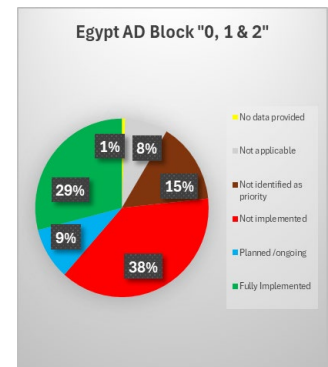
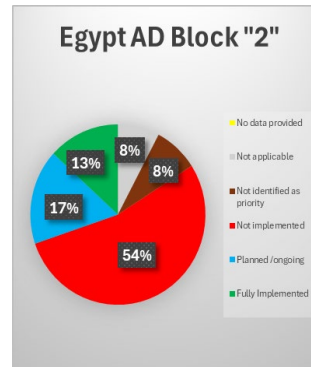
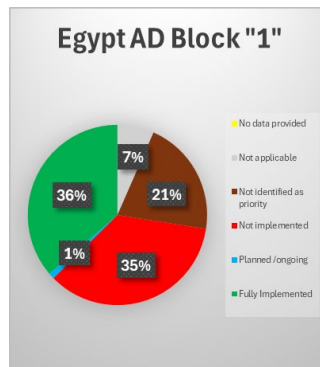
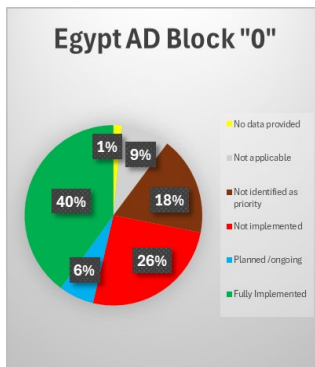
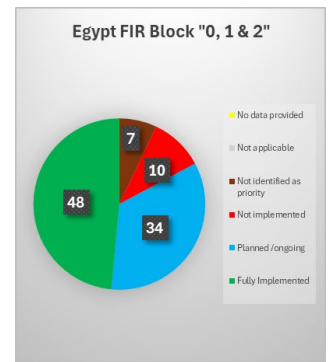
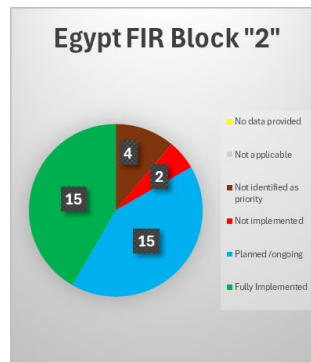
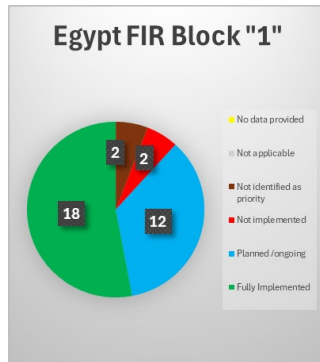
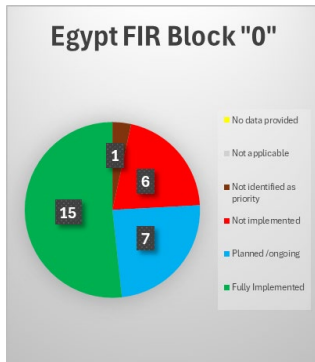
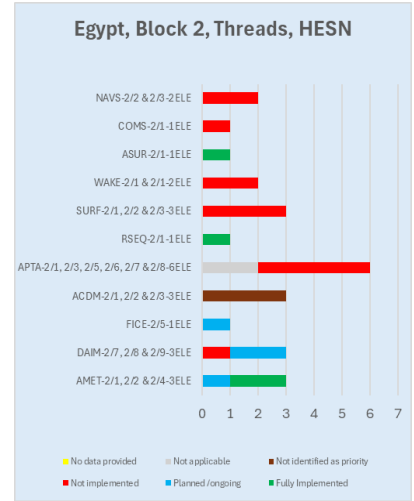
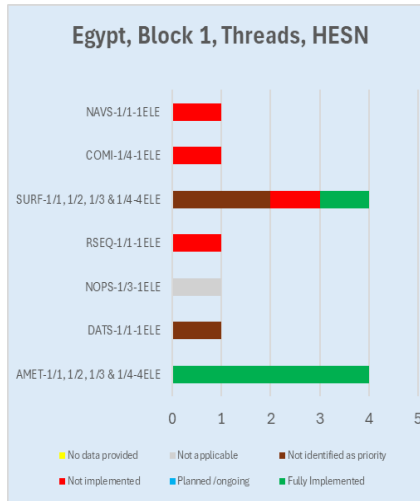
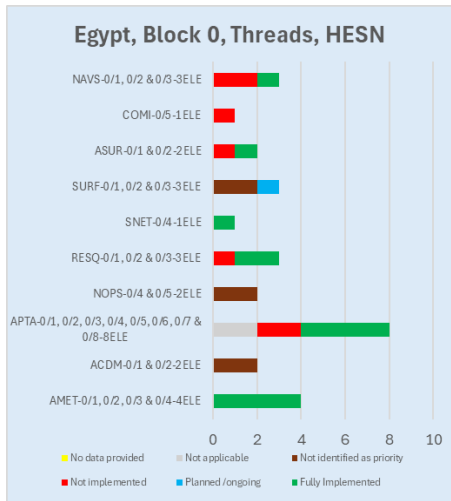




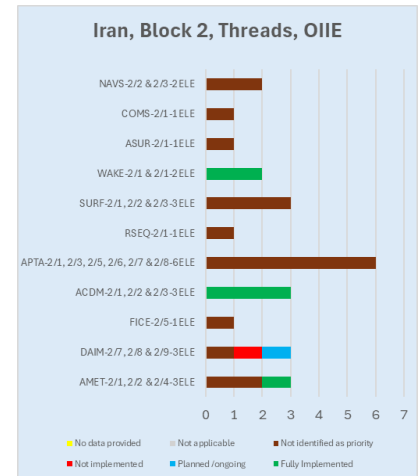
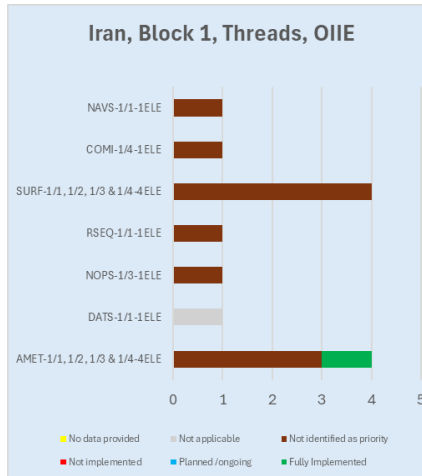
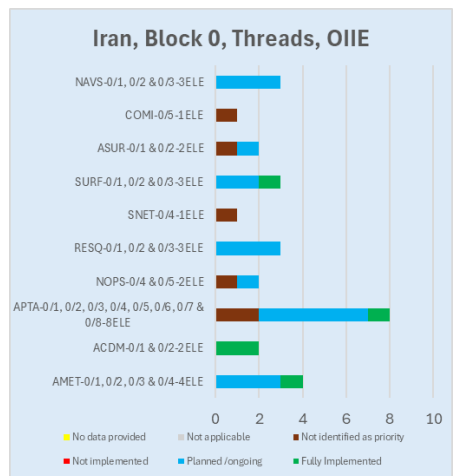
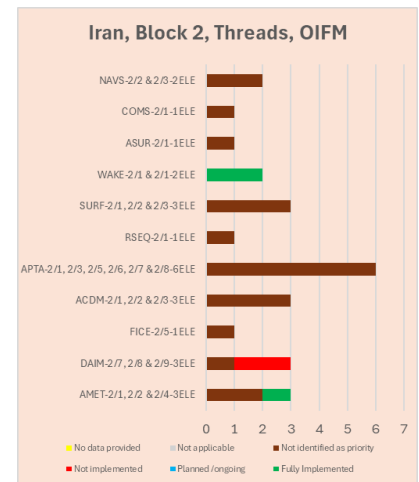
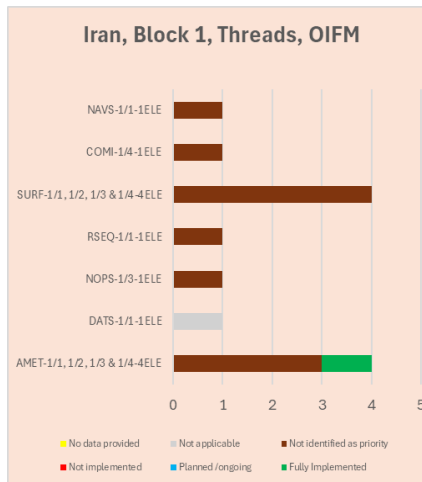
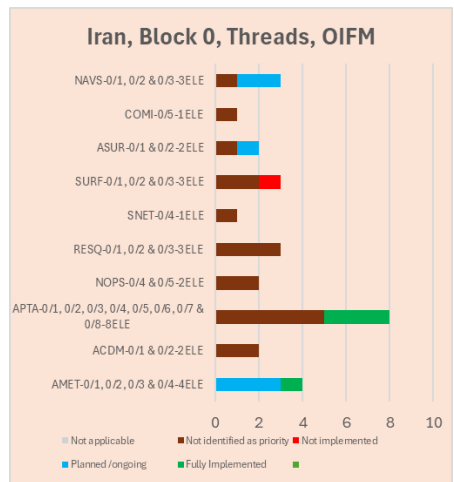
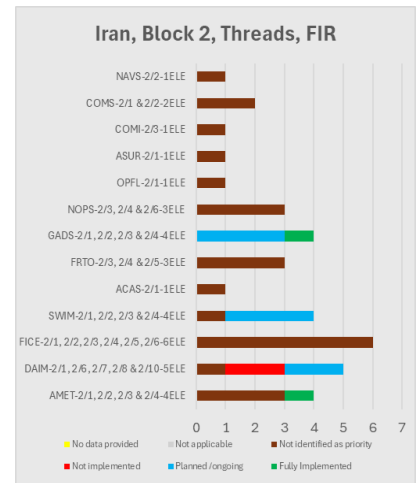
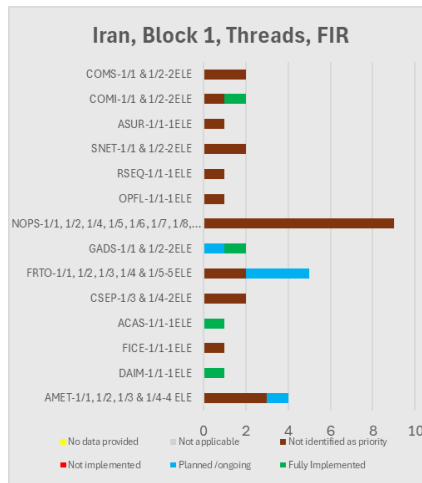
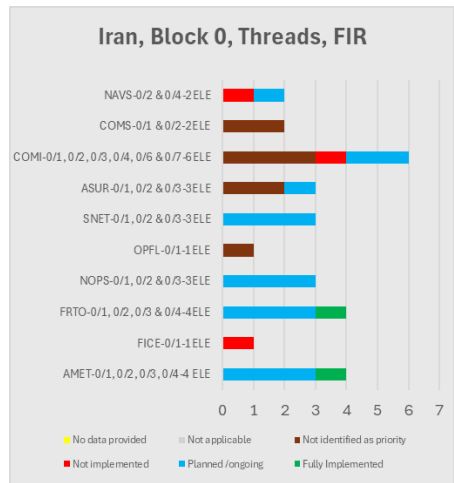
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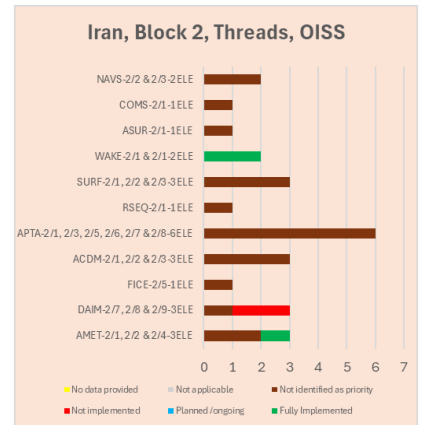
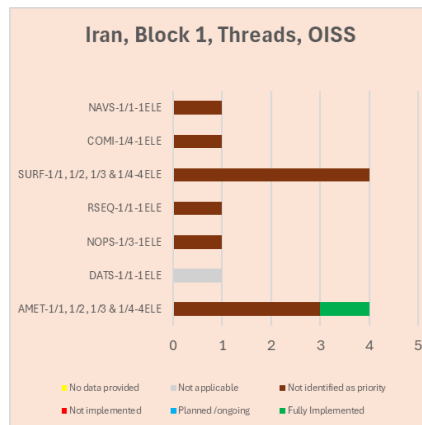
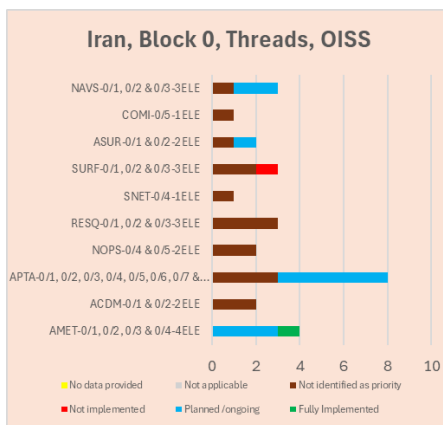
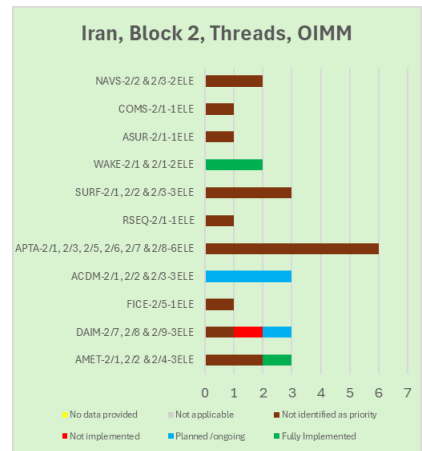
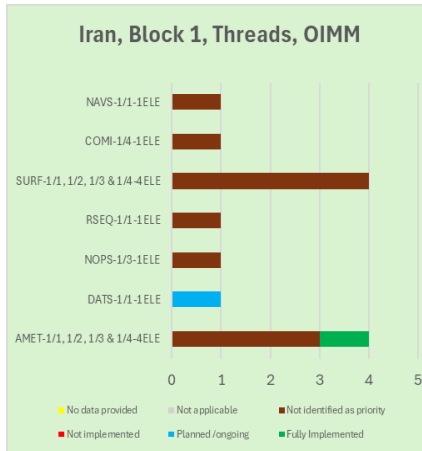
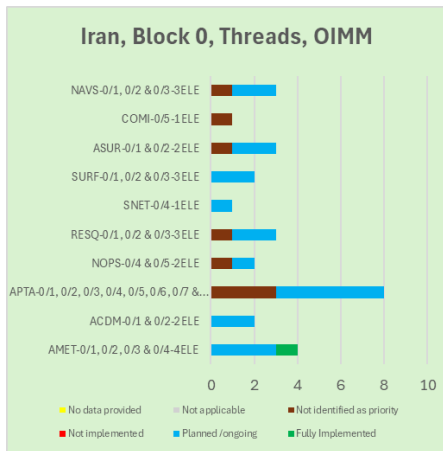
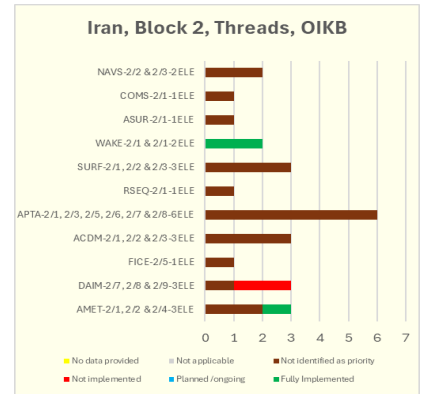
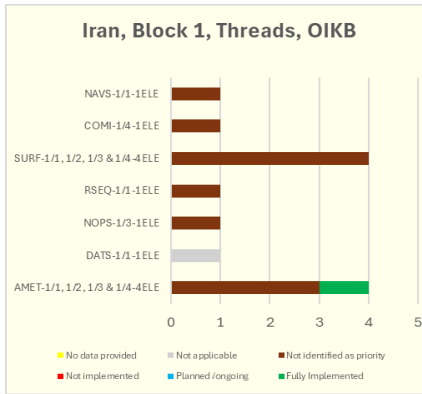
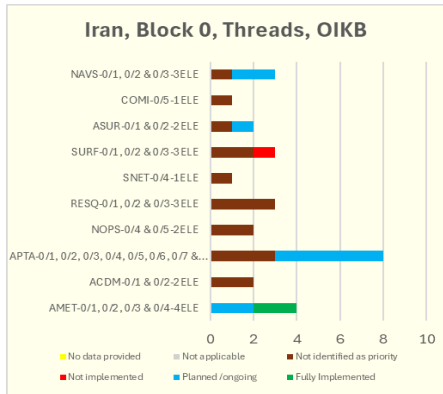
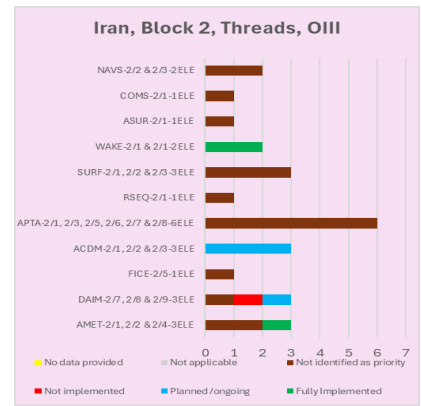
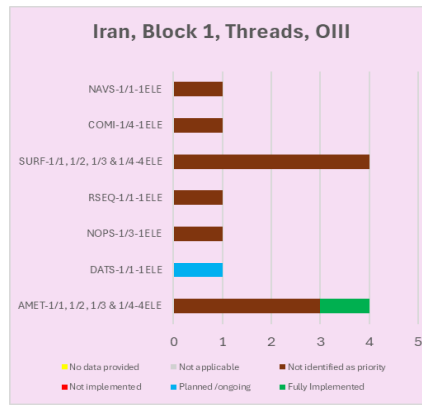
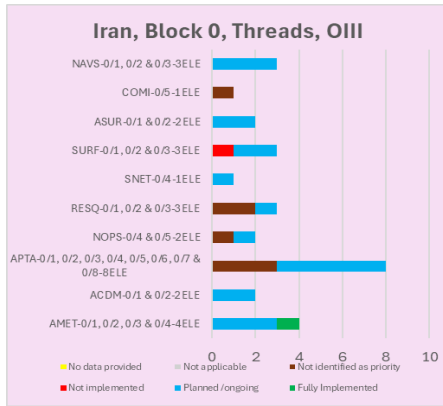


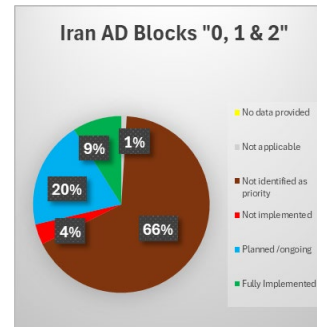
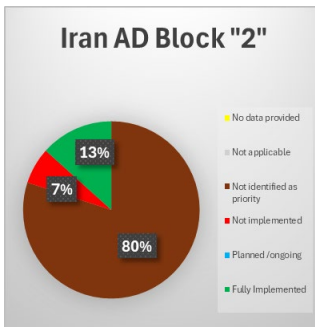
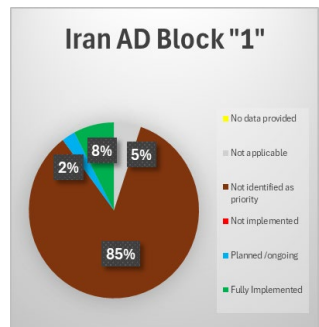
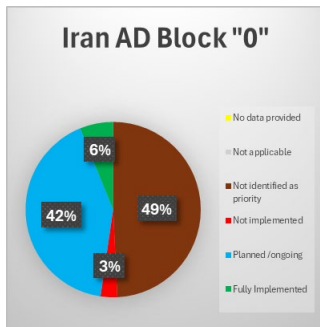
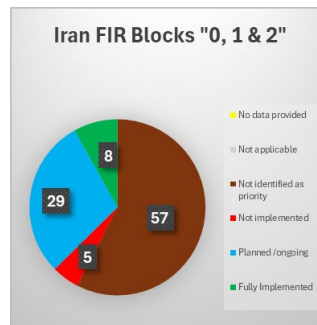
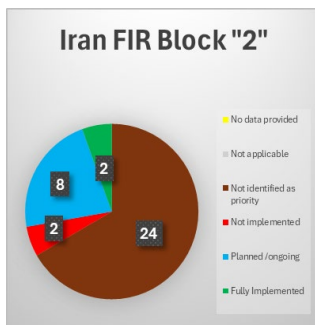
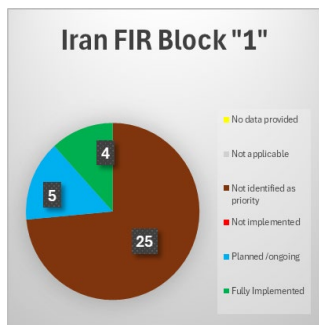
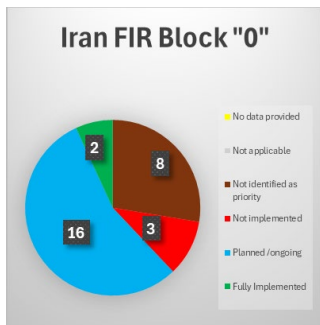
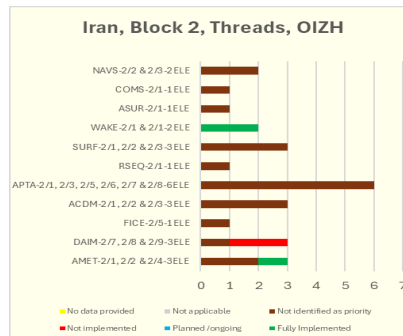
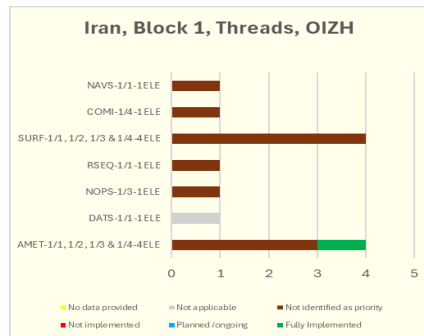
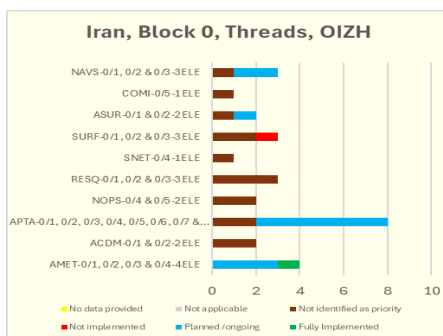
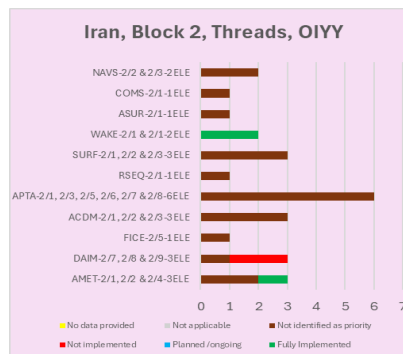
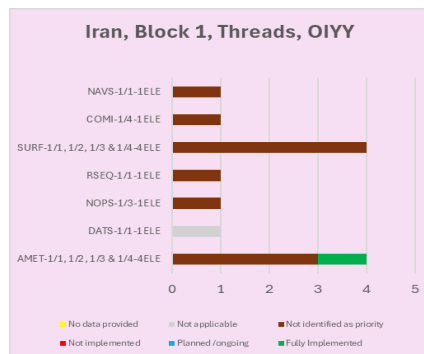
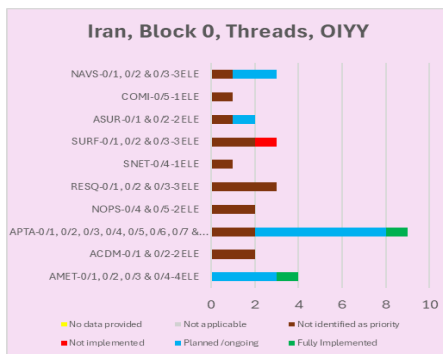
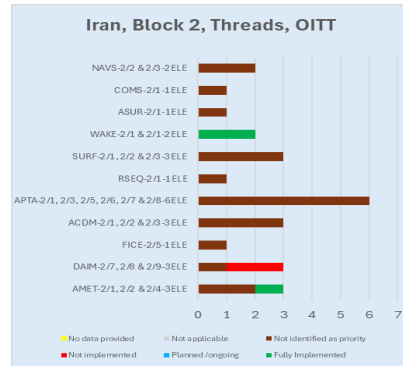
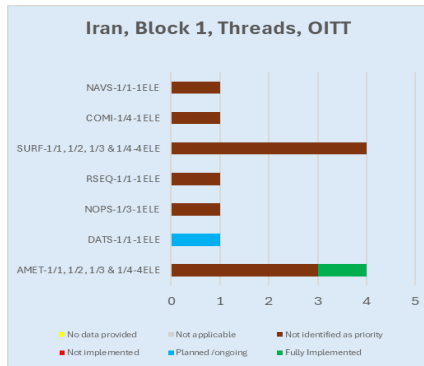
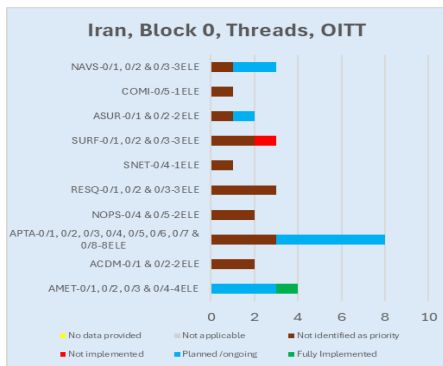




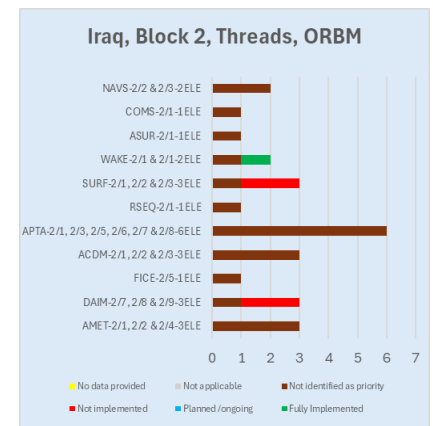
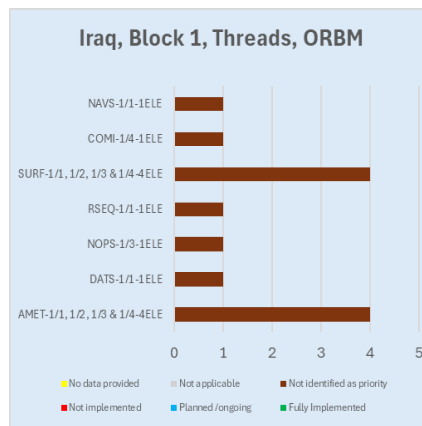
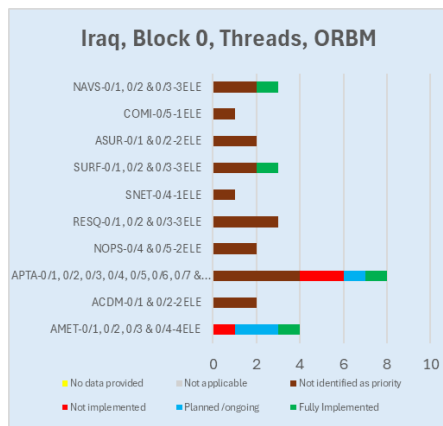
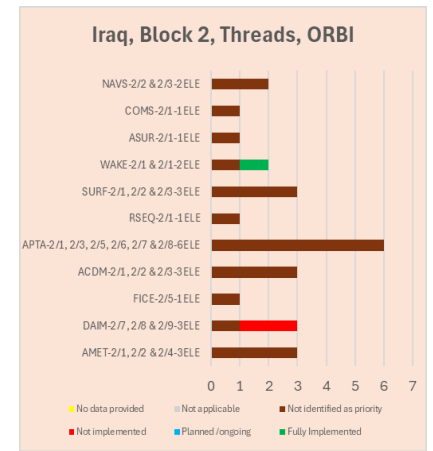
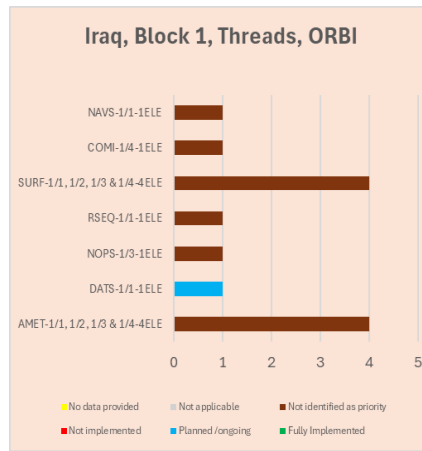
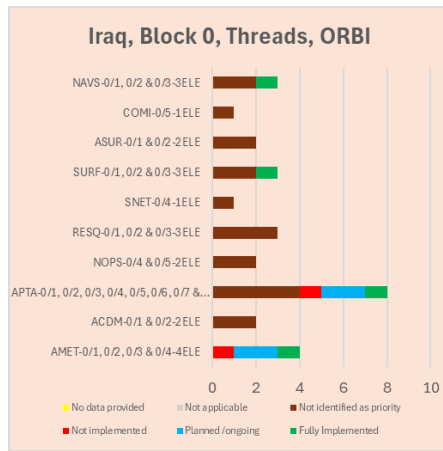
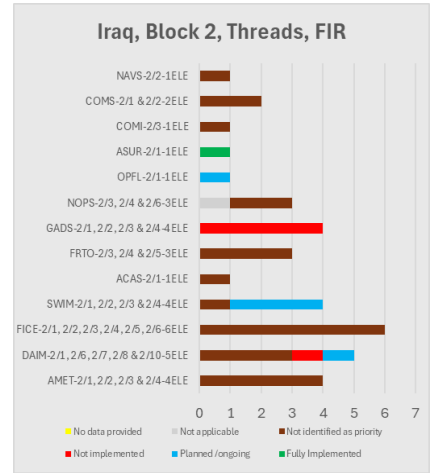
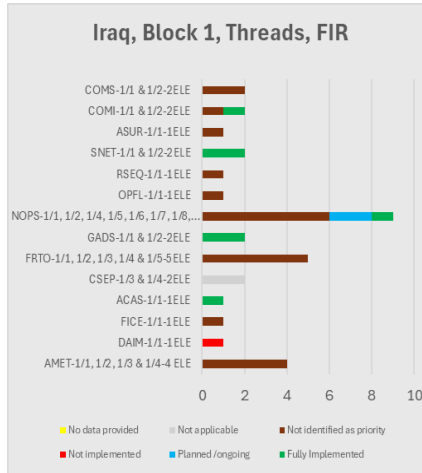
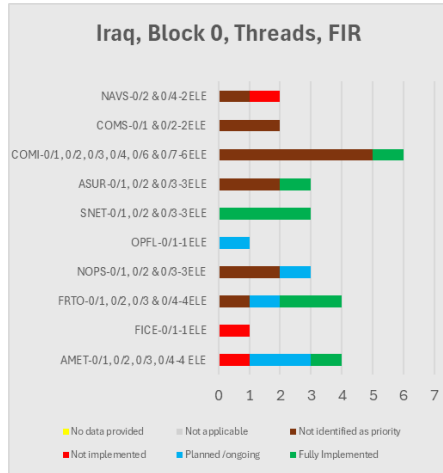
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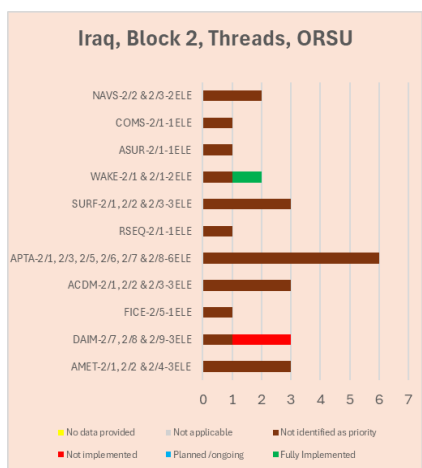
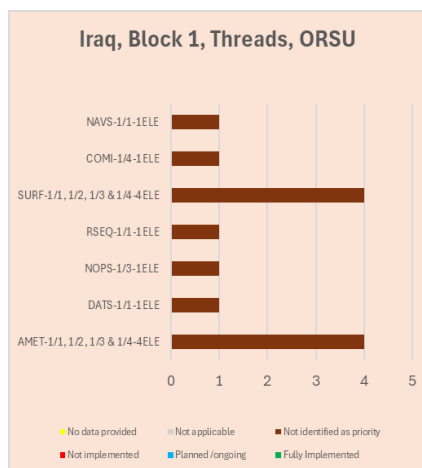
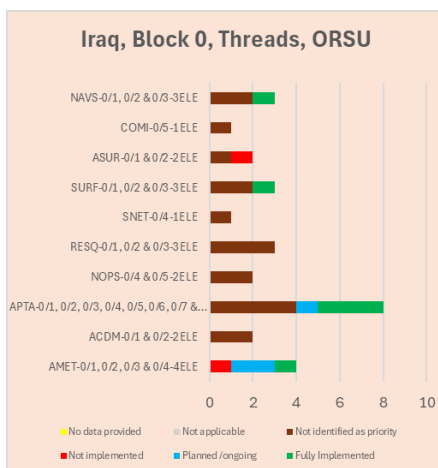
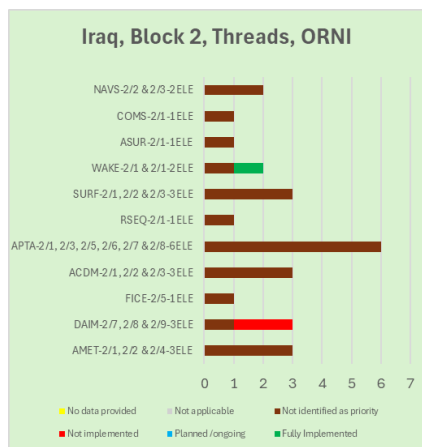
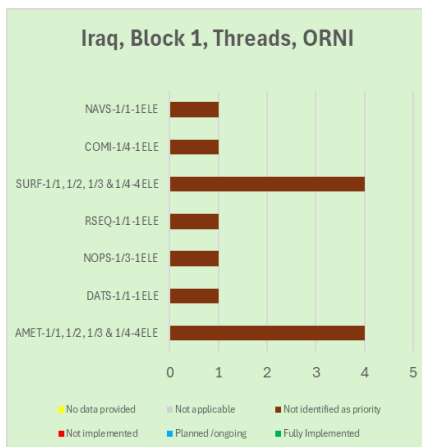
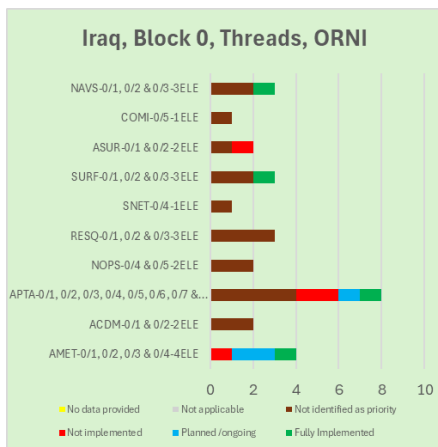
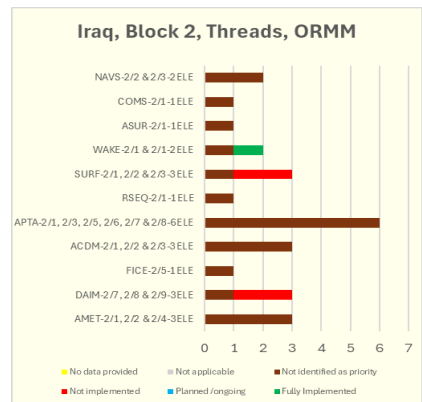
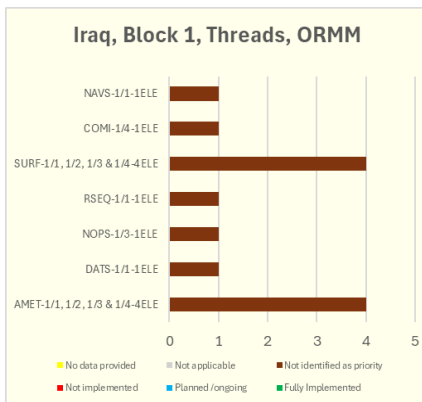
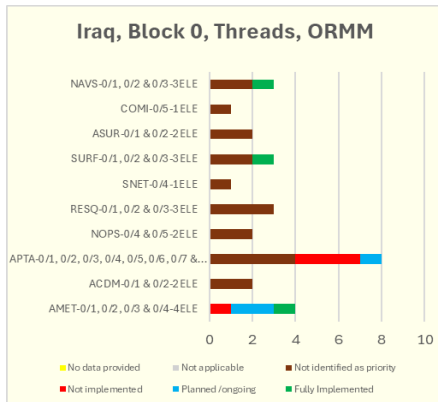
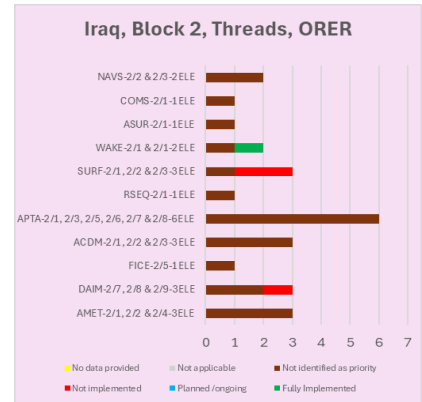
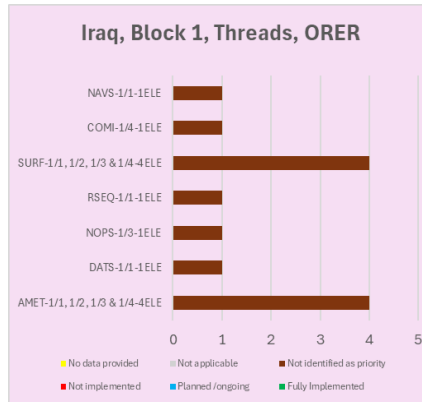
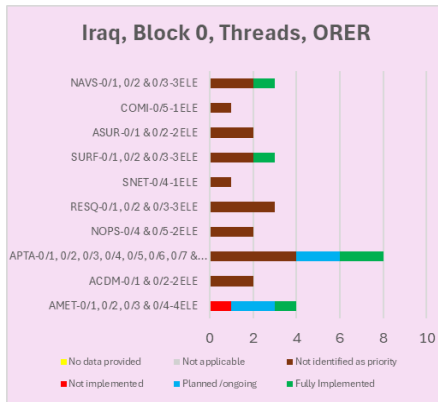


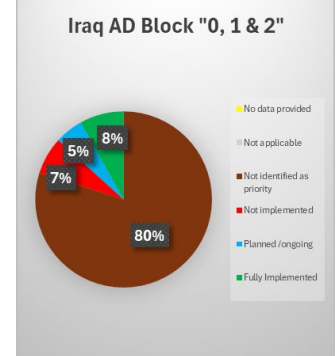
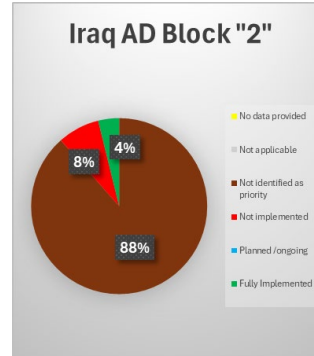
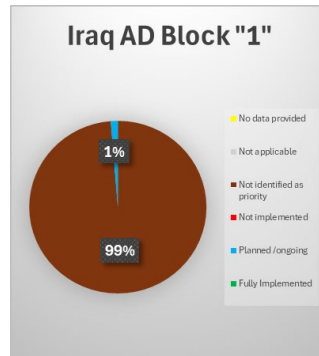
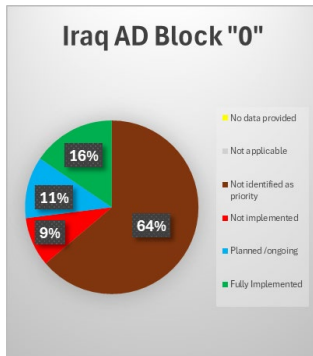
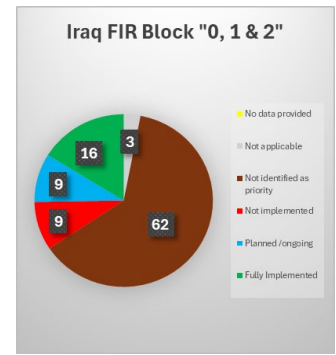
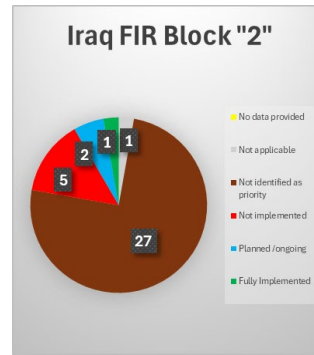
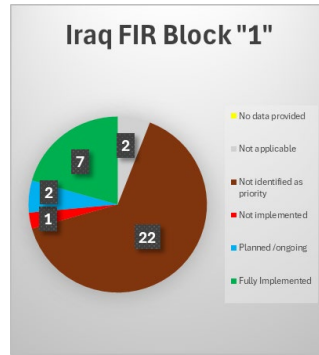
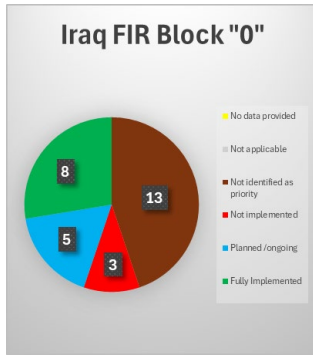




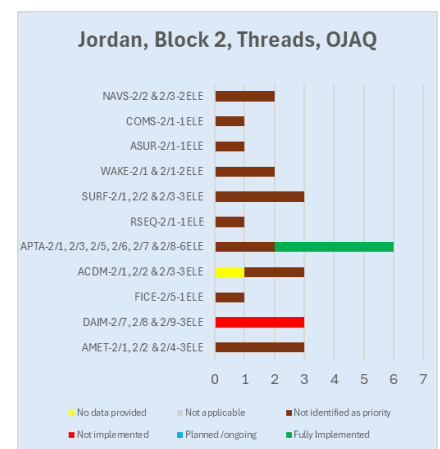
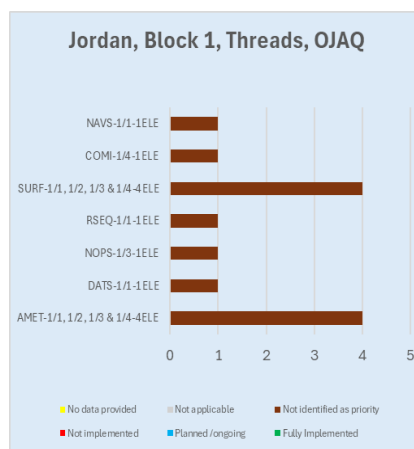
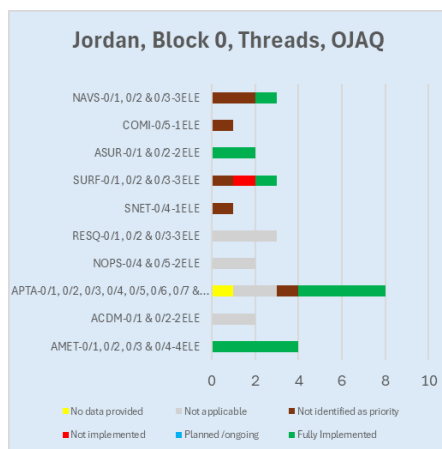
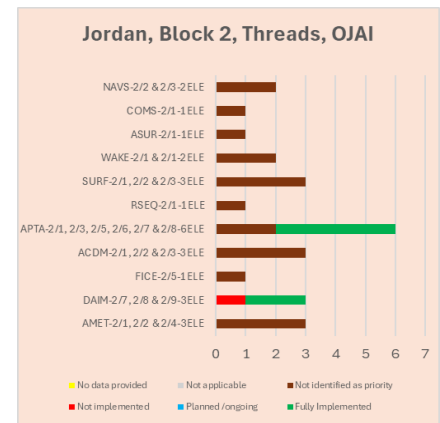
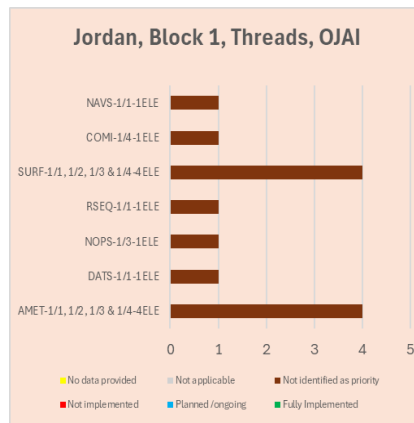
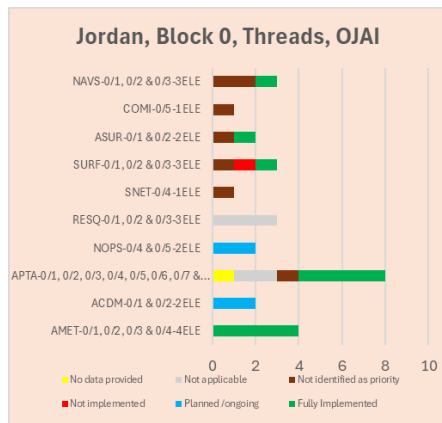
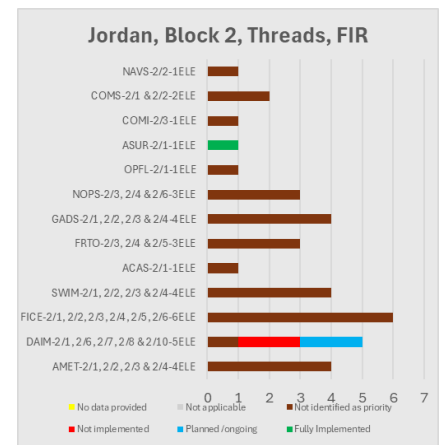
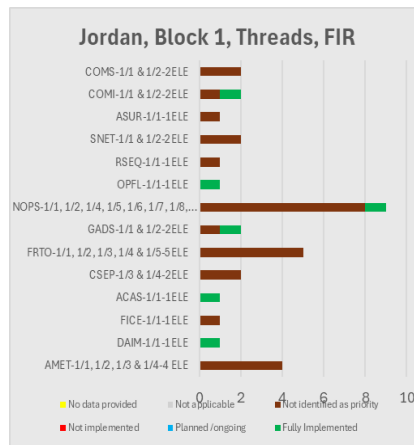
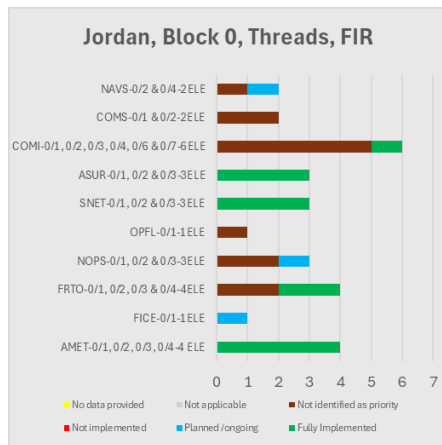
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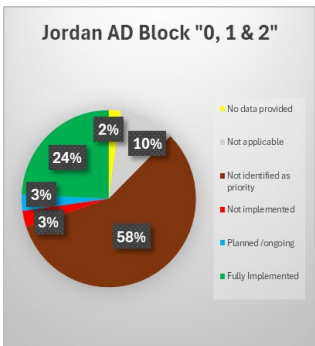
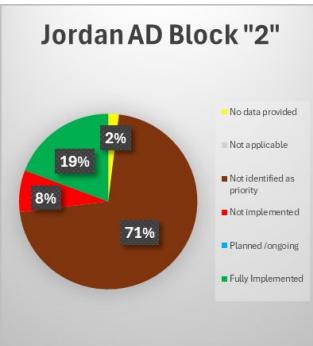
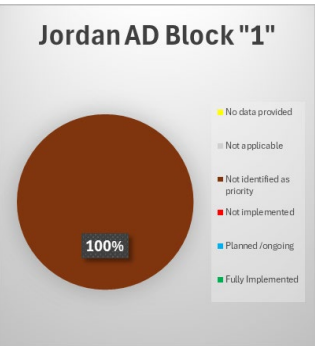
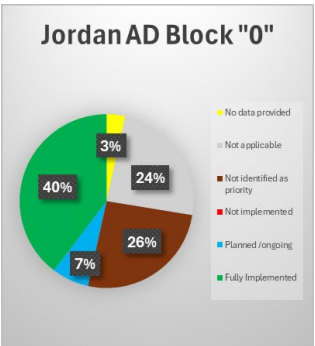
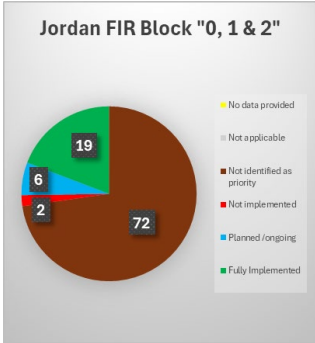
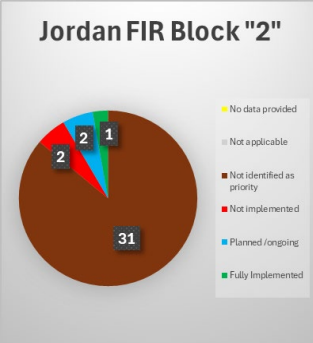
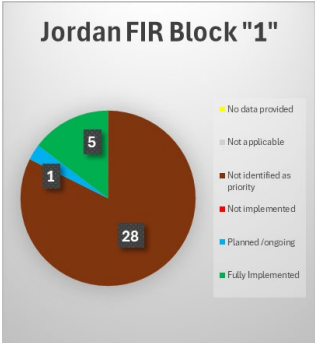
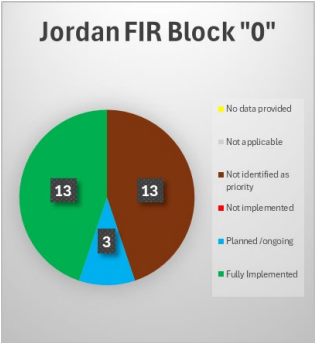




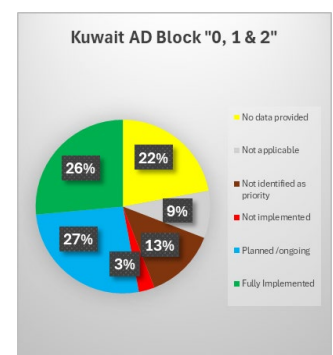
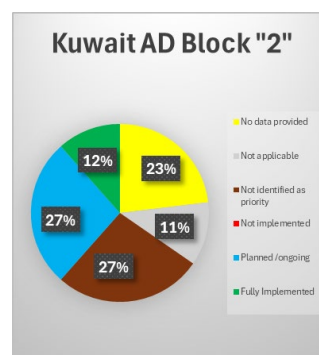
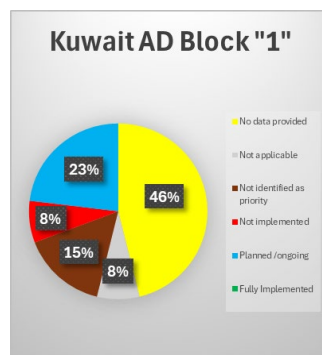
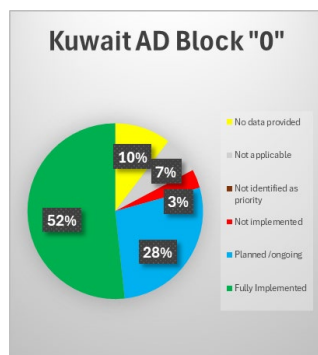
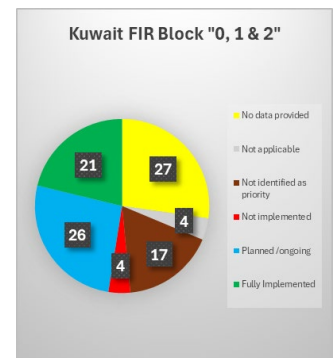
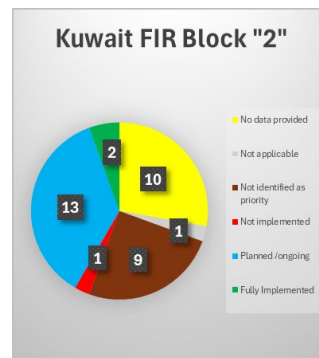
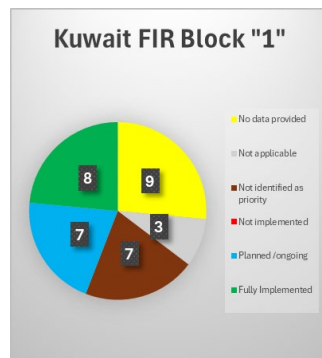
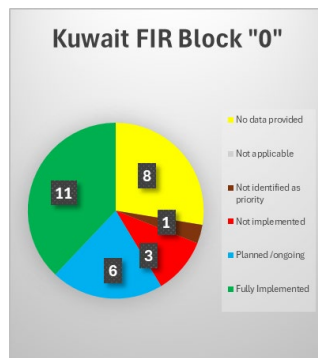
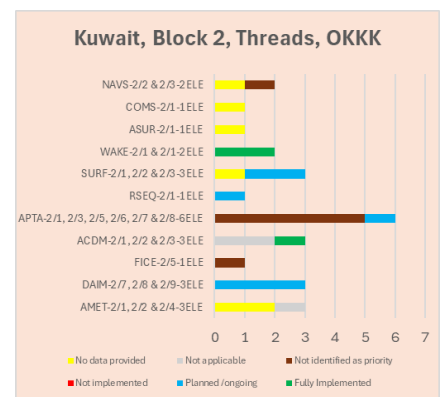
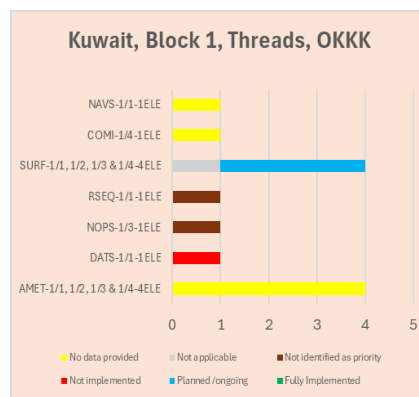
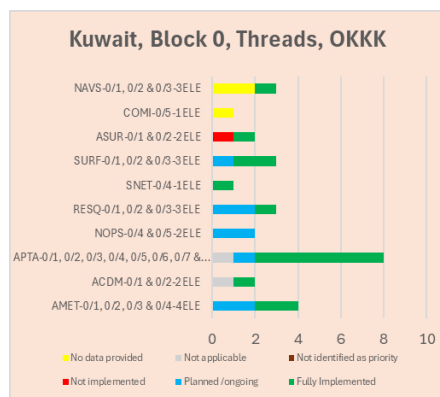
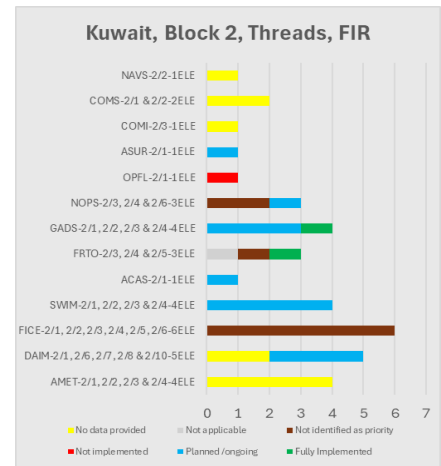
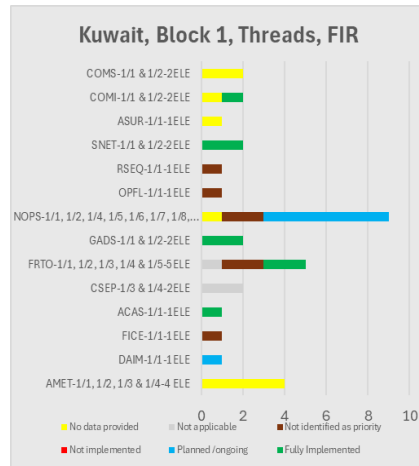
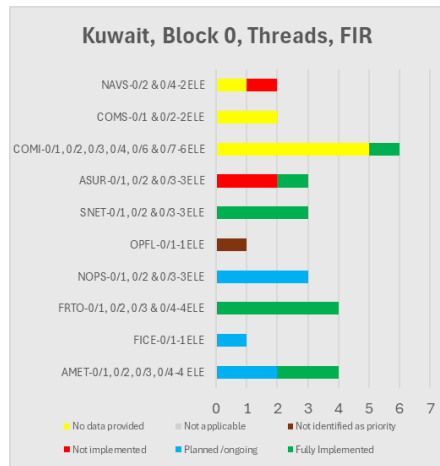


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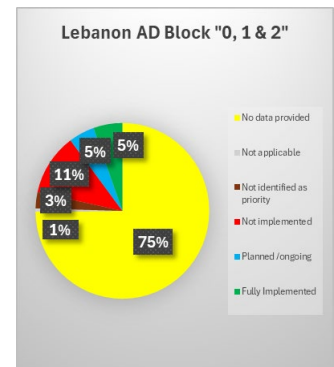
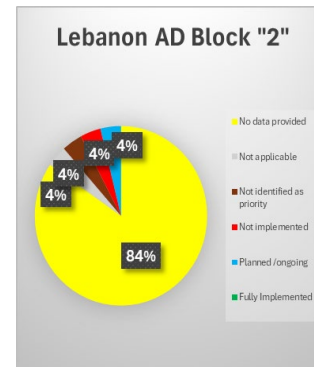
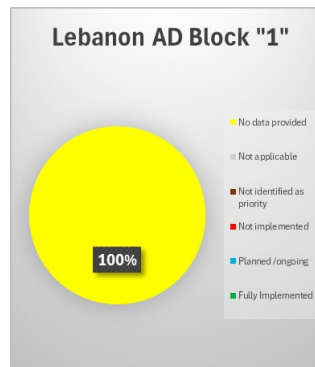
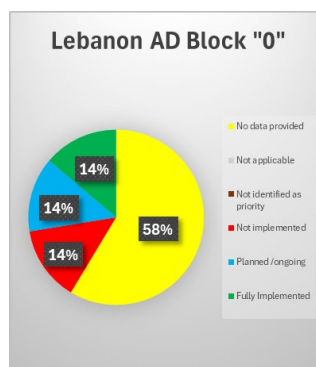
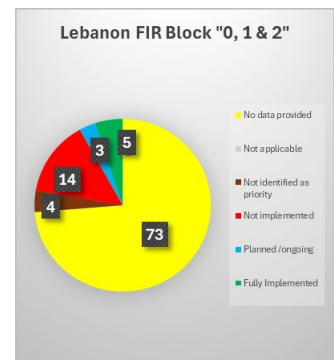
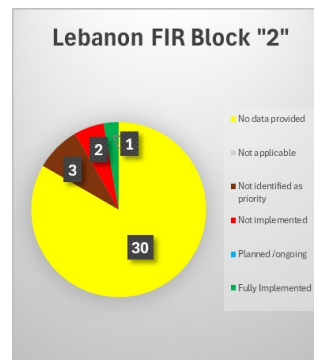
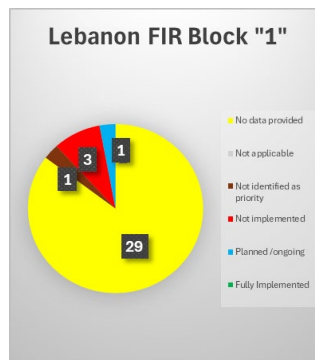
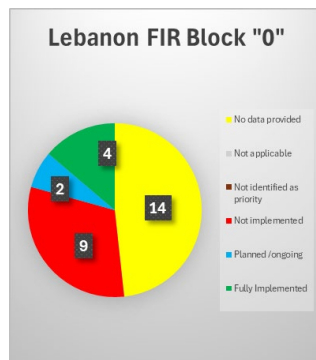
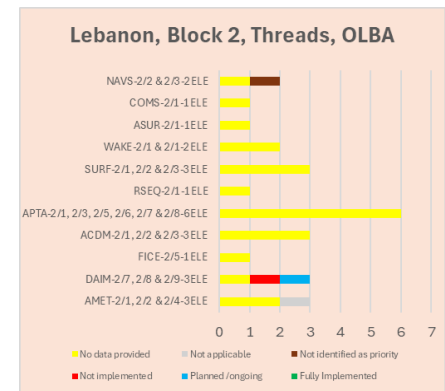
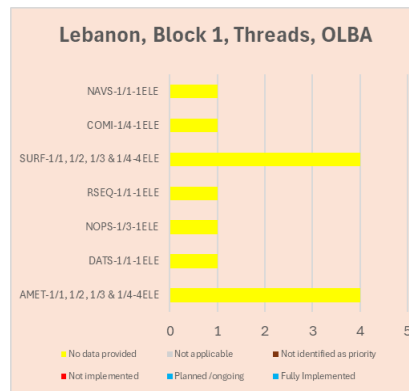
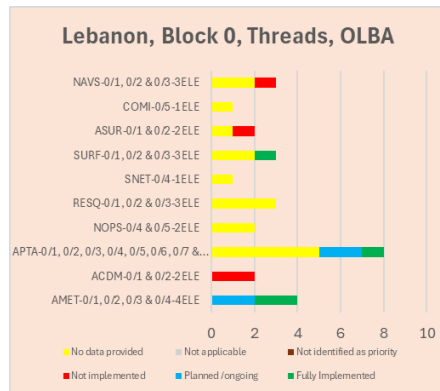
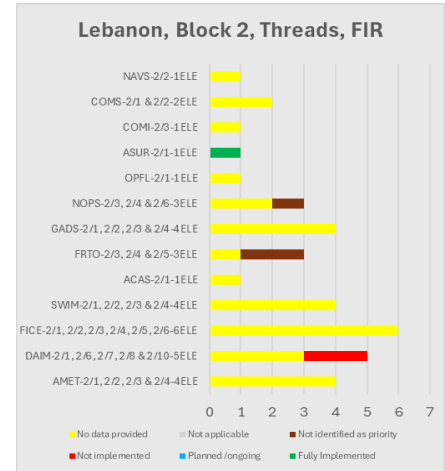
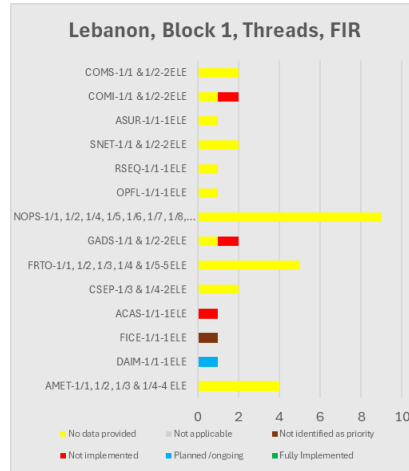
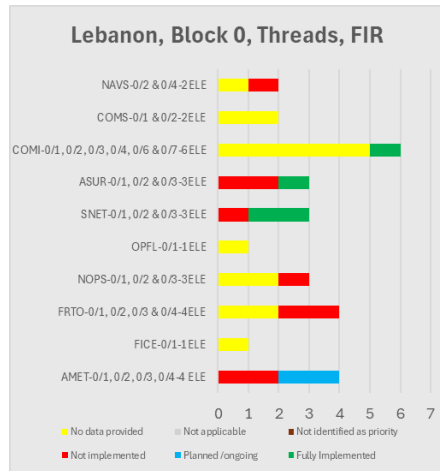




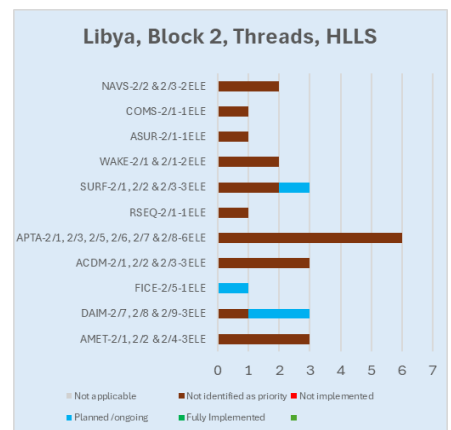
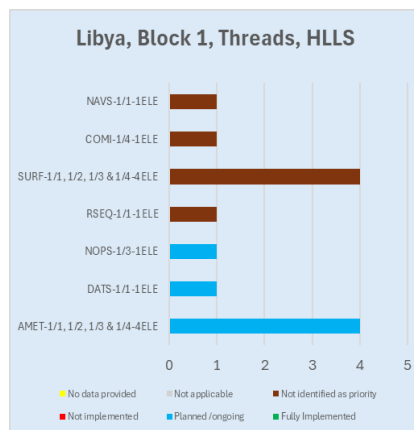
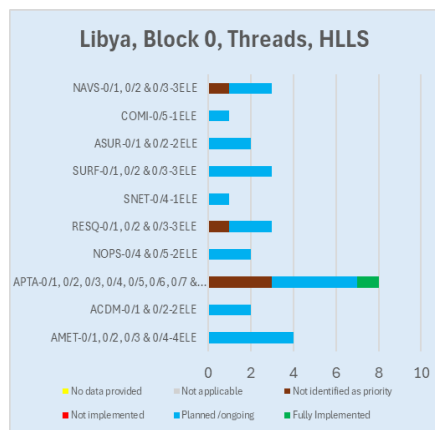
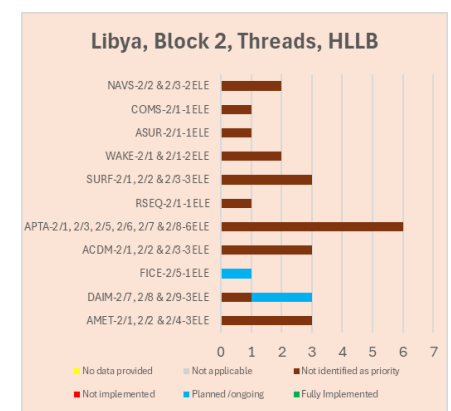
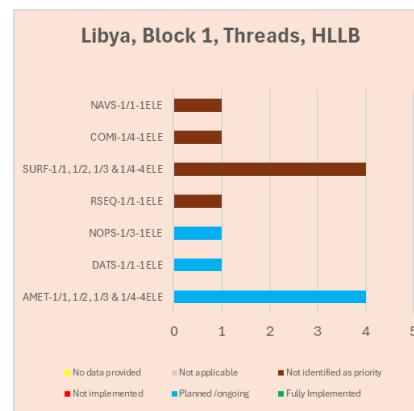
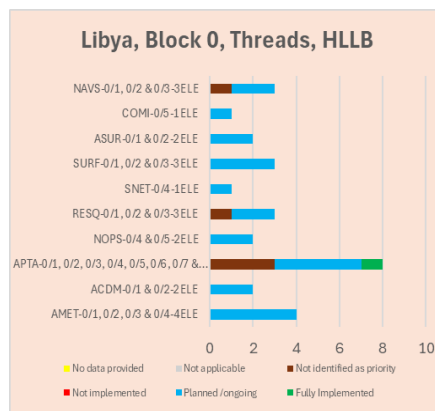
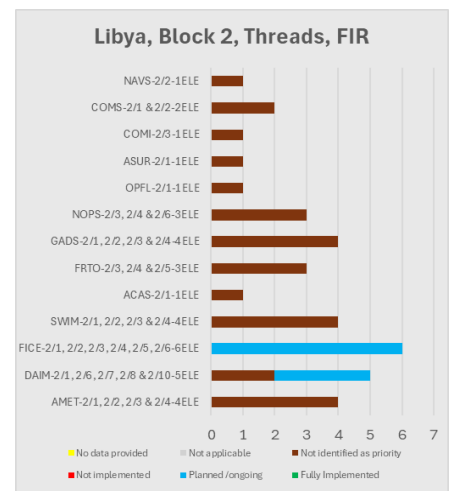
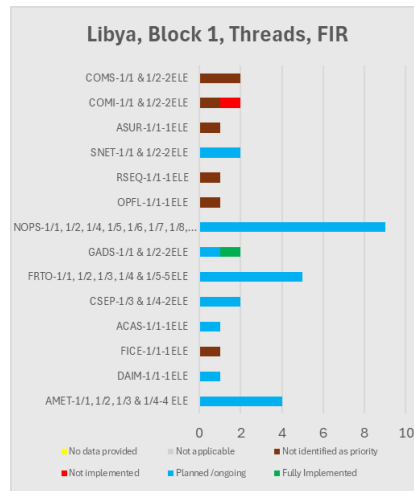
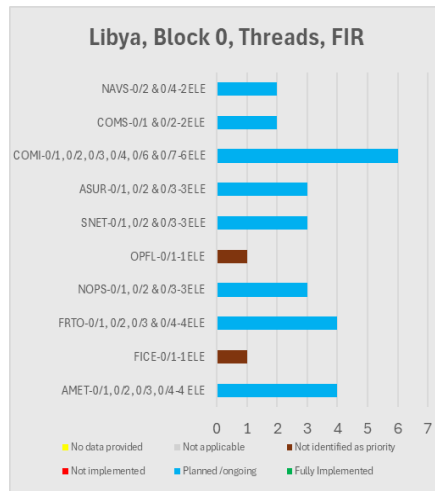
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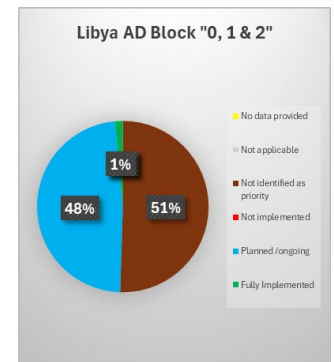
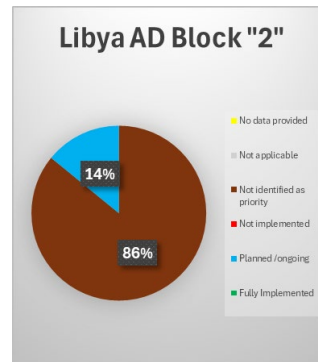
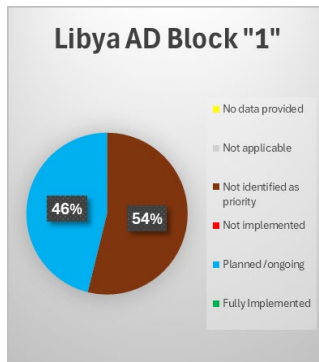
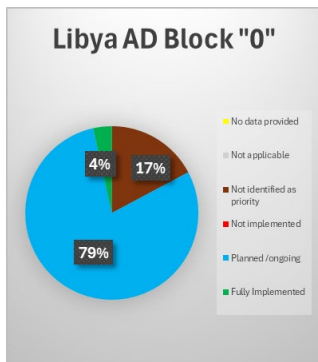
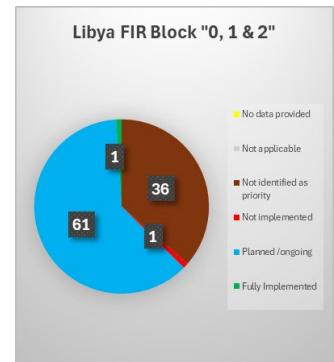
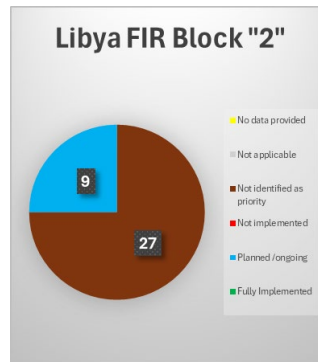
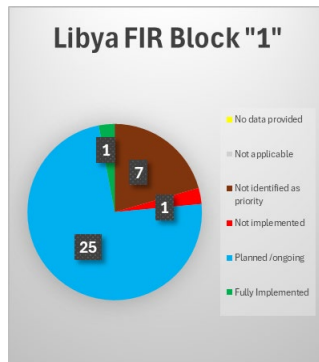
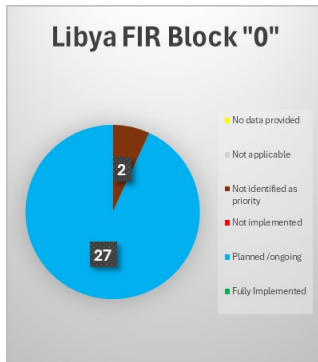
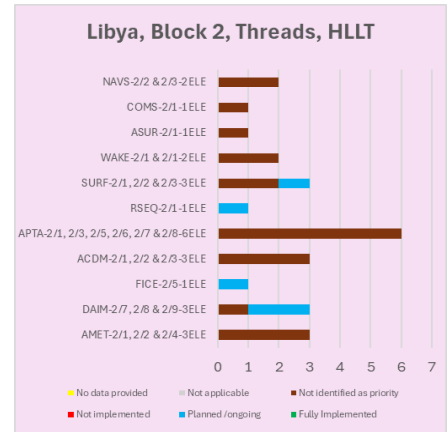
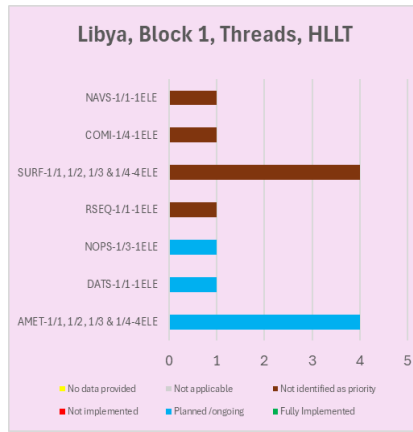
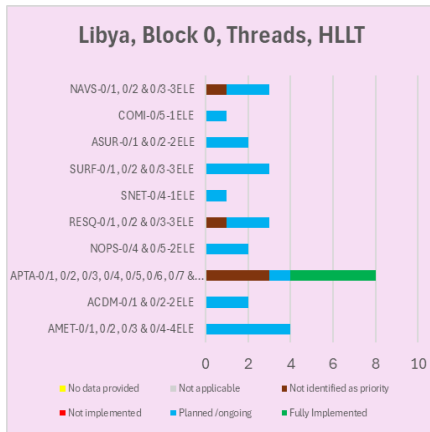


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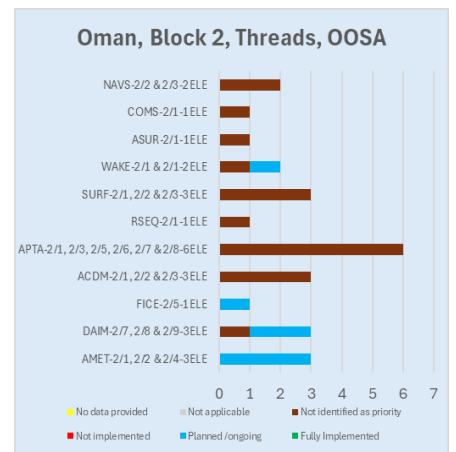
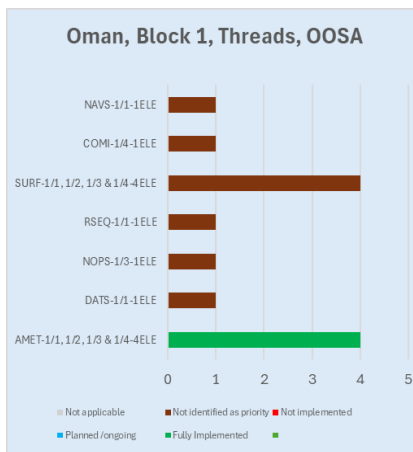
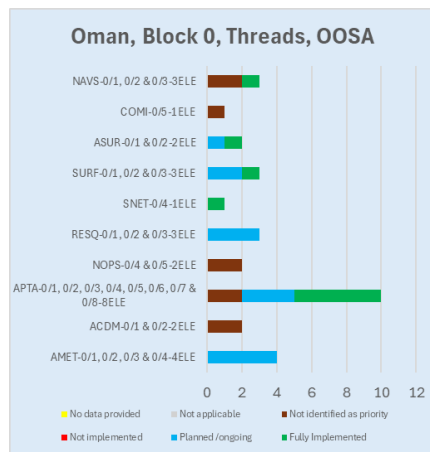
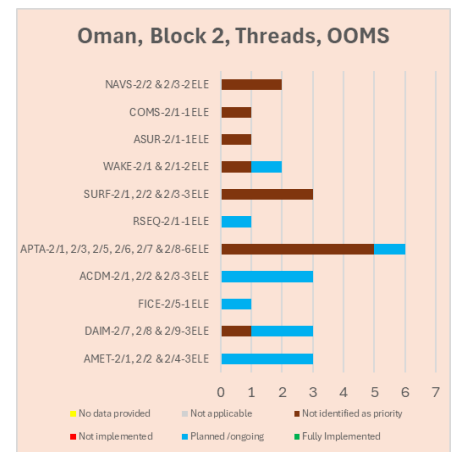
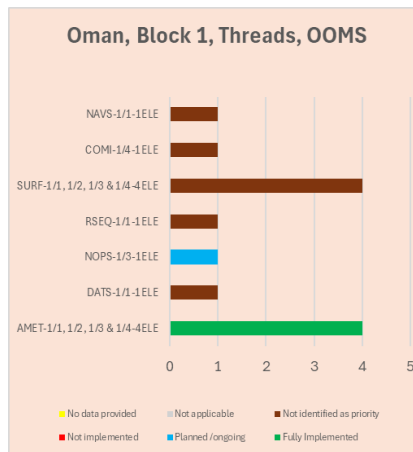
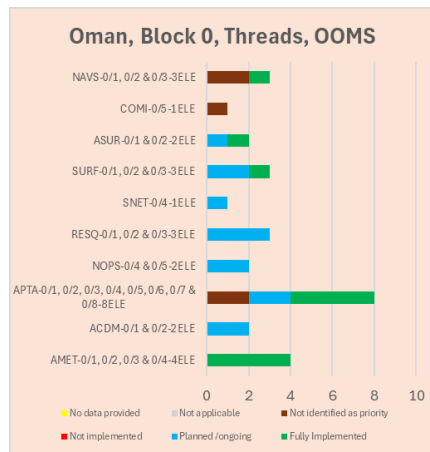
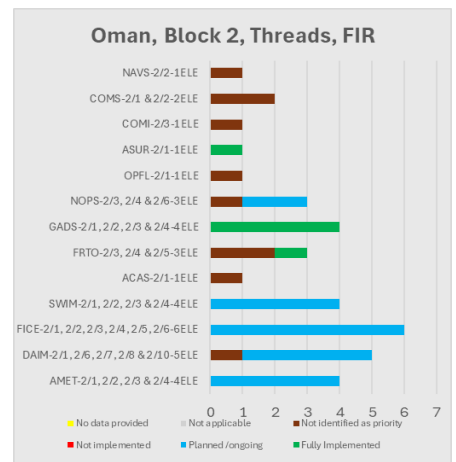
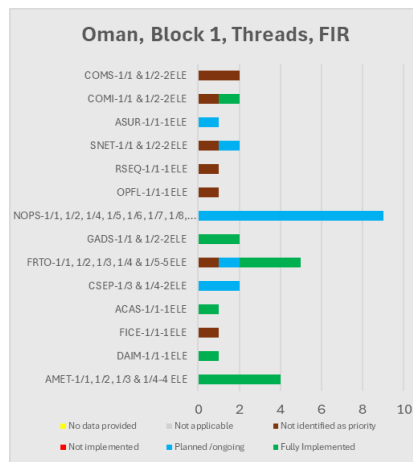
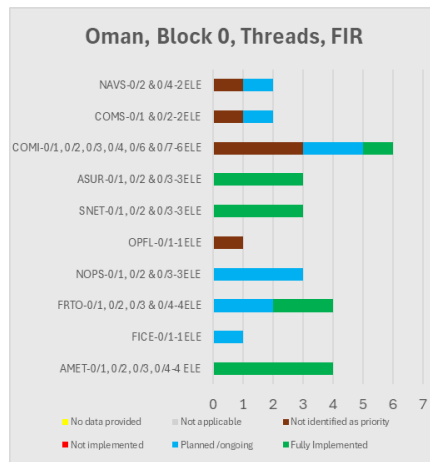


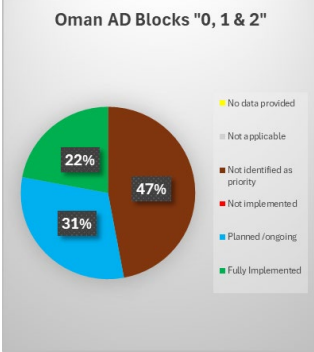
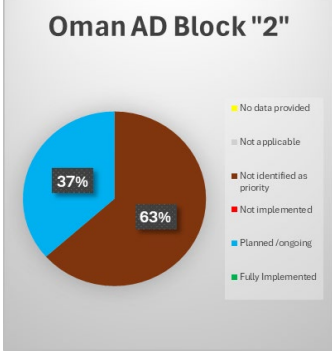
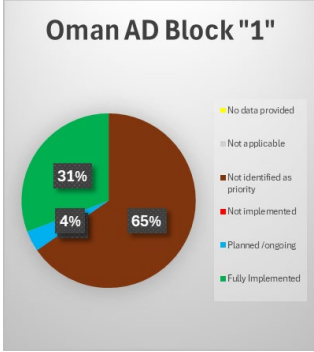
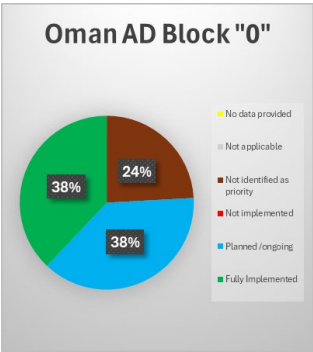
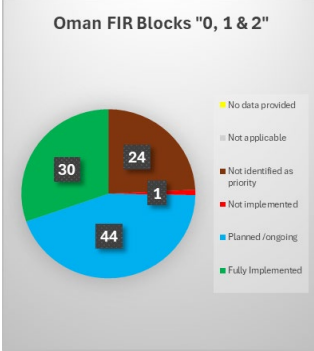
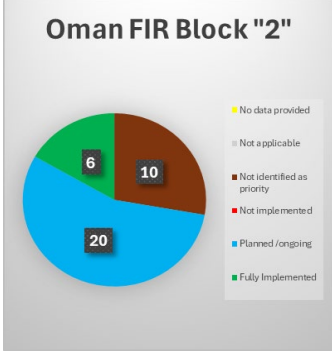
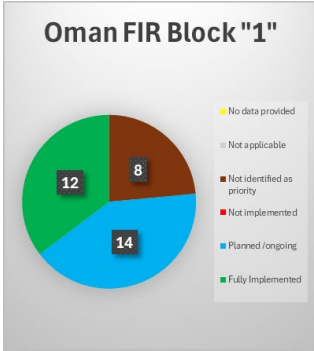
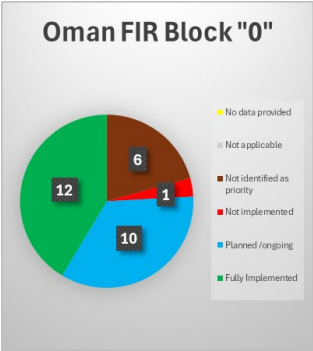
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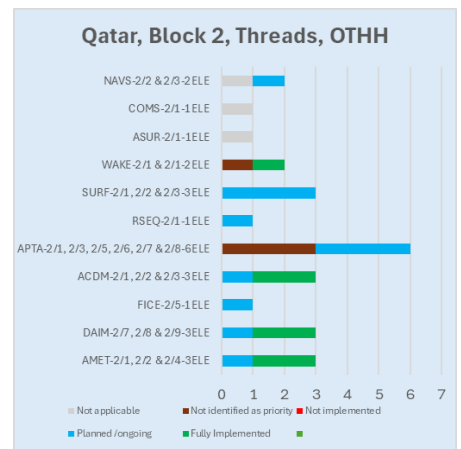
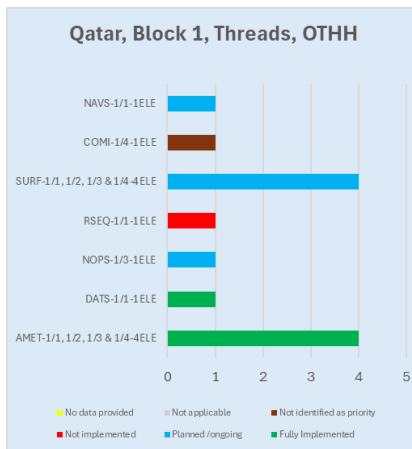
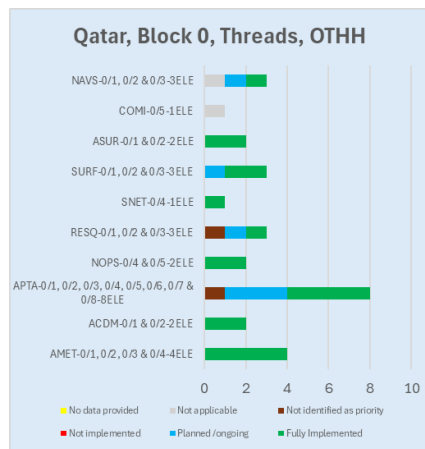
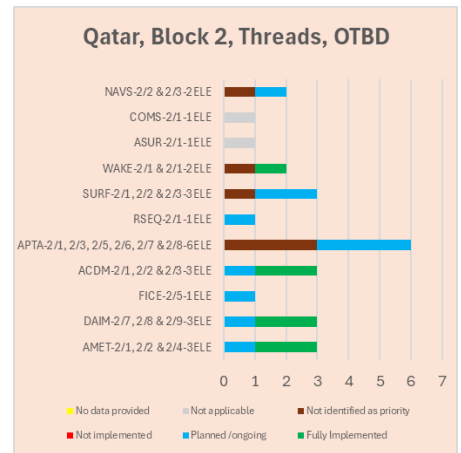
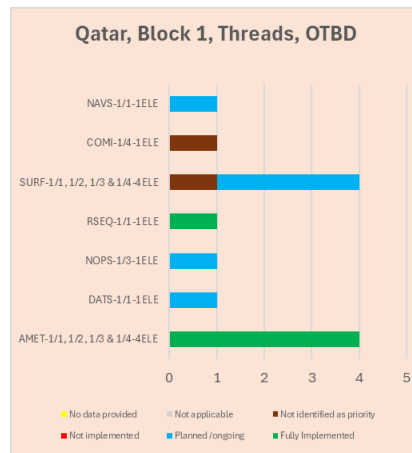
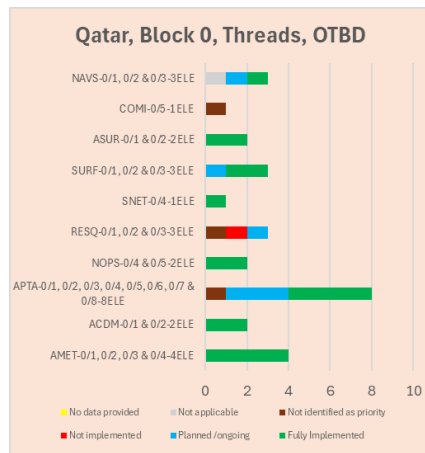
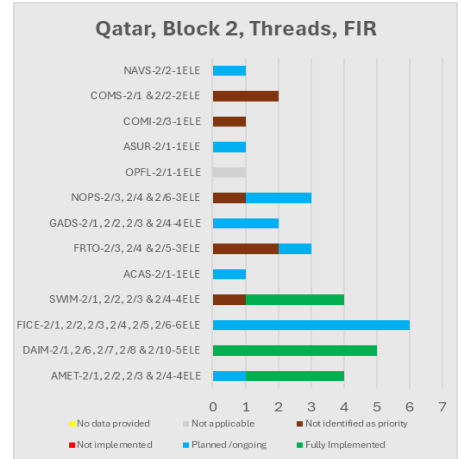
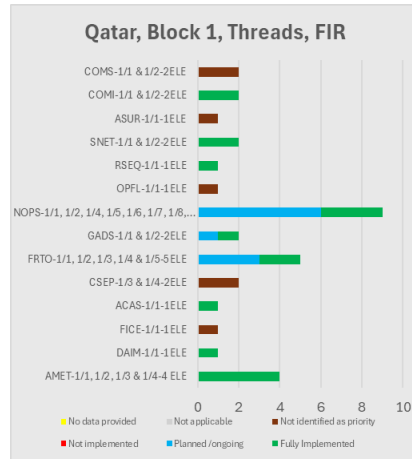
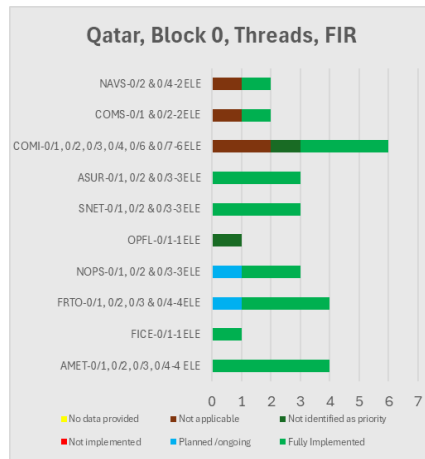


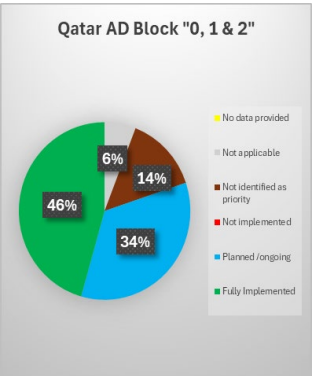
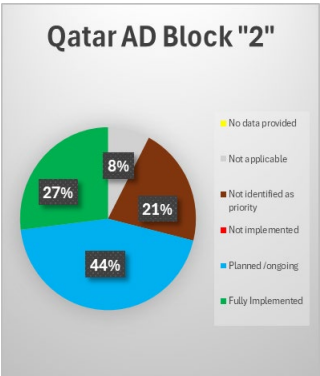
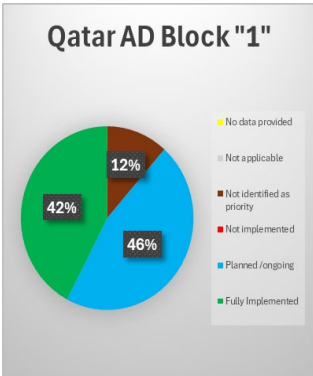
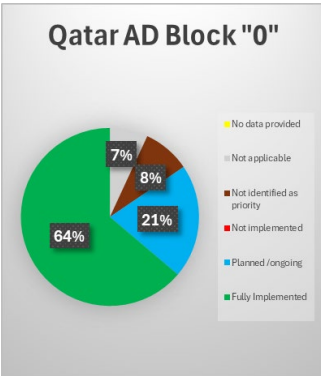
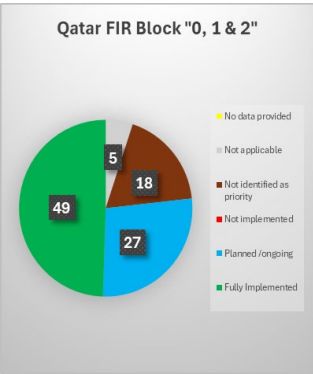
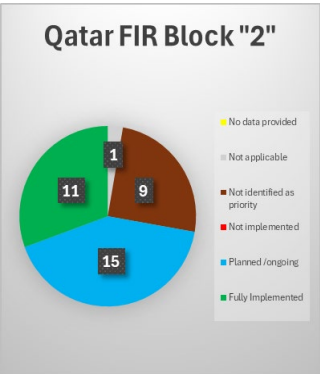
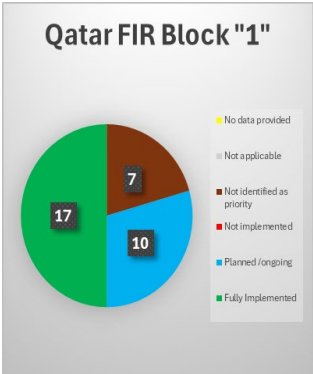
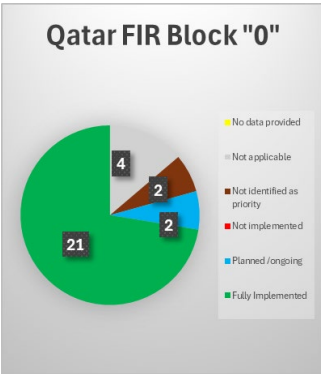
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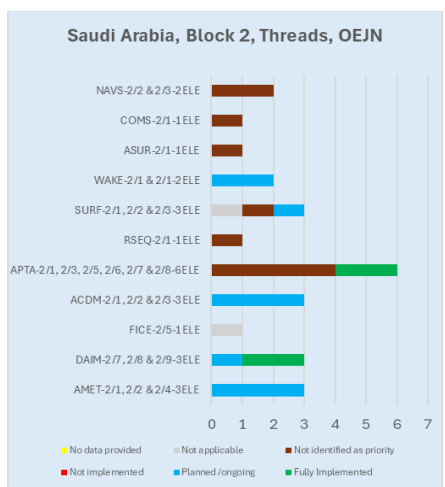
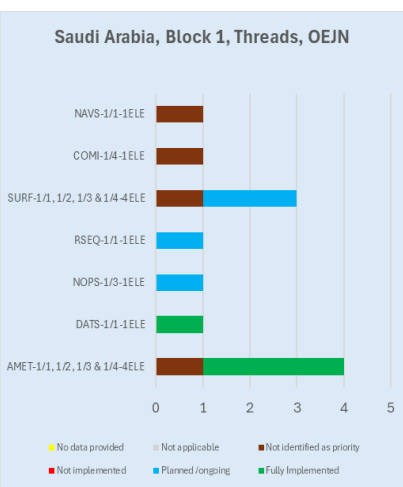
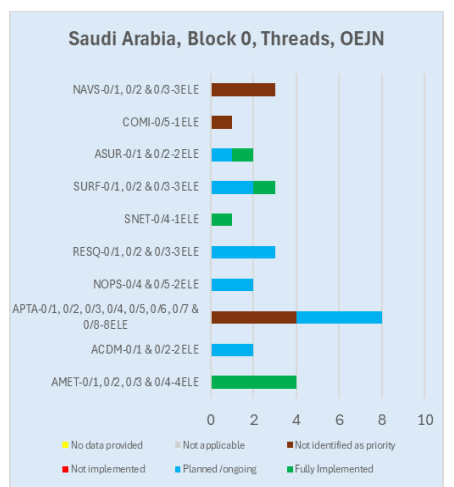
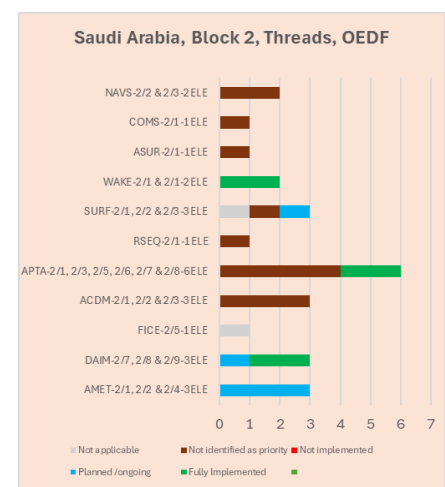
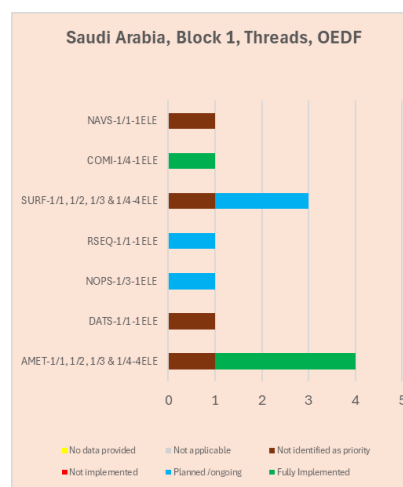
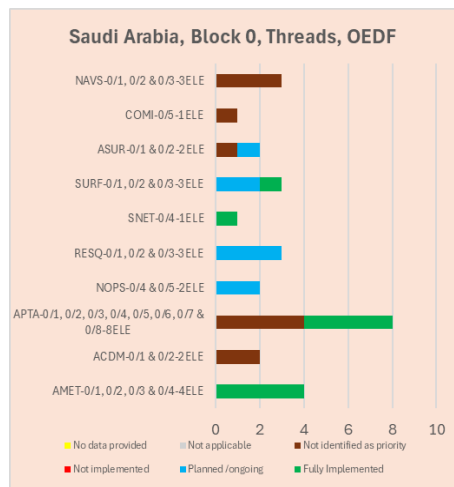
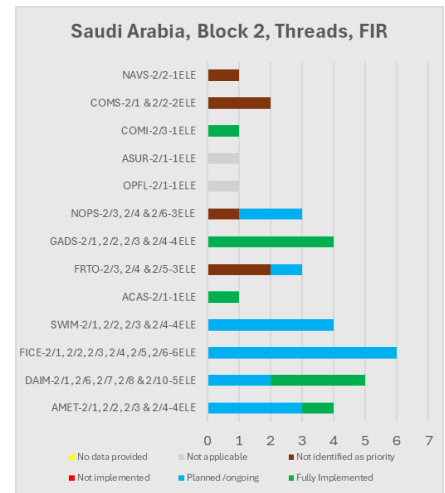
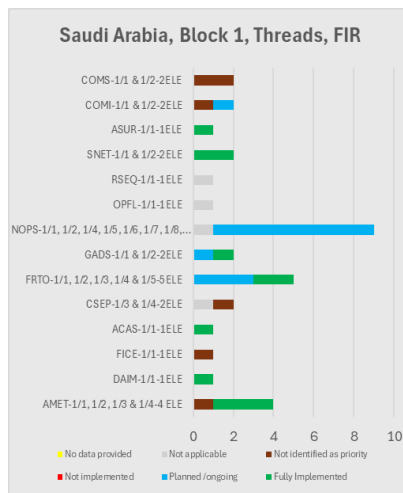
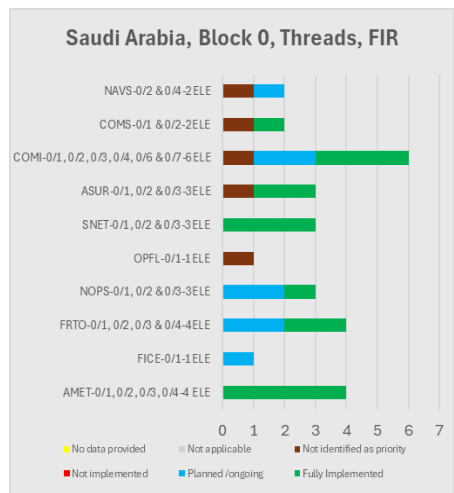


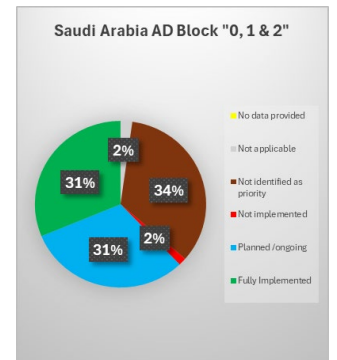
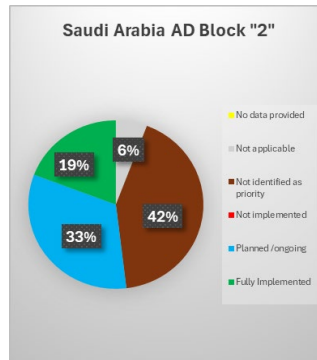
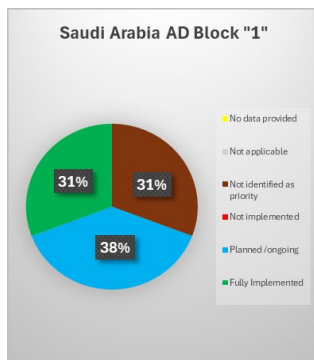
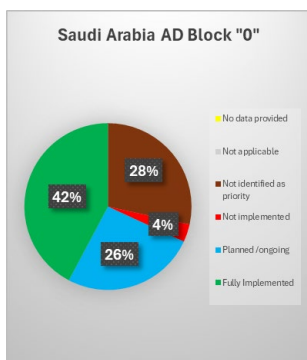
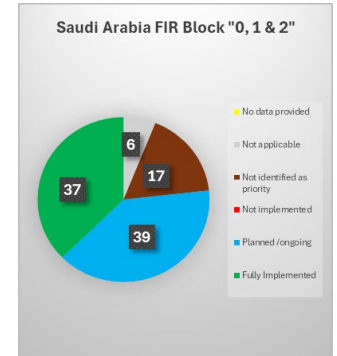
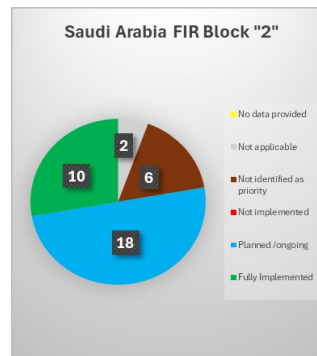
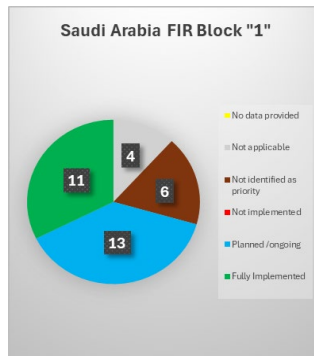
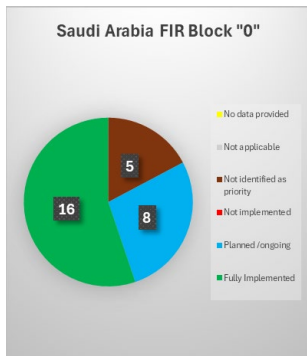
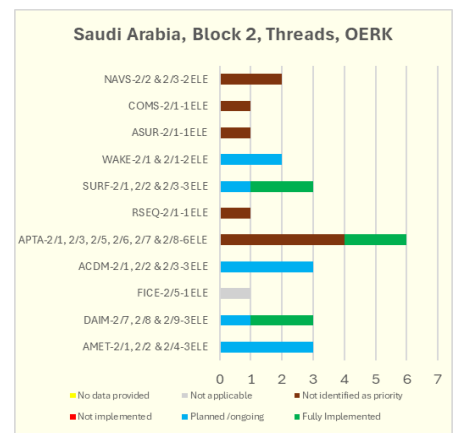
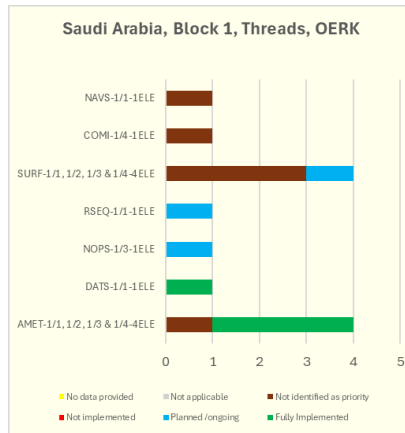
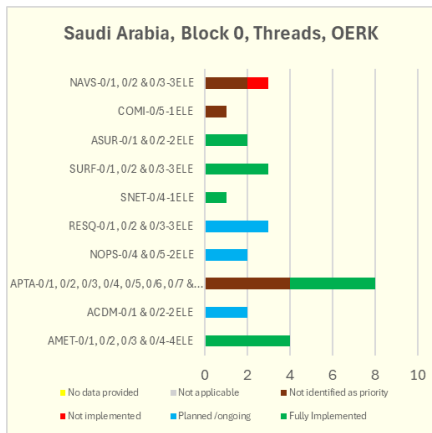
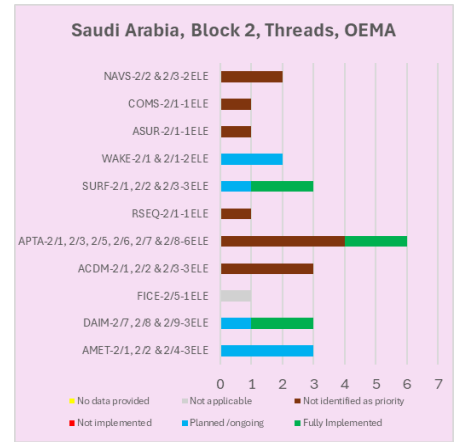
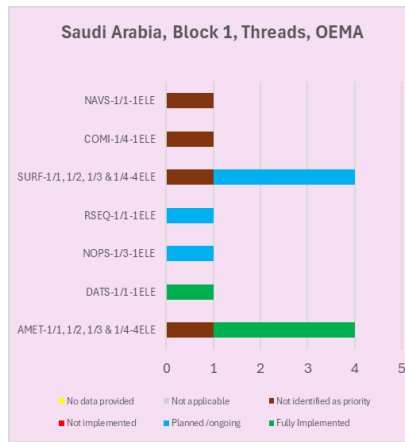
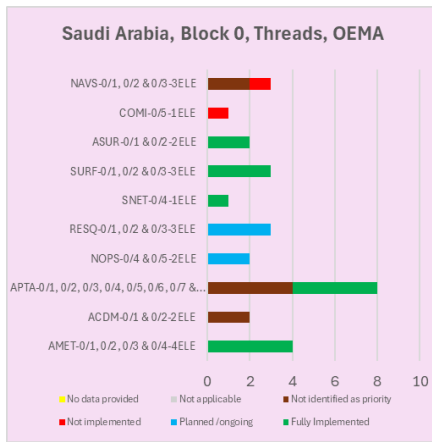
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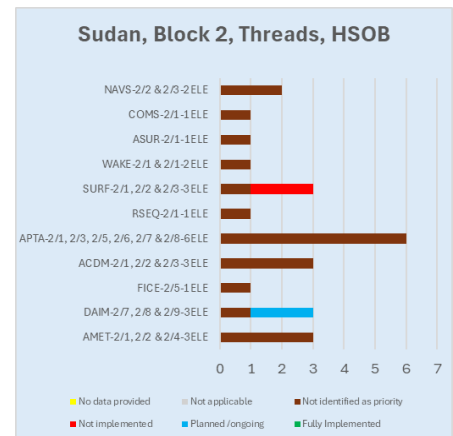
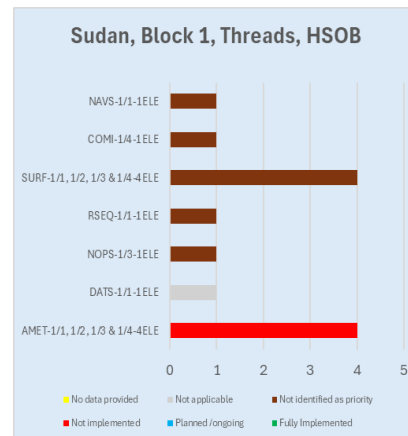
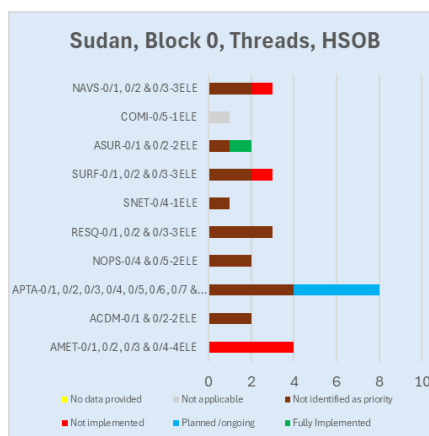
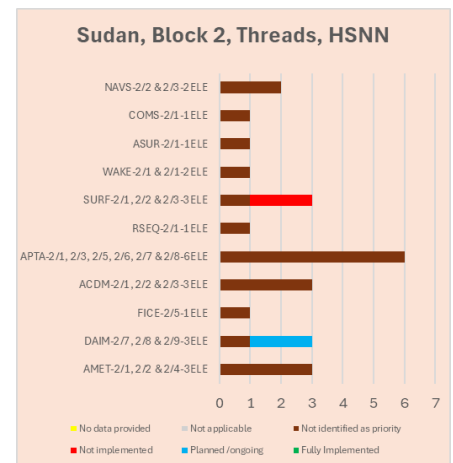
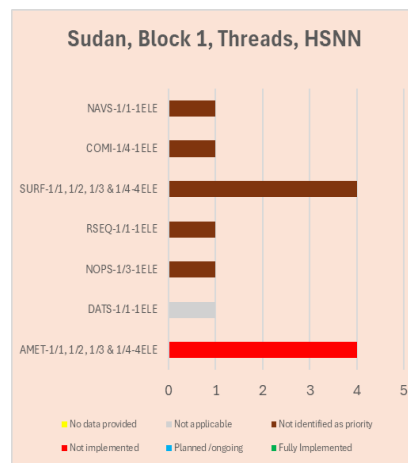
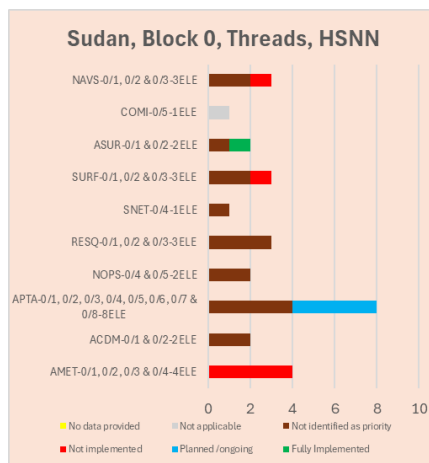
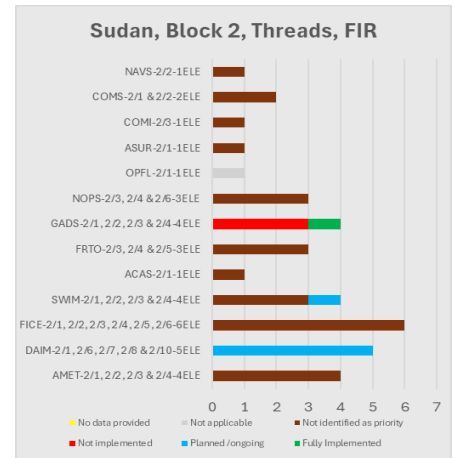
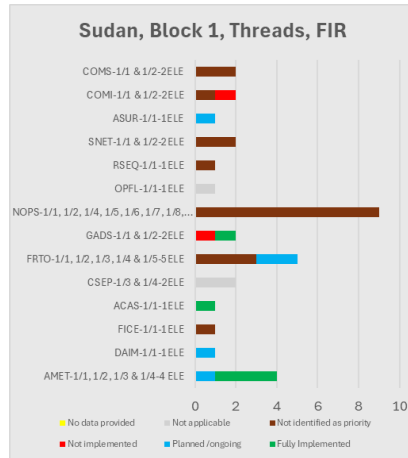
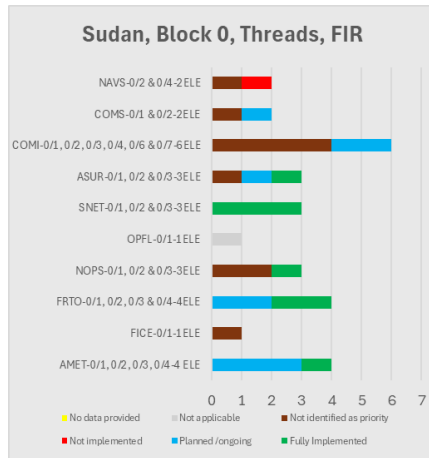


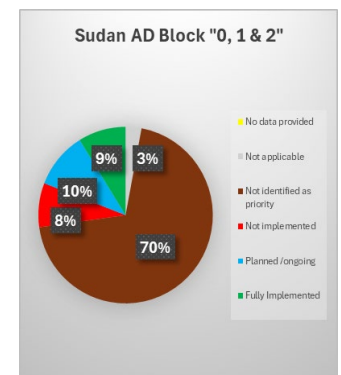
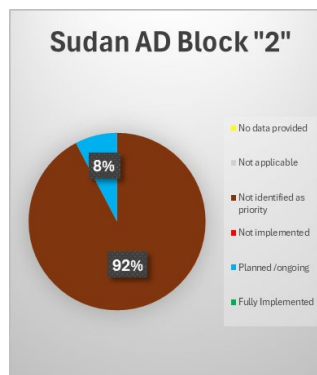
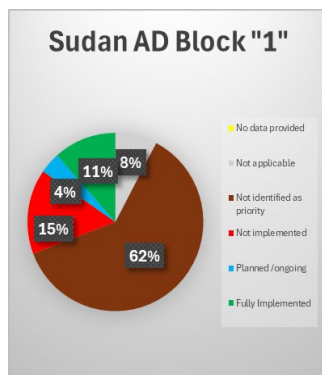
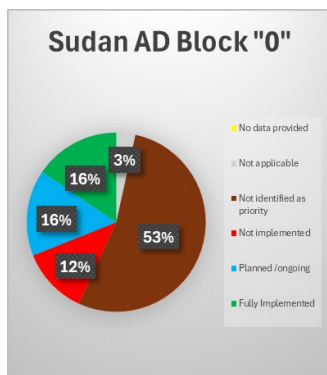
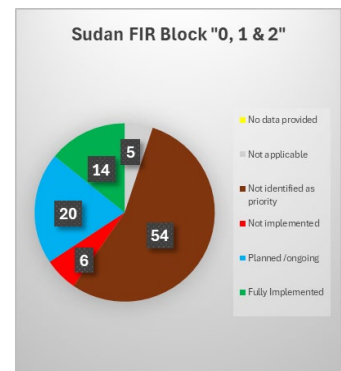
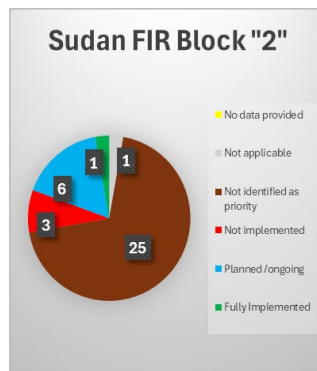
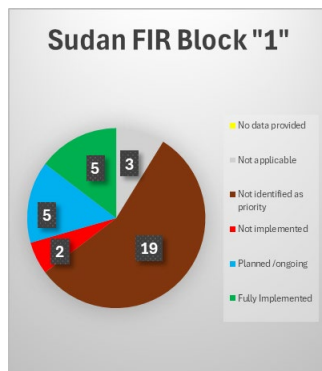
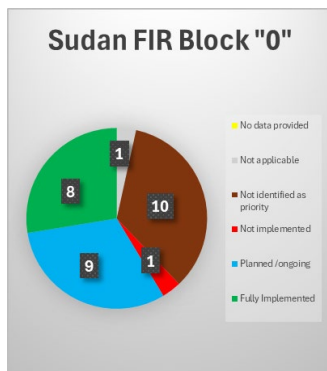
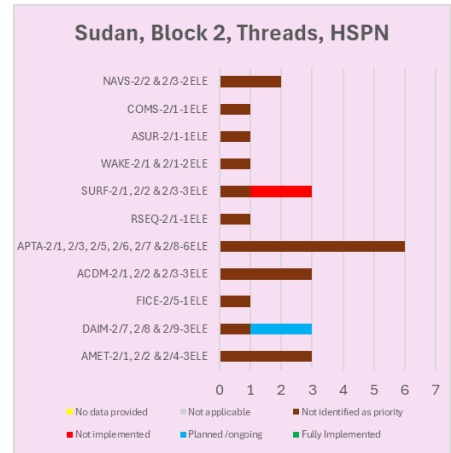
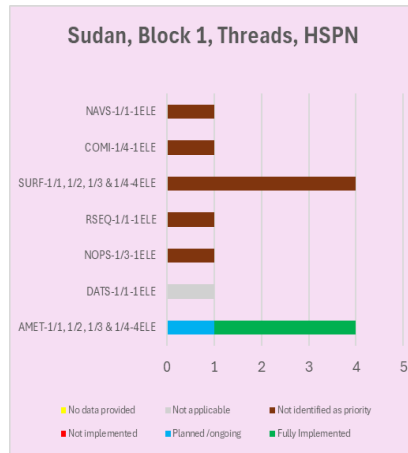
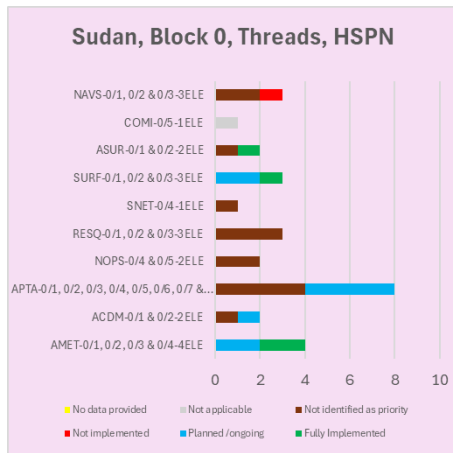
2.1.11 Saudi Arabia



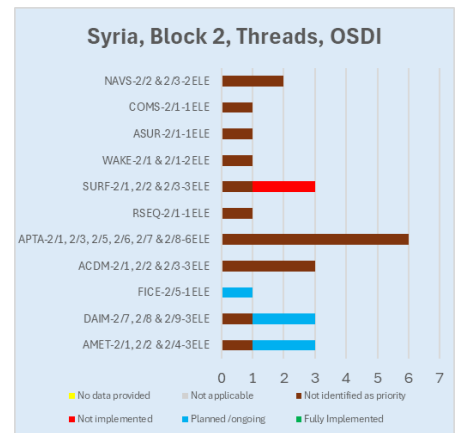
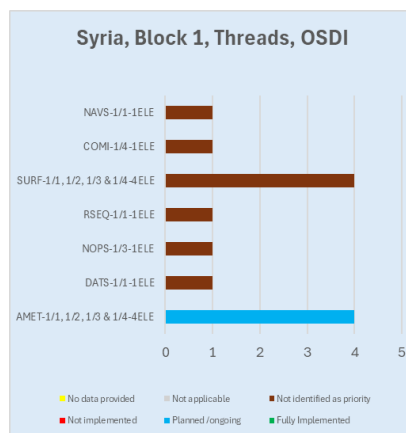
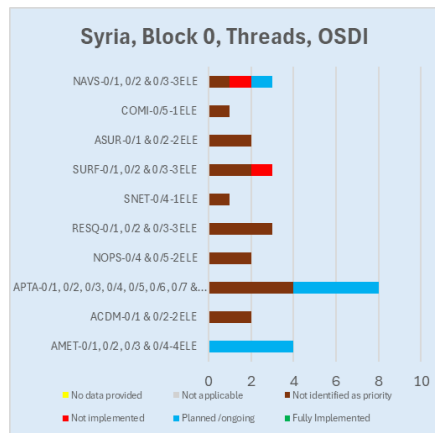
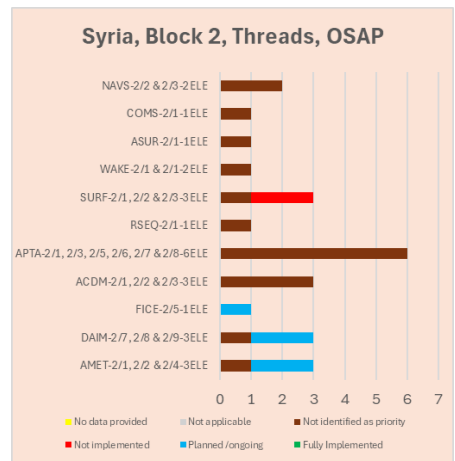
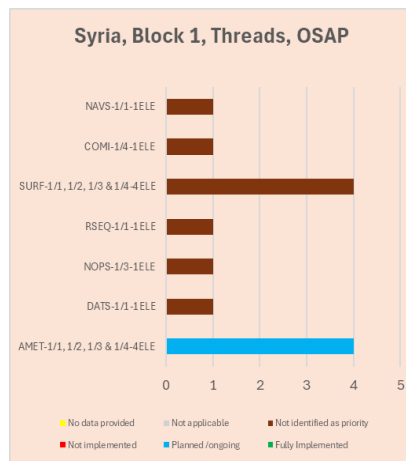
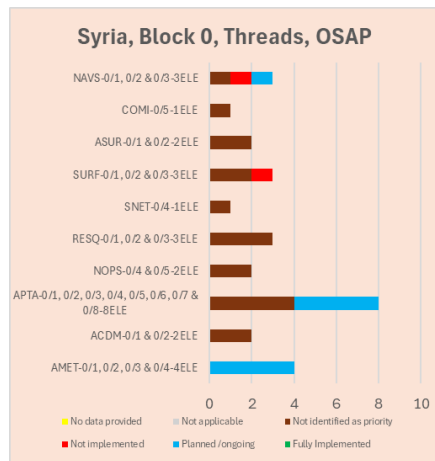
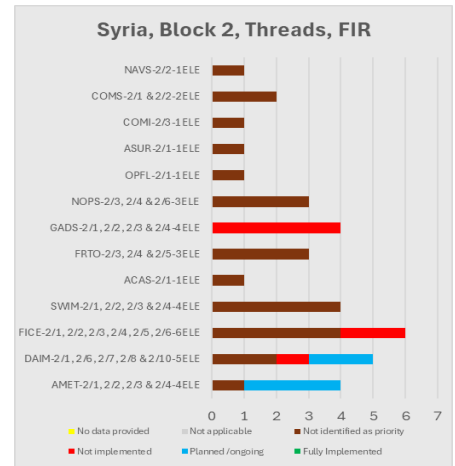
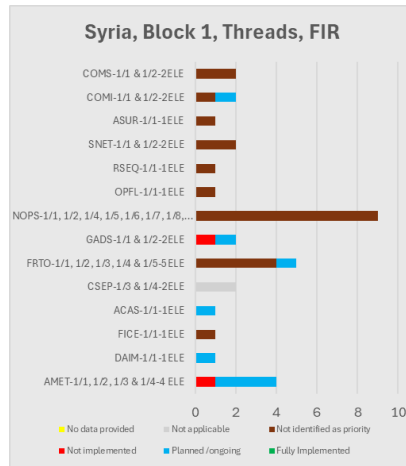
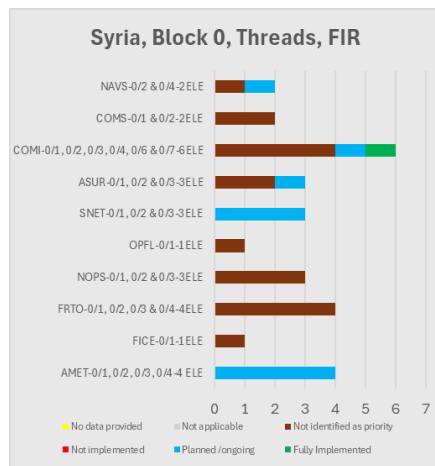


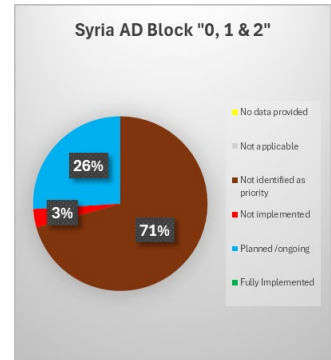
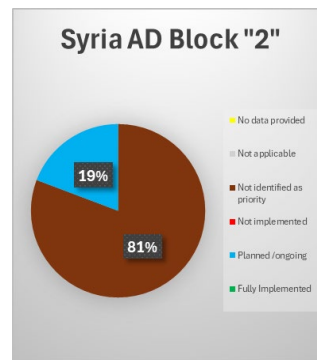
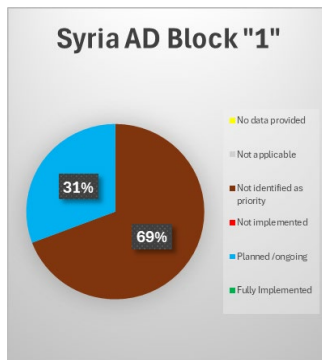
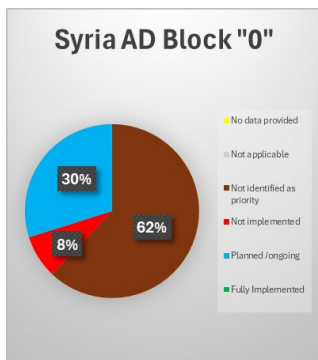
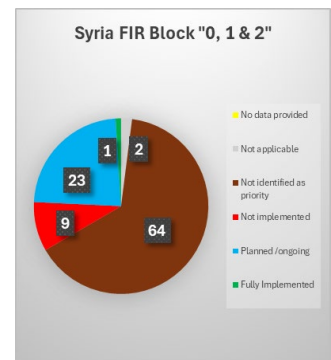
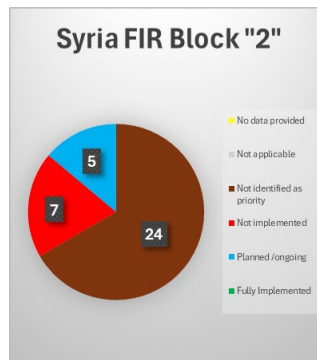
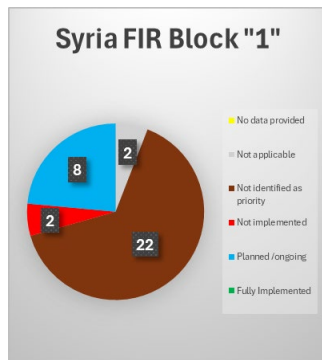
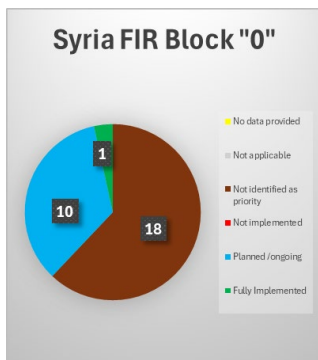
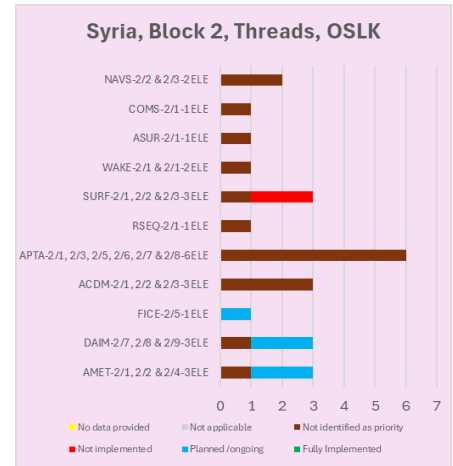
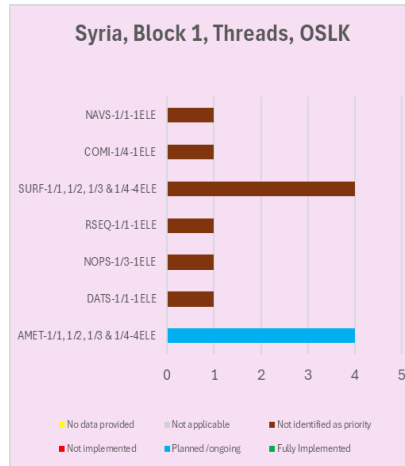
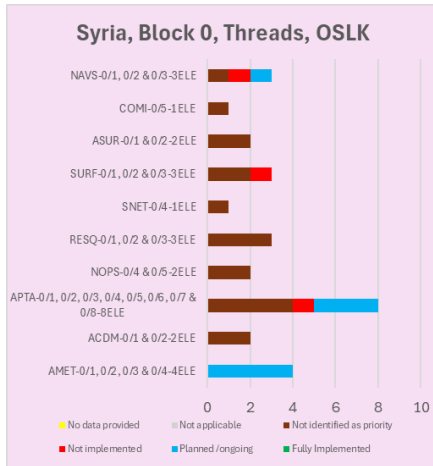
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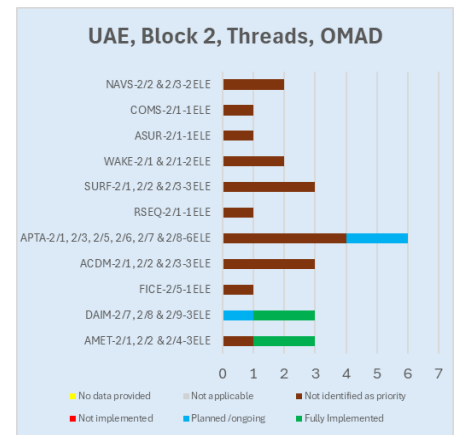
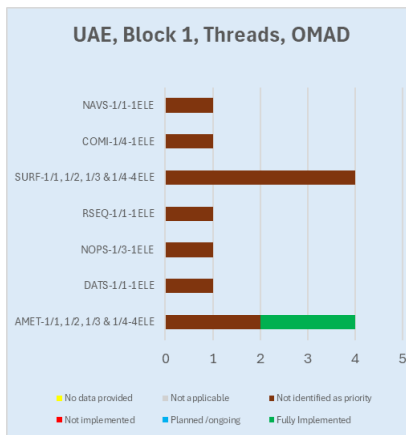
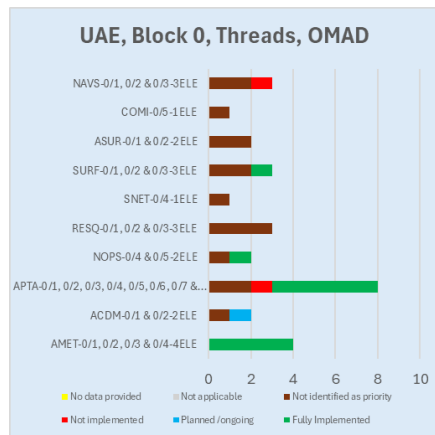
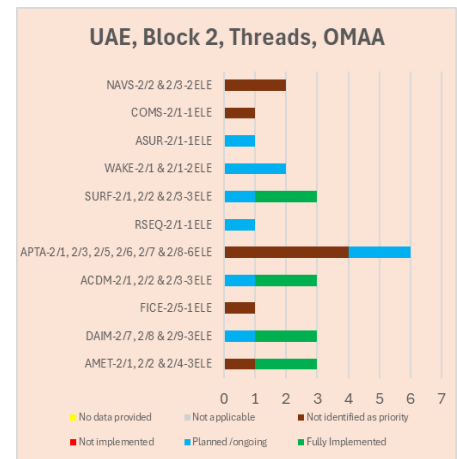
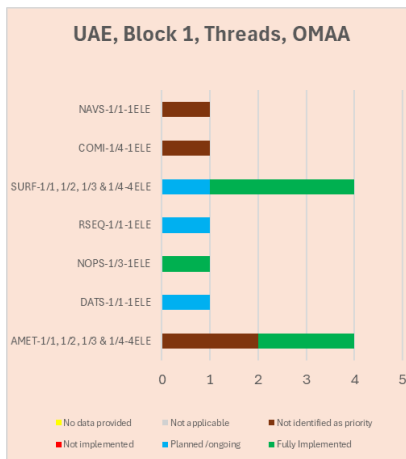
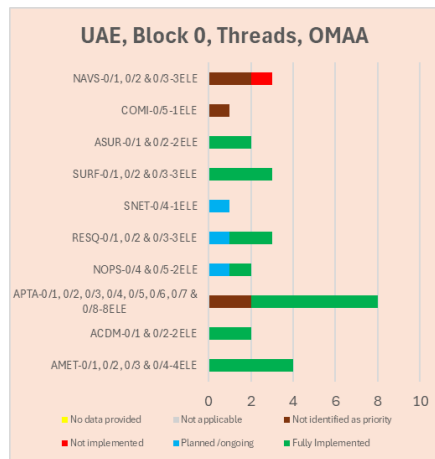
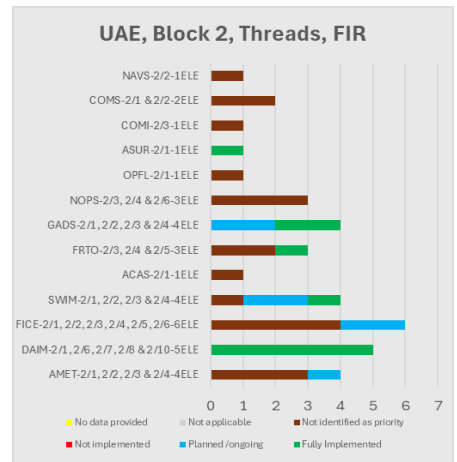
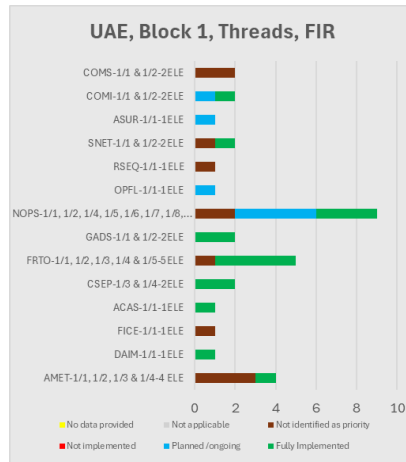
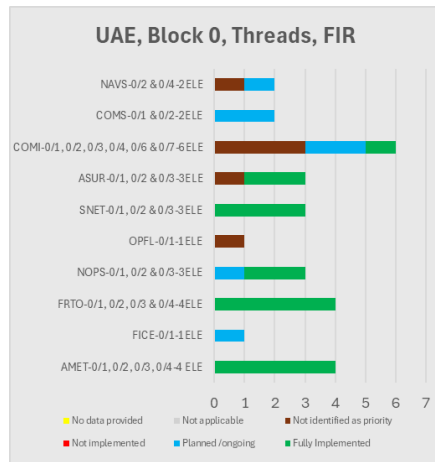


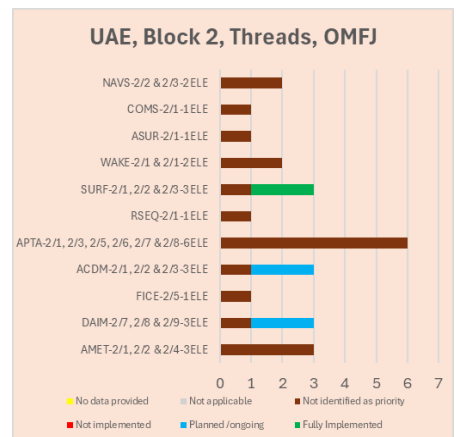
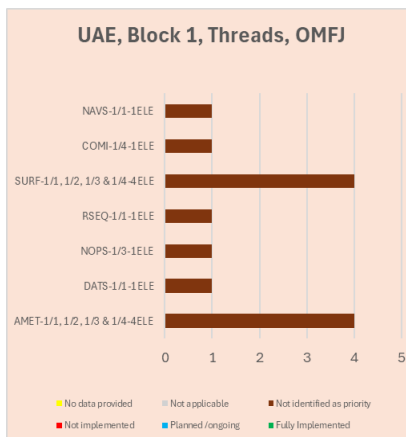
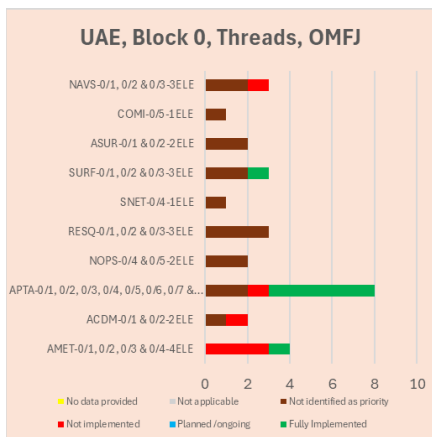
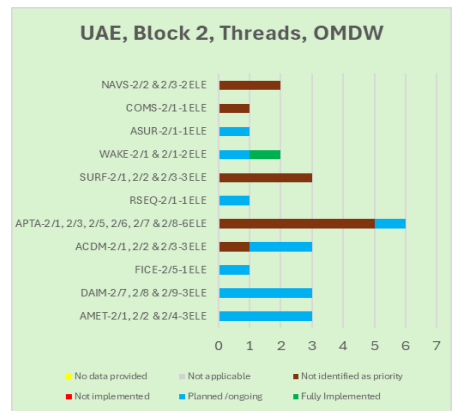
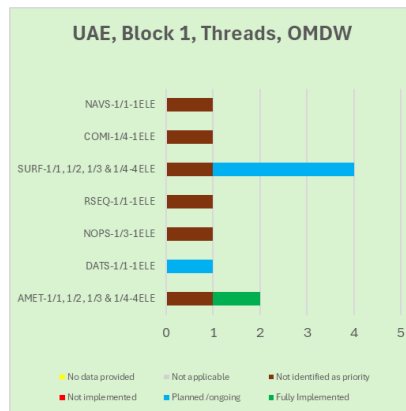
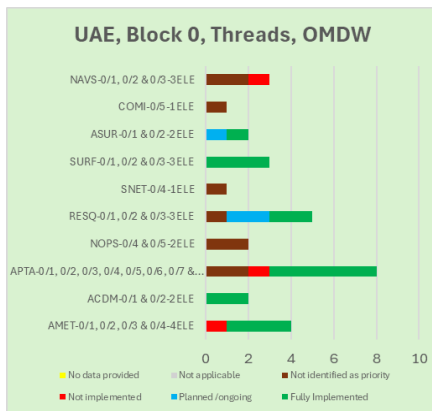
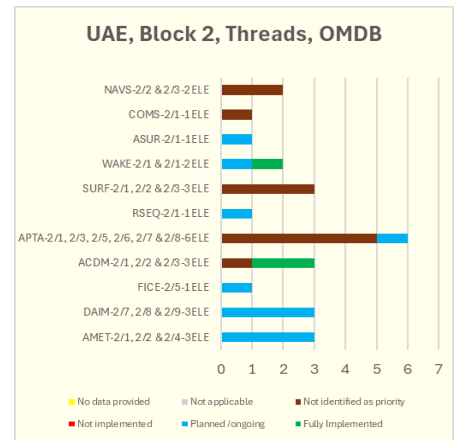
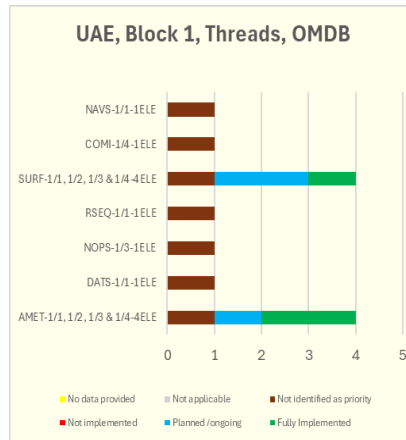
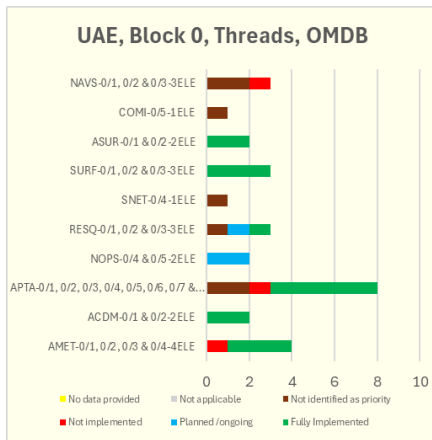
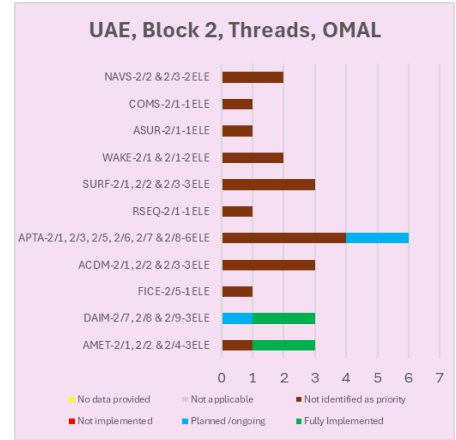
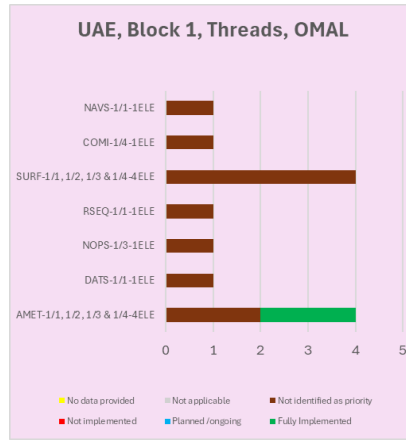
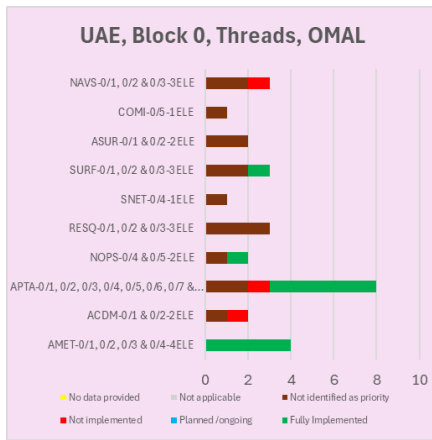
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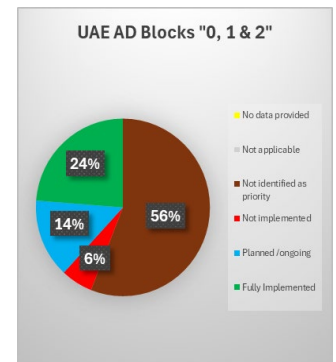
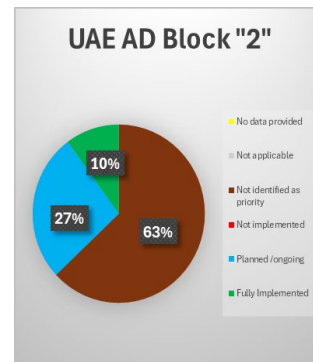
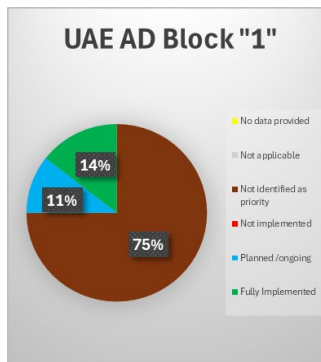
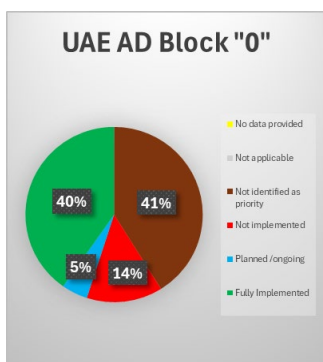
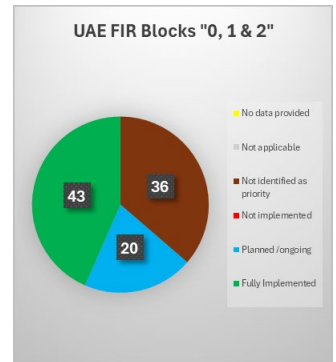
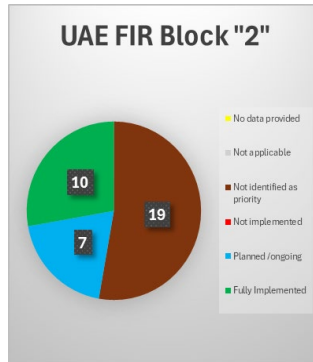
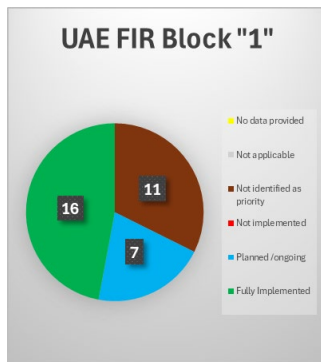
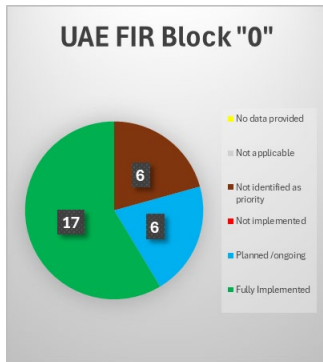
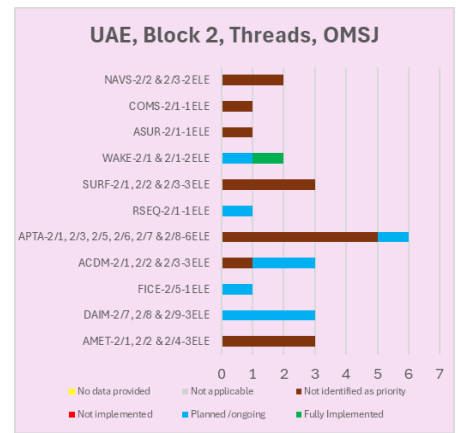
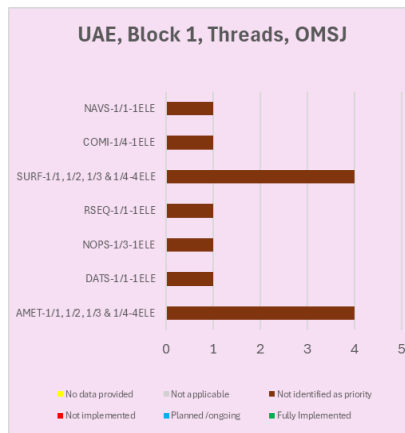
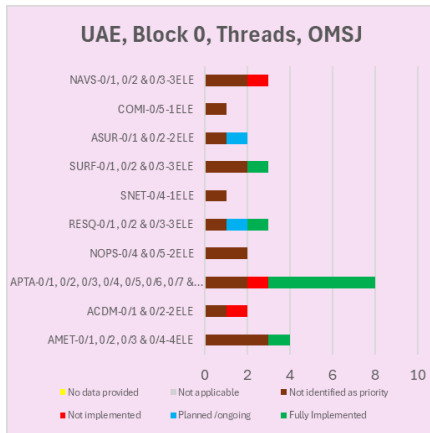
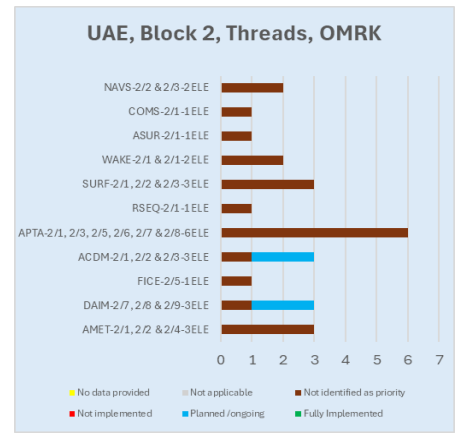
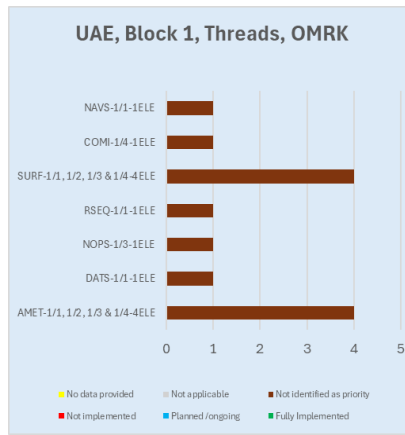
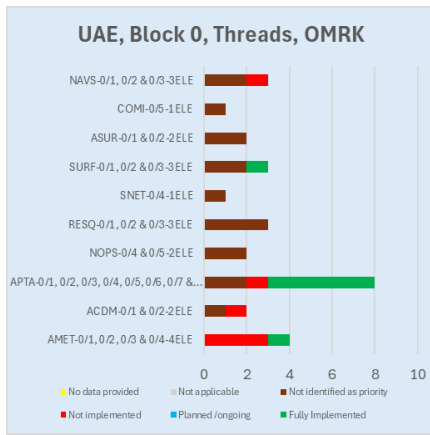




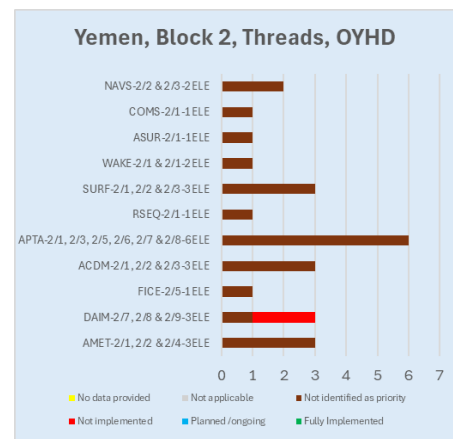
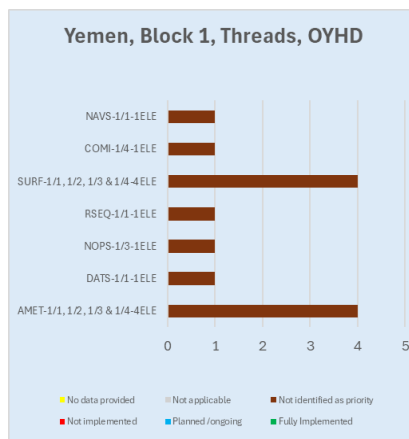
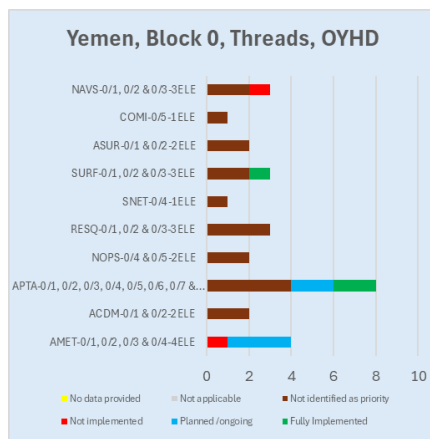
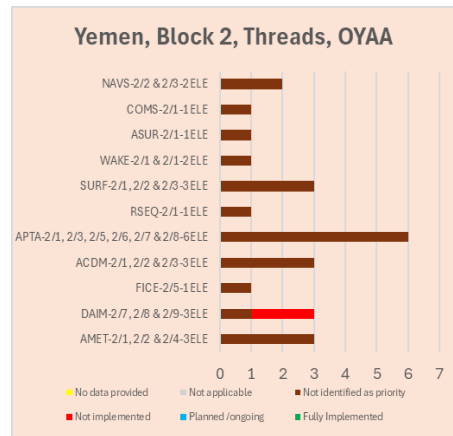
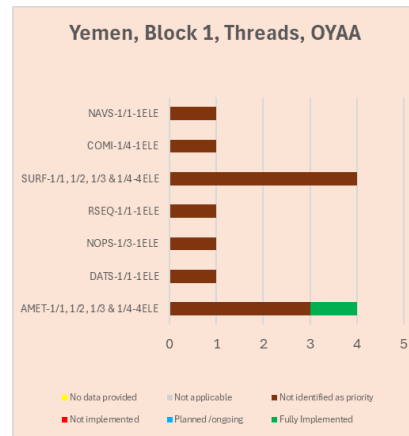
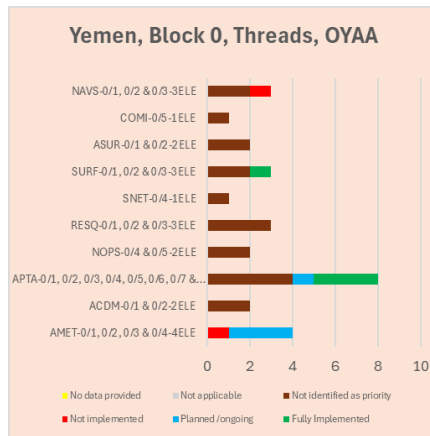
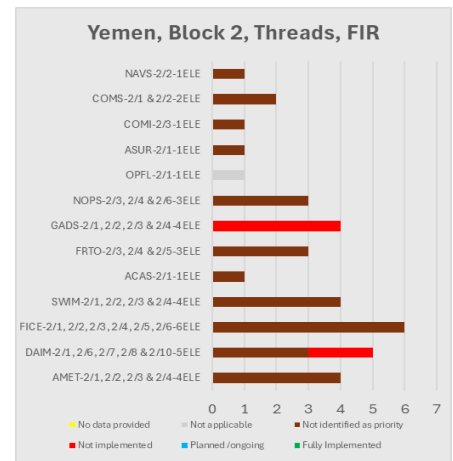
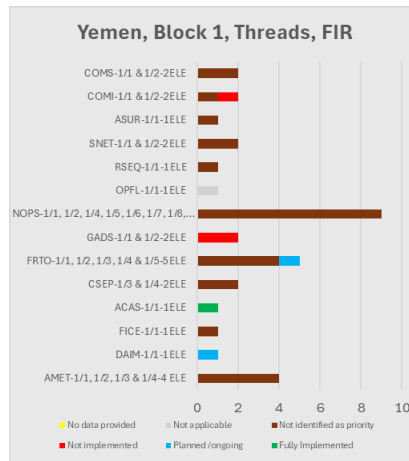
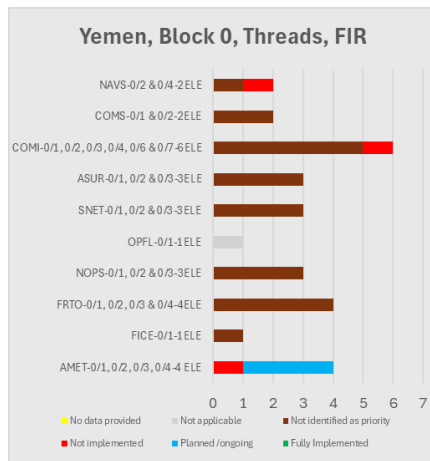
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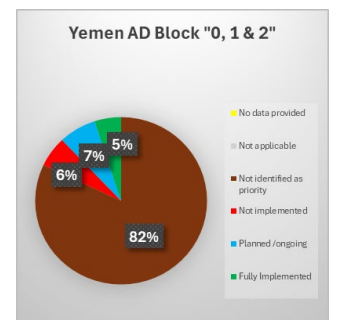
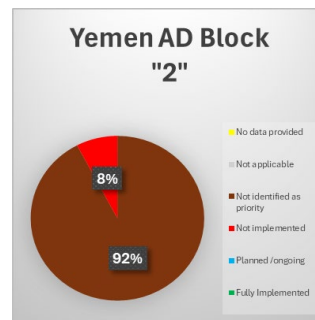
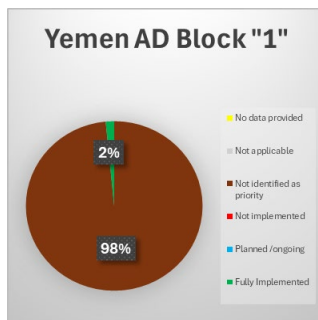
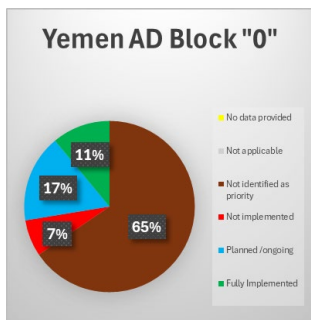
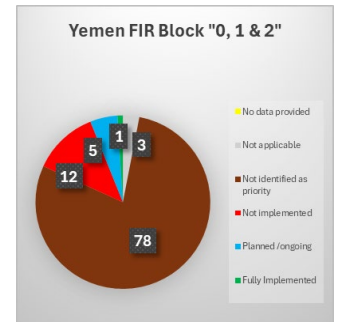
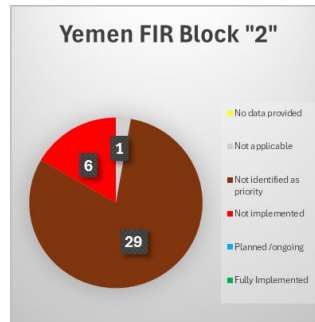
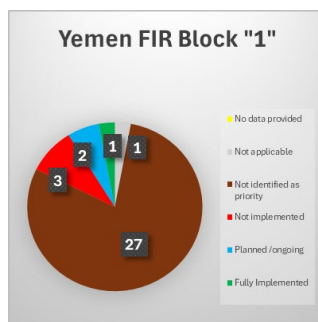
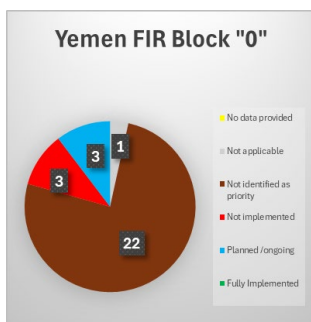
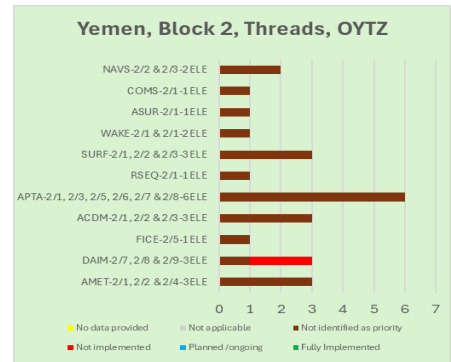
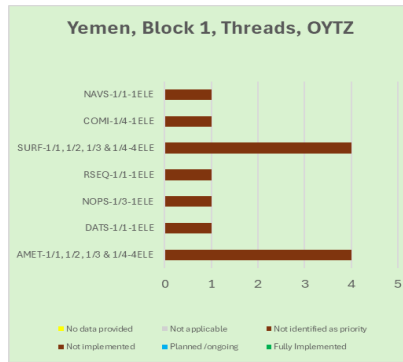
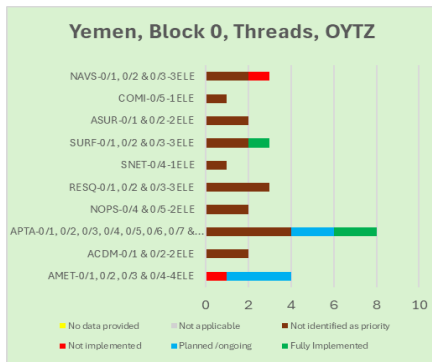
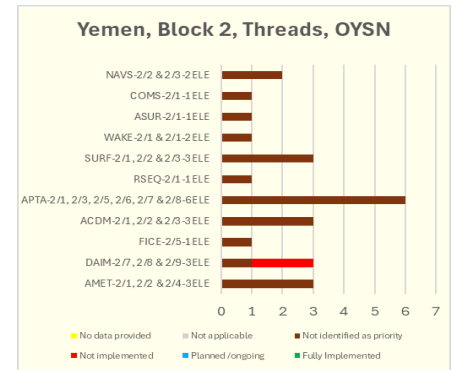
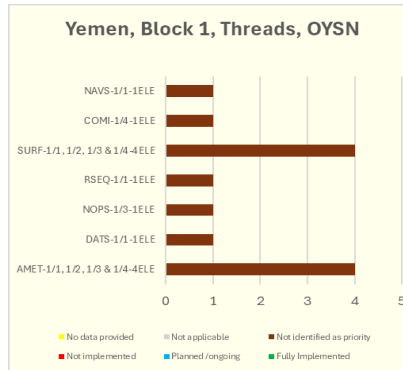
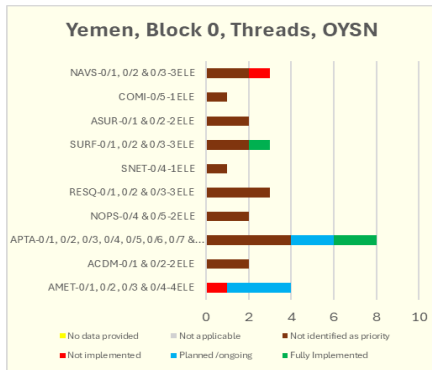
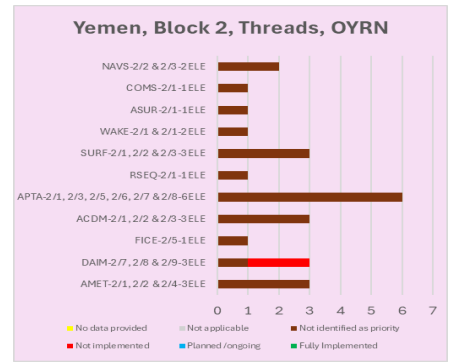
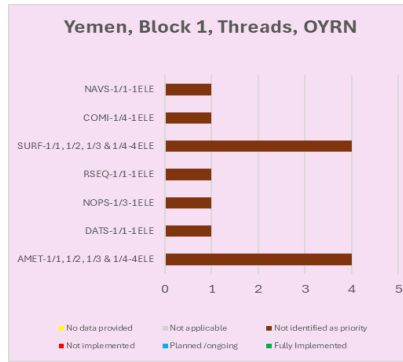
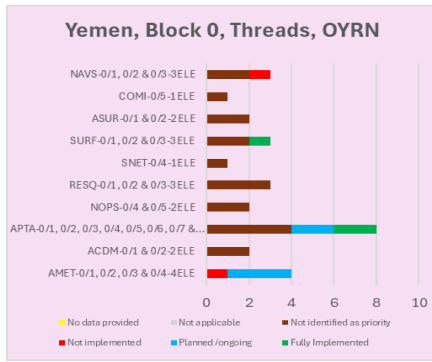




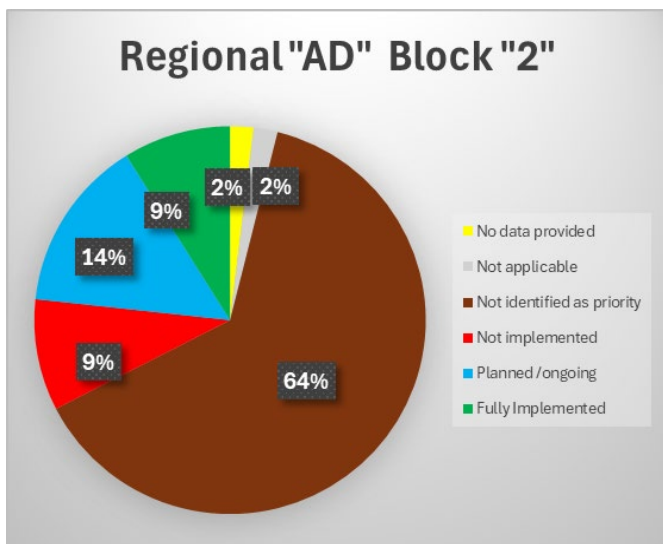
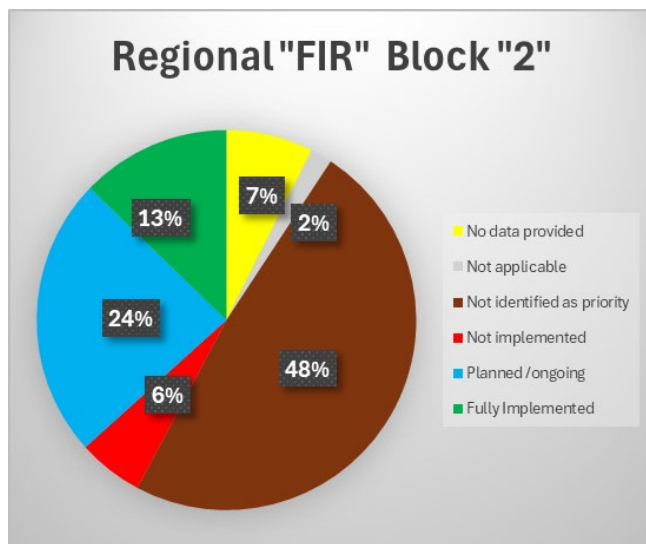
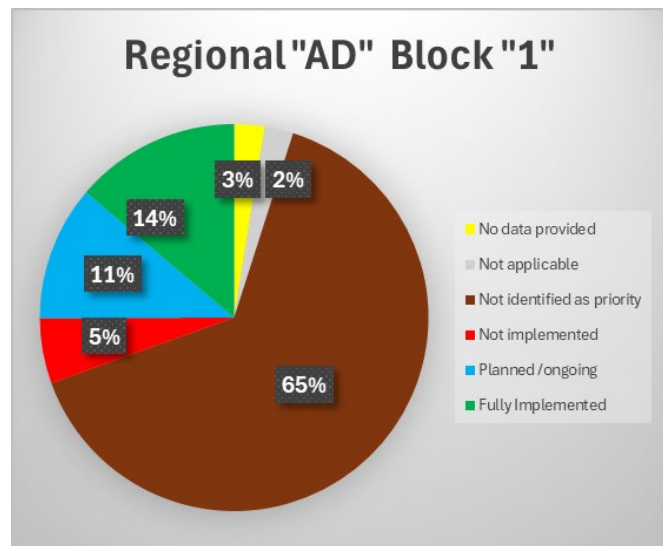
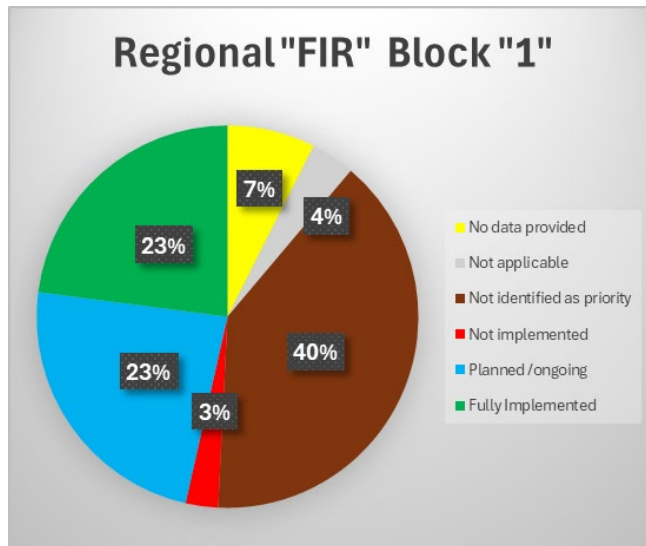
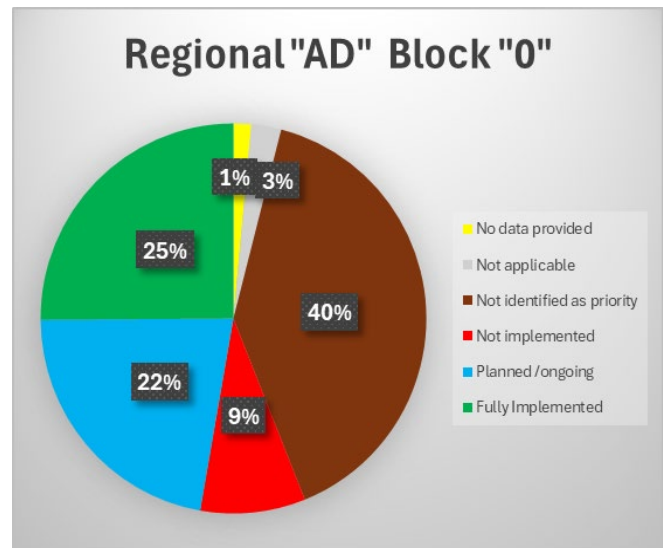
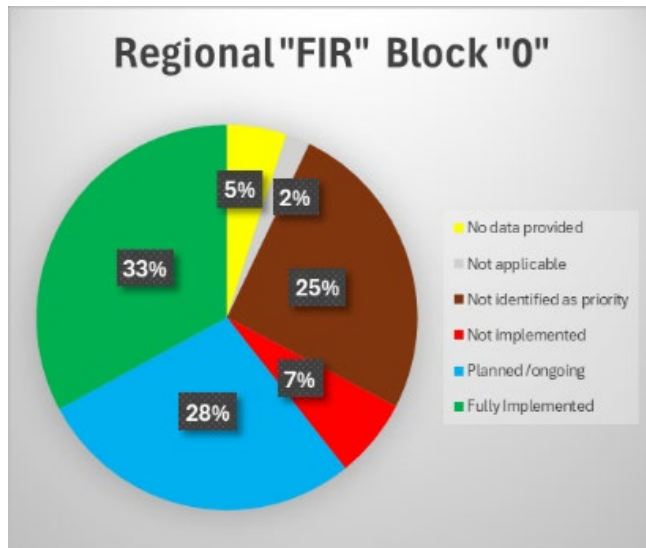


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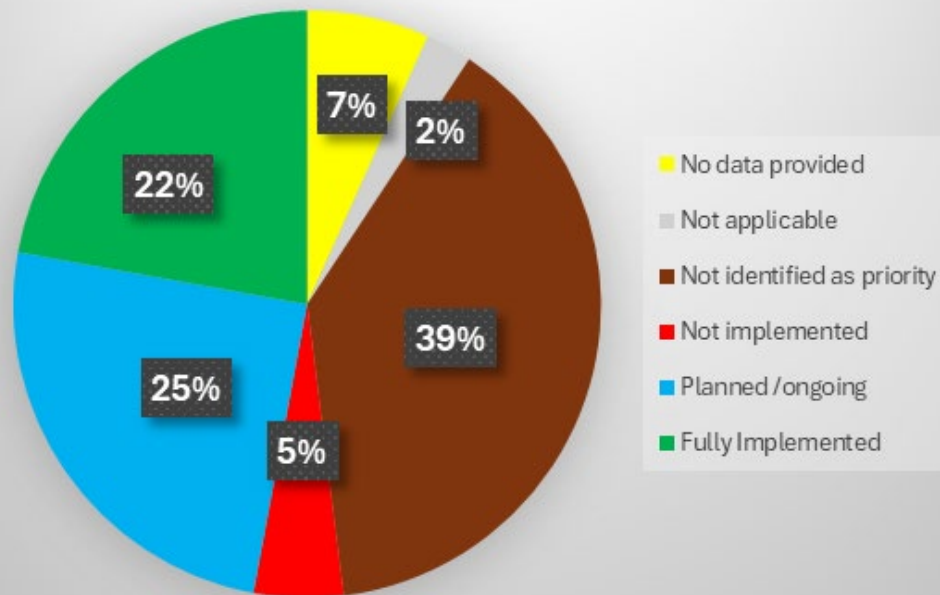




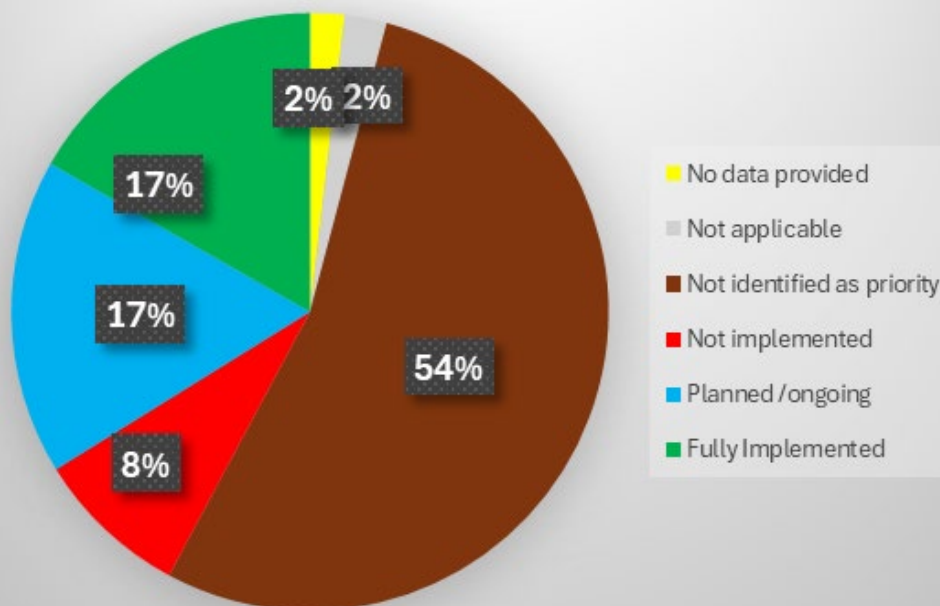
2.2 ASBU Implementation Status at Regional Level



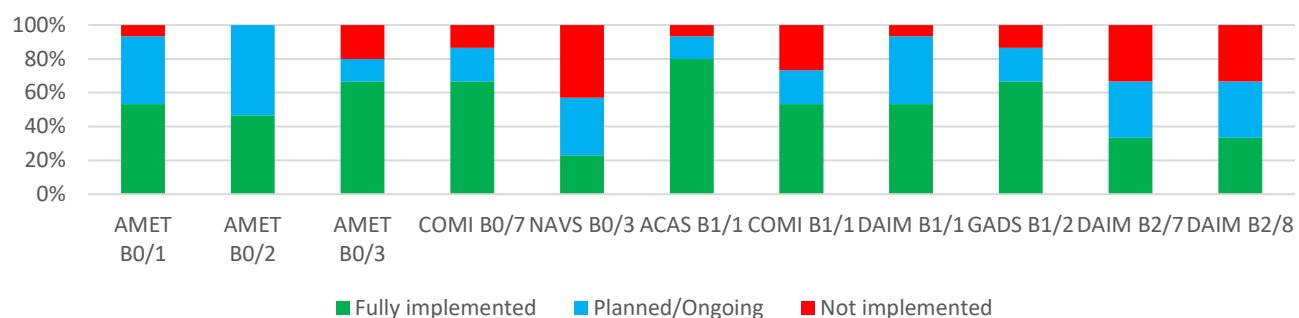
Regional "FIR" Block "0, 1 & 2"



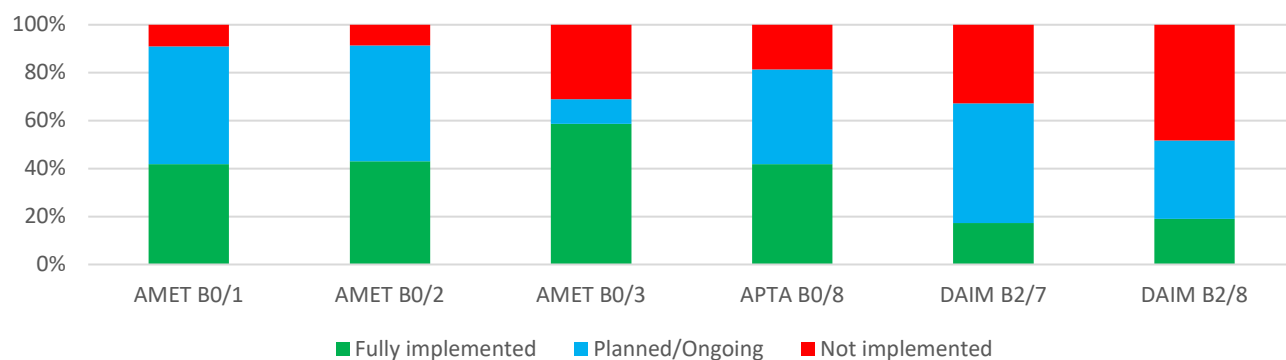
Regional "AD" Block "0, 1 & 2"



Regional priority-mandatory/FIR Blocks "0, 1 & 2", ASBU Elements, implementation status



Regional priority-mandatory/ADs Blocks "0, 1 & 2", ASBU Elements, implementation status



The above bar charts illustrate the implementation status of ASBU Elements that have been identified as regional priorities, because they support the implementation of ICAO Standards and Recommended Practices (SARPs) or other agreed regional requirements, in order to achieve harmonization, interoperability, safety, efficiency, and capacity improvements across the MID Region.

The analysis is presented at both levels of granularity: State/FIR and Aerodrome/TMA. Overall, the implementation status at the State/FIR level is encouraging, particularly when ongoing and planned implementation initiatives reported by States are taken into account. In contrast, the level of implementation at the Aerodrome/TMA level remains comparatively low, indicating the need for increased efforts, resources, and coordination to accelerate the deployment of the relevant operational improvements.

Notwithstanding the positive progress achieved in several areas, the implementation of a number of ASBU Elements remains significantly below the expected level. In particular, limited implementation has been reported for DAIM B2/7 – Provision of Digital Terrain Data Sets, DAIM B2/8 – Provision of Digital Obstacle Data Sets, AMET B0/1 – Meteorological Observation Products, AMET B0/2 – Meteorological Forecast and Warning Products, NAVS B0/3 – Aircraft-Based Augmentation Systems (ABAS) and even APTA B0/8 - Performance based aerodrome operating minima – Basic aircraft. Given the importance of these elements for supporting safe and efficient air navigation operations and ensuring compliance with applicable ICAO provisions, States are encouraged to identify and address the challenges hindering their implementation and to prioritize the necessary actions within their national implementation plans.

3. NANP DEVELOPMENT AND SUCCESS STORIES

3.1 Status of development of National Air Navigation Plan (NANP)

National Air Navigation Plans (NANPs) constitute a key component of the performance-based planning framework established by ICAO, translating global and regional air navigation objectives into coordinated national implementation plans. The development and maintenance of NANPs enable States to identify their operational priorities, define implementation targets, and align national air navigation initiatives with the ICAO Global Air Navigation Plan (GANP) and the Middle East Air Navigation Plan (MID ANP).

The Table below presents the status of NANP development and maintenance by MID States.

State	Existing NANP	NANP up-to-date and fully aligned with GANP and MID ANP	NANP under development/ update	Date/planned date of development of NANP	Remarks
Bahrain	YES (Draft)	NO	YES	Aug-26	Continuous update/ improvement
Egypt	NO	NO	YES		Ongoing (Workshop conducted, 31 March - 2 April 2026)
Iran	NO	NO	YES		Ongoing (NANP committee was established) (Workshop conducted, 2-5 February 2025)
Iraq	NO	NO	NO		
Jordan	NO	NO	YES	Oct-26	Continuous update/ improvement (Workshop conducted, 27-29 May 2024)
Kuwait	YES	NO	YES	Nov-26	Continuous update/ improvement (Workshop conducted, 28 May-1 June 2023)
Lebanon	NO	NO	NO		
Libya	NO	NO	NO		
Oman	YES (Draft)	NO	YES	by the end of 2026	Continuous update/ improvement (Workshop conducted, 15-18 Dec 2025)
Qatar	YES	NO	YES		Continuous update/ improvement
Saudi Arabia	YES	YES	YES		Continuous update/ improvement
Sudan	NO	NO	NO		
Syria	NO	NO	NO		
UAE	YES	NO	YES		Continuous update/ improvement
Yemen	NO	NO	NO		

With regard to National Air Navigation Plans (NANPs), the Report indicates that their development across the MID Region remains at an early stage of maturity. While a number of States have initiated or developed draft versions of their NANPs, most States are still in the process of progressively refining,

updating and enhancing their draft documents to ensure full alignment with the ICAO Global Air Navigation Plan (GANP) and the MID Air Navigation Plan (MID ANP). Five States have indicated their intention to finalize and approve their first edition of the NANP by the end of 2026, reflecting a positive trend towards formalization of national performance-based planning frameworks.

The Report also highlights that States are continuously improving their draft NANPs through iterative updates, taking into account evolving operational requirements, implementation priorities, and feedback received through regional coordination mechanisms. In support of this process, the ICAO MID Regional Office has conducted national-level NANP workshops for five MID States upon their specific request, involving both regulatory authorities and service providers to strengthen coordination and enhance understanding of performance-based planning principles. The remaining States are encouraged to request similar workshops, as appropriate, to further support capacity-building efforts and accelerate the development and implementation of their NANPs in line with the GANP and MID ANP. Continued regional cooperation and targeted assistance will remain essential to strengthen national planning capabilities and ensure consistent progress across the Region.

3.2 MID States' Success Stories

Egypt - Cairo FIR Optimization Phase 2 and 3

This report assesses the operational performance and efficiency gains resulting from Phases 2 and 3 of the Cairo Flight Information Region (FIR) Optimization Programme. The analysis focuses on the period of heightened traffic associated with the MID Region contingency arising from regional political tensions, during which daily traffic reached 2,647 movements per day.

Despite the near doubling of traffic volume, operations were conducted safely and efficiently, with zero separation infringements and no reported Resolution Advisories (RAs).

The Benefits and Outcomes from Cairo FIR Optimization Phases 2 and 3 are as follows:

a) Direct route between (BLT-DATOK)

Benefits and Outcomes	
Distance Reduction	45.3 NM
Time Savings	Approx. 6 MINs
Fuel Efficiency	209.5 kg
Emissions Reduction per flight	662.1 kg
Emissions Reduction for the new ATS route per day	2648.24kg

b) Direct route between (MENKU- ANTAR)

Benefits and Outcomes	
Distance Reduction	4.9 NM
Time Savings	Approx. 1 MINs
Fuel Efficiency	22.7 kg
Emissions Reduction per flight	71.6 kg
Emissions Reduction for the new ATS route per day	6588.4 kg

c) Direct route between (DATOK- DARUR)

Benefits and Outcomes	
Distance Reduction	88.3 NM
Time Savings	Approx. 12 MINs
Fuel Efficiency	408.4 kg
Emissions Reduction per flight	1290.5 kg
Emissions Reduction for the new ATS route per day	41296.1 kg

d) Direct route between (KUNKI – TANSA)

Benefits and Outcomes	
Distance Reduction	14.7 NM
Time Savings	Approx. 2 MINs
Fuel Efficiency	68 kg
Emissions Reduction per flight	214.8 kg
Emissions Reduction for the new ATS route per day	9238.1 kg

e) Direct route between (DASUM – FYM)

Benefits and Outcomes	
Distance Reduction	19.5 NM
Time Savings	Approx. 3 MINs
Fuel Efficiency	90.2 kg
Emissions Reduction per flight	285 kg
Emissions Reduction for the new ATS route per day	57853.5 kg

f) Direct route between (BLT – SISIK)

Benefits and Outcomes	
Distance Reduction	21.3 NM
Time Savings	Approx. 3 MINs
Fuel Efficiency	98.5 kg
Emissions Reduction per flight	311.3 kg
Emissions Reduction for the new ATS route per day	10895.5 kg

g) Direct route between (PAXIS – OBRAN)

Benefits and Outcomes	
Distance Reduction	7.9 NM
Time Savings	Approx. 1 MINs
Fuel Efficiency	36.5 kg
Emissions Reduction per flight	115.5 kg
Emissions Reduction for the new ATS route per day	10160.3 kg

h) KUMBI-CVO (direct route)

Benefits and Expected Outcomes	
Distance Reduction	9.5 NM
Time Savings	Approx. 1 MIN
Fuel Efficiency	43.9kg
Emissions Reduction per flight	138.8 kg
Emissions Reduction for the new ATS route per day	6525.6kg

i) Direct air traffic route between (DATOK-PSD-MELDO-AMMAR)

Benefits and Expected Outcomes	
Distance Reduction	68.5 NM
Time Savings	Approx. 10 MINs
Fuel Efficiency	316.8 kg
Emissions Reduction per flight	1001.1 kg
Emissions Reduction for the new ATS route per day	10011.3kg

j) Direct route between (SISIK and NABSI)

Benefits and Expected Outcomes	
Distance Reduction	5.5 NM
Time Savings	Approx. 1MIN
Fuel Efficiency	25.4 kg
Emissions Reduction per flight	80.4 kg
Emissions Reduction for the new ATS route per day	3295.7 kg

k) Kufra (KFR) KURDI KHG Route

Benefits and Expected Outcomes	
Distance Reduction	88.4 NM
Time Savings	Approx. 13 MINs
Fuel Efficiency	408.9 kg
Emissions Reduction per flight	1292 kg
Emissions Reduction for the new ATS route per day	20671.5 kg

l) A Direct LIGAT KURDI KHG Route

Benefits and Expected Outcomes	
Distance Reduction	145.6 NM
Time Savings	Approx. 21 MINs
Fuel Efficiency	673.4 kg
Emissions Reduction per flight	2127 kg
Emissions Reduction for the new ATS route per day	34047 kg

m) Direct CDR1 (SALUN-CVO-SILKA)

Benefits and Expected Outcomes	
Distance Reduction	11 NM
Time Savings	Approx. 2 MINs
Fuel Efficiency	50.9 kg
Emissions Reduction per flight	160.8 kg
Emissions Reduction for the new ATS route per day	15272.7 kg

Jordan

In 2025, Jordan advanced its air navigation system on every front – a restructured Amman FIR, modernized CNS infrastructure, an accelerating AIS-to-AIM transition, and exceptional operational resilience – while passenger traffic crossed 10 million for the first time.

A Record Year for Jordanian Aviation



Amman FIR Airspace Restructure

→

New airspace procedures — implemented

- Published 4 September 2025; effective 2 October 2025.

▢

Modernization project — completed (100%)

- Redesign of approach, departure and en-route procedures; budget JOD 2.07M (2023–2025).

✓

Compliance

- Fully aligned with ICAO provisions and the MID Regional Air Navigation Plan.

ICAO Enroute Chart — Amman FIR (OJAC)

CNS Modernization

▲

Navigation — new VOR & ILS

- New VOR and ILS installed and fully operational at King Hussein Airport (Aqaba). ILS upgrade complete (100%).

⦿

Resilience — DME/DME (2026)

- DME/DME network of 12 stations underway to support RNAV/RNP and reduce GNSS dependency.

★

Regional role

- CARC chairs the MID CNS Sub-Group; high AMHS implementation maturity.

Doppler VOR (DVOR) — Aqaba (OJAC)

DME/DME coverage — southern Jordan

CNS / ANS Projects Portfolio

Project	Period	Status	Cost (JOD)
WAM/MLAT surveillance — Aqaba & southern Jordan	2025–26	Ongoing - 95%	1,971,769
Jordanian airspace modernization (procedures & airways)	2023–25	Complete - 100%	2,068,719
ILS landing system upgrade	2024–25	Complete - 100%	956,579
Air navigation system — DME network (12 stations)	2025–26	Ongoing - 25%	1,640,365
Aviation surveillance / MET system upgrade	2025–26	Ongoing - 50%	949,907
Radio communication system upgrade	2024–25	Complete - 100%	650,000

JOD 8.2M+

Total CNS investment
across the 2023–2026 portfolio

Highlights

- 3 of 6 projects delivered; 3 in progress.
- 100% radar coverage of Jordanian airspace achieved.
- Executed by CARC under the Ministry of Transport.

Full Radar Coverage — WAM/MLAT

100%

Radar coverage
of Jordanian airspace

19

WAM/MLAT sites
southern region & Aqaba



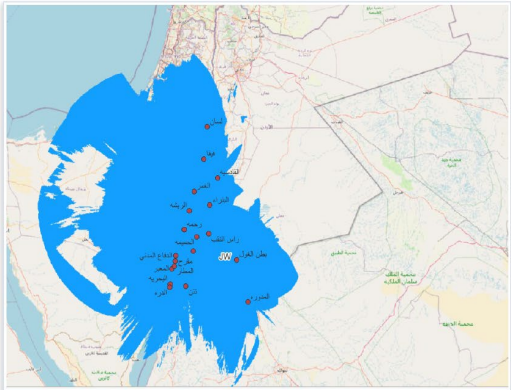
Target area

- Southern region / Aqaba — closing lower-airspace coverage gaps (95% complete).



Benefit

- Greater capacity, reduced separation and improved safety; supports the Aqaba economic zone.



WAM/MLAT surveillance coverage — Amman FIR

AIS-to-AIM Transition



GAP analysis completed

- CARC completed a comprehensive AIS-to-AIM gap analysis against ICAO Annex 15 / PANS-AIM.



FPD & eTOD implementation

- Specialists engaged for Flight Procedure Design and electronic Terrain & Obstacle Data.



National collaboration

- Work with the National Geodetic body on terrain/obstacle data (TOD); hosted AIM SG/11 in Amman.

Why it matters

- AIM is the largest field of MID air-navigation deficiencies (≈42%).
- Digital data (eTOD, AIXM) underpins PBN, SWIM and FF-ICE.

Flight Procedure Programme & PBN



IFP packages reviewed & recommended for approval

- MIDFPP reviewed and recommended approval of Instrument Flight Procedures for OJAI, OJAM and OJAQ — with flight-validation reports.



PBN momentum

- Jordan hosted PBN SG/10 & the IFP Provision Workshop (Amman, Dec 2025).



Capacity building

- Specialists engaged for in-house procedure-design capability at CARC.

OJAI

Queen Alia Intl

OJAM

Amman City

OJAQ

King Hussein

- Procedures designed to ICAO PANS-OPS (Doc 8168).
- Flight-validated and recommended for publication.
- Supports RNAV/RNP approaches and CCO/CDO operations.

United Arab Emirates

a) UAE AIP AI BOT Implementation

This initiative aimed to develop an Aeronautical Information Publication Artificial Intelligence Bot (AIP AI Bot), which utilizes machine learning and natural language processing technologies to process and analyze Aeronautical Information Publication (AIP) content, including all its associated files.

UAE AIP AI Bot enables the users of the AIP to submit queries in a conversational manner and receive accurate, structured, and context-aware responses. The system ensures that each response includes clear references to the relevant AIP sections, maintaining traceability, reliability, and compliance with applicable aeronautical information standards.

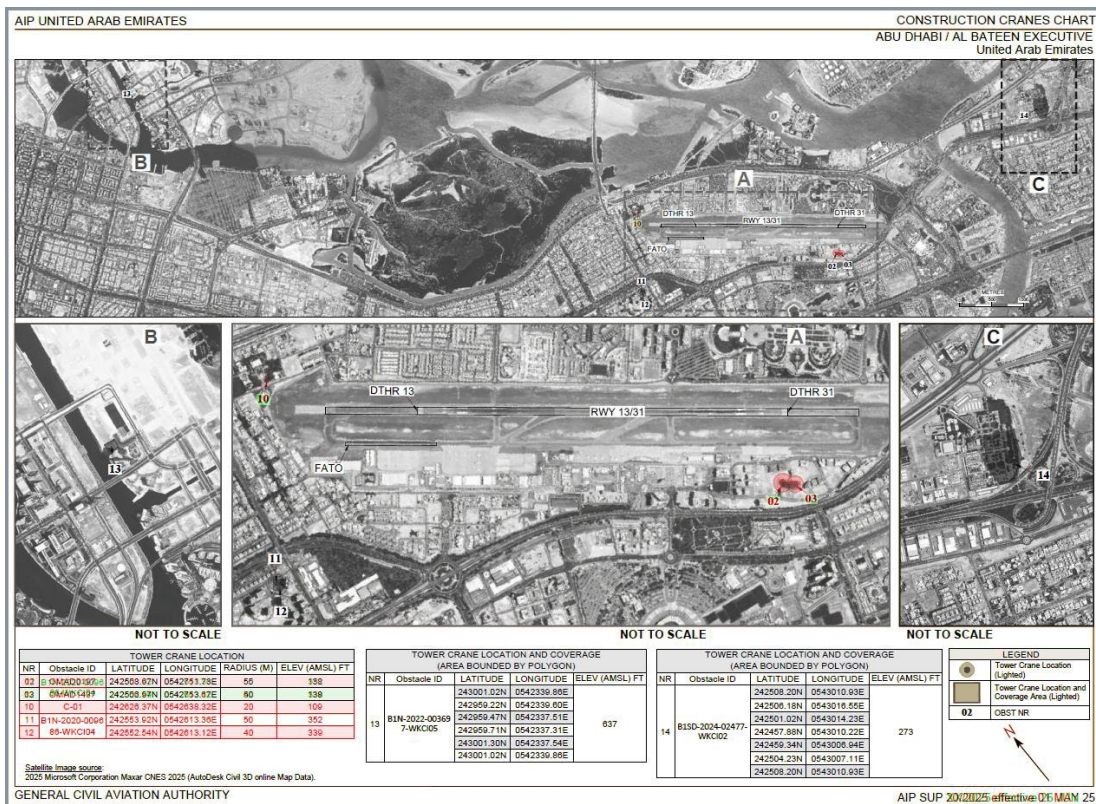
This solution provides an enhanced and innovative experience for customers and strategic partners by enabling fast, seamless access to aeronautical information. It significantly reduces the time required to locate relevant data and improve overall operational efficiency. Additionally, the AIP AI Bot is expected to reduce the volume of repetitive queries directed to the AIM team, thereby optimizing resource utilization and allowing personnel to focus on higher-value tasks. It will also support improved service delivery, data accessibility, and alignment with ongoing digital transformation initiatives within the Air Navigation Services ecosystem.

b) Utilizing AI in Production of AIM Products

The Aeronautical Information Management (AIM) at the UAE General Civil Aviation Authority (GCAA) has utilized available artificial intelligence tools such as ChatGPT and Copilot in the production of aeronautical information. These tools have been used to evaluate navigation change requests, extract PERM NOTAMs, perform geodetic calculations, and evaluate Electronic Terrain Data (ETOD) delivery files. Previously, manual calculations had to be performed using GIS software. Tasks involved coordinates conversion, plotting and manually derive distances and bearings. AI is capable of reading coordinates data. By utilizing AI tool such as ChatGPT coordinates are uploaded and prompted to perform plotting and calculation. AI performs geodetic calculations automatically.

Previously, chart comparisons were carried out manually using software such as AutoCAD and Bluebeam to identify changes to visually review the outputs to identify differences as part of the QA/QC process.

AI is capable of reading aeronautical charts in PDF format and perform comparison automatically. By utilizing AI tool such as ChatGPT submitted and published charts are uploaded and prompted to perform comparison and prepare summary of changes. AI automatically identifies changes such as positions, height modifications, and geometric shifts, and generates a summary report. Summary is utilized for comprehension and coordination with data originators if any observations.



Previously, full list of valid NOTAMs needs to be reviewed manually in order to identify permanent NOTAMs for inclusion in AIRAC Amendment of charts. AI is capable of reading NOTAMs in PDF format and perform analysis and extraction automatically. By utilizing AI tool such as ChatGPT valid NOTAMs in PDF format is uploaded and prompted to perform analysis and extraction of Valid PERM NOTAMs. AI automatically summarizes and extracts Valid PERM NOTAMs for decision making and inclusion in AIRAC Amendment of charts.

Previously, obstacle data attributes were manually extracted from AIXM SNAPSHOT file to excel in order to create obstacle data GIS shapefile. These shapefiles are utilized for depicting of obstacles on AIXM DB driven Charts. This process was totally manual and required a high level of focused attention to interpret data for extraction of obstacles information. AI is capable of reading AIXM format and perform analysis and extraction automatically. By utilizing AI tool such as ChatGPT Aeronautical Data in AIXM format is uploaded and prompted to perform analysis and extraction of obstacles information. AI automatically identify obstacle data attributes and generate list in tabular format.

c) Introduction of a new NOTAM series "C"

UAE NOTAM Office had identified significant rise in NOTAM requests due to the increased number of UAS activities. Consequently, NOTAM checklists often exceeded the allowable 1,800-character limit, necessitating manual splitting which increases workload, potential human errors (senders and receivers), and leads to potential delays in higher-priority NOTAM processing.

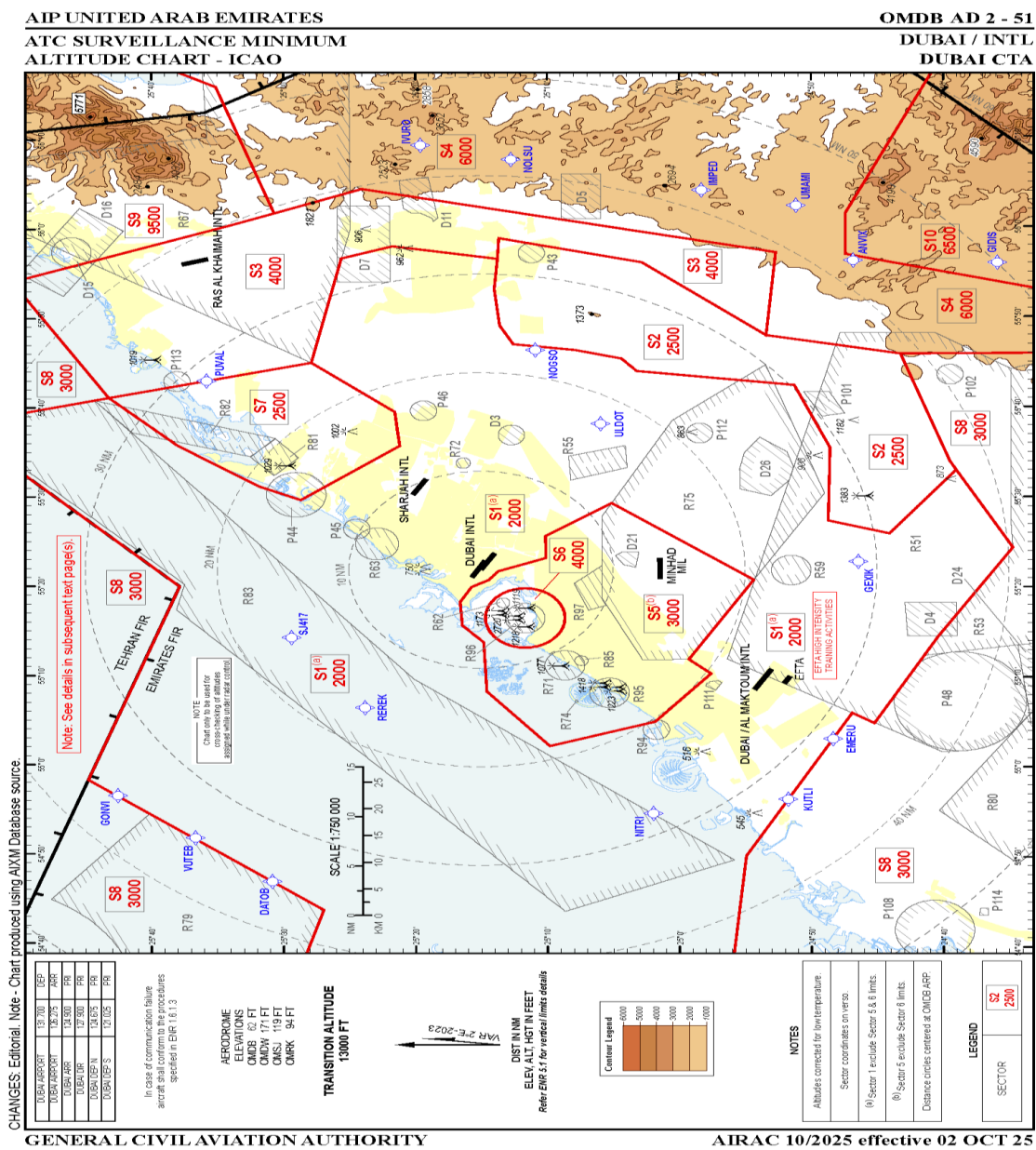
Based on GCAA AIM study in 2024, It was identified that many operations were limited to 400 feet and below which mainly impacts low level local operations. Hence, a proposal to introduce a New NOTAM Series was discussed with the regulator and NOTAM requesters. This series was to be used for low level

activities like UAS, UAV, fireworks and laser activities, at 400 FT AGL and below which are outside the CTR and Aerodrome Traffic Zone (ATZ).

AIC was issued in advance to advise about the new series and its details. AIC also invited users that wish to receive the new series to send their requests. The new series was introduced at the start of 2025. This initiative reduced NOTAM overload on international operators and eliminated the confusion of reviewing multi part NOTAM checklists for all UAE NOTAM users.

d) Production of ATC Surveillance Minimum Altitude using AIXM Database

The Aeronautical Information Management (AIM) at the UAE General Civil Aviation Authority (GCAA) successfully migrated legacy AutoCAD-based ATC SURVEILLANCE MINIMUM ALTITUDE charts into a structured Aeronautical Information Exchange Model (AIXM) digital data environment and published operationally.



e) Removing the registration requirements for the main AIM products

The GCAA had introduced a requirement that all users of their Services and Products were required to be authenticated using UAE Pass credentials. Due to this AIM customers faced issues related to access, especially from outside the UAE and restricted sensitive areas. Most popular AIM products like AIP and the Aeronautical Chart needed to be made available easily to airspace users.

As proof of UAE AIM's agility, the AIM Department engaged with GCAA IT to eliminate the registration and login requirements to overcome this limitation and to enhance customer satisfaction. This achievement shows the efforts made towards eliminating bureaucracy by Aeronautical Information Management (AIM) of the UAE General Civil Aviation Authority (GCAA).

f) Emirates ACC ATFM Unit and Daily ATFM Plan (ADP)

In August 2025, the United Arab Emirates established an Air Traffic Flow Management (ATFM) Unit at the Emirates Area Control Centre (ACC), marking a significant milestone in enhancing network performance and operational resilience. As part of this advancement, a structured ATFM Daily Plan (ADP) was introduced to support proactive and coordinated demand-capacity balancing across the Emirates FIR.

The ADP establishes a standardized daily planning framework that integrates multiple operational inputs to enable informed decision-making. This includes traffic demand forecasting aligned with sector capacity assessments, incorporation of real-time MET information, NOTAMs, and dynamic airspace availability, as well as collaborative coordination with key stakeholders including airlines, airports, and adjacent ANSPs. The process is further supported by continuous monitoring and the ability to implement tactical adjustments in response to evolving operational conditions.

The implementation of the ATFM Unit and ADP has delivered tangible operational improvements, including:

- Enhanced predictability and stability of traffic flows, particularly during peak demand periods
- Improved capability to manage disruptions and respond to high-demand or constrained airspace scenarios
- Strengthened collaborative decision-making (CDM) practices among national and regional stakeholders
- Establishment of a solid foundation for performance-based ATM, supporting future initiatives such as FF-ICE and trajectory-based operations.

This initiative represents a key step in the UAE's ongoing efforts to modernize airspace management, improve network efficiency, and align with ICAO global air navigation priorities.

g) Reduced Lateral Separation Minima (RLAT) Phase II

Phase II of Reduced Lateral Separation Minima (RLAT) was successfully implemented within the Emirates FIR in September 2025. This phase expanded the application of 3 NM lateral separation across additional airspace segments, particularly in high-density terminal interface areas.

The implementation was supported by:

- Comprehensive safety assessments and risk analysis
- System readiness validation and controller training
- Close coordination with adjacent ANSPs and airspace users

Achievements / Benefits

- ~33% increase in arrival and departure capacity per Transfer of Control Point (TCP)
- Reduced tactical interventions and enhanced controller efficiency

Enhanced regional coordination and cross-border traffic management

4. CONCLUSION

The MID Air Navigation Report – 2025 demonstrates that the MID Region continues to make steady progress towards the implementation of the ICAO GANP and the MID ANP. The results confirm the sustained commitment of MID States, Air Navigation Service Providers and aviation stakeholders to modernizing the air navigation system and implementing operational improvements that enhance safety, capacity, efficiency, resilience and environmental sustainability.

The analysis of ASBU implementation indicates that substantial progress has been achieved in the implementation of Block 0 Elements and that many Block 1 Elements have either been implemented or are currently under implementation. The high levels of implementation observed in several operational improvement areas demonstrate the Region's ability to successfully address established priorities and implement globally harmonized air navigation improvements. At the same time, the relatively low level of implementation of Block 2 Elements reflects both the longer-term implementation horizon and the increased complexity, resource requirements and operational dependencies associated with these advanced improvements.

The Report also confirms that the adoption of performance-based planning principles continues to evolve across the Region. While an increasing number of States have identified operational needs, implementation priorities and performance improvement objectives, further efforts are required to strengthen the systematic application of performance measurement and performance monitoring processes. In particular, the consistent use of ICAO Key Performance Indicators (KPIs), benefit realization assessments and data-driven decision-making mechanisms will be essential to support future planning and investment decisions.

With regard to National Air Navigation Plans (NANPs), the findings demonstrate growing awareness among States of the importance of establishing structured national planning frameworks aligned with the GANP and MID ANP. Although the overall maturity of NNP development remains relatively low, encouraging progress has been observed through the preparation and continuous refinement of draft NANPs by a number of States. The planned approval of the first edition of NANPs by several States before the end of 2026 represents an important milestone towards strengthening national ownership of air navigation planning and enhancing alignment between national, regional and global implementation objectives.

The Report further highlights the importance of maintaining strong regional cooperation mechanisms and implementation support activities. Significant differences in implementation maturity continue to exist among States, reflecting variations in operational requirements, institutional capacities, available resources and national priorities. Consequently, targeted assistance, capacity-building initiatives, technical cooperation and the sharing of best practices will remain critical to supporting States facing implementation challenges and to promoting a more harmonized level of air navigation development across the Region.

The Report serves as a key monitoring and assessment tool for the Middle East Air Navigation Planning and Implementation Regional Group (MIDANPIRG), providing a comprehensive overview of the status of air navigation implementation across the MID Region during the reporting period from January to December 2025. The reporting and analysis process could be further enhanced through the use of advanced business intelligence tools, such as Power BI, to support dynamic data visualization, and enable

more advanced analytics, interactive reporting, and deeper analysis of implementation trends and performance indicators.

Looking ahead, the successful implementation of the GANP and MID ANP will require continued commitment from all stakeholders, supported by effective governance, performance monitoring, resource mobilization and regional coordination. MIDANPIRG, its subsidiary bodies and implementation support mechanisms will continue to play a key role in facilitating collaboration, monitoring progress and identifying emerging priorities.

Overall, the findings of this Report provide confidence that the MID Region is moving in the right direction. By sustaining current implementation efforts, accelerating the development of National Air Navigation Plans, strengthening performance-based planning practices and enhancing regional cooperation, MID States will be well positioned to achieve the objectives of the GANP and MID ANP and to ensure the continued evolution of a safe, efficient, interoperable and sustainable air navigation system for the benefit of all airspace users.



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MID Region Implementation Plan for Digital Data sets

First Edition — 2026

**International Civil Aviation Organization
MIDDLE EAST Air Navigation Planning and Implementation Regional Group
(MIDANPIRG)**

RECORD OF AMENDMENTS AND CORRIGENDA

Version	Date	Description
1.0	June 2026	First edition

FOREWORD

This First Edition (2026) has been developed under the authority of MIDANPIRG and reflects the collective commitment of MID Region States to the digitalization of aeronautical information in support of FF-ICE and Trajectory-Based Operations.

The Plan establishes the MID Region framework for the provision of digital aeronautical data sets, addressing what to provide, how to provide it, and when to provide it. It is intended to complement, and must be read in conjunction with, ICAO Annex 15 — Aeronautical Information Services, PANS-AIM (Doc 10066), and the supporting guidance material listed in Appendix A.

This Plan is a living document. It will be reviewed and updated periodically by the AIMDP TF under MIDANPIRG, to reflect progress in national implementation, developments in international standards, and the evolving requirements of the ATM environment, including the transition to System-Wide Information Management (SWIM) and the future applicability of Flight and Flow Information for a Collaborative Environment (FF-ICE).

States are encouraged to use this Plan as the reference framework for developing their national digital data sets implementation plans, in accordance with the template provided in Appendix B.

The Plan is structured in three Parts and three Appendices:

Part I — General Aspects of Digital Aeronautical Data Sets

Part II — Digital Aeronautical Data Sets: Requirements, Standards, and Specifications

Part III — Coordinated Regional Deployment

Appendix A — Regulatory and Guidance Material References

Appendix B — National Implementation Plan Template

Appendix C — PANS-AIM to AIXM 5.1/5.1.1 Mapping Tables

EXECUTIVE SUMMARY

The aeronautical information environment is undergoing a fundamental transformation. The shift from paper-based Aeronautical Information Services (AIS) to digital Aeronautical Information Management (AIM) is no longer a future aspiration, it is an ongoing obligation, grounded in the Standards and Recommended Practices of ICAO Annex 15 and the Procedures for Air Navigation Services , Aeronautical Information Management (PANS-AIM, Doc 10066).

This MID Region Implementation Plan for Digital Data sets provides MID Region States with a coordinated framework to manage that transition. It answers three practical questions: what digital aeronautical data sets are required, how they should be produced and encoded, and when they should be made available.

What. Five categories of digital aeronautical data sets are addressed: terrain data sets, obstacle data sets, AIP data sets, aerodrome mapping data sets, and instrument flight procedure data sets. The scope, content, and quality requirements for each category are specified in accordance with Annex 15 and PANS-AIM, with MID Region-specific elaborations where appropriate.

How. All digital data sets shall be encoded in internationally agreed formats, primarily the Aeronautical Information Exchange Model (AIXM) version 5.1/5.1.1, with AIXM 5.2 applicable to instrument flight procedure data sets. Detailed coding specifications and PANS-AIM to AIXM mapping tables are provided in Appendix C for the AIP data set, which constitutes the most complex data set in terms of encoding scope. In the medium term, digital data sets shall be made available as System-Wide Information Management (SWIM) information services.

When. Target provision dates are defined for each data set category, taking into account PANS-AIM applicability and the phased nature of the transition. The implementation timeline spans 2020 to 2031, with Terrain and Obstacle Data (TOD) from 2020 to 2027, aerodrome mapping data sets from 2020 to 2027, AIP data sets from 2026 to 2030, and instrument flight procedure (IFP) data sets from 2026 to 2031.

Each member State is required to prepare and submit a national digital data sets implementation plan, structured in accordance with the template provided in Appendix B, and to update it at least annually. The AIM Sub-Group (AIM/SG) will monitor implementation progress and report to MIDANPIRG, as needed.

This Plan shall be reviewed by the AIMDP TF at intervals not exceeding two years, or sooner if triggered by:

- Amendments to ICAO Annex 15 or PANS-AIM
- Material changes to AIXM standards (e.g., AIXM 5.2 finalization)
- Significant shifts in regional implementation status

Amendments to this Plan shall be reviewed by the AIM/SG and endorsed by MIDANPIRG. An amendment record shall be maintained.

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GLOSSARY

Terms and definitions used in this document are, unless otherwise stated, those contained in ICAO Annex 15 — Aeronautical Information Services, PANS-AIM (Doc 10066), and the ICAO Aeronautical Information Services Manual (Doc 8126).

ABBREVIATIONS/ACRONYMS

AIM	Aeronautical information management
AIP	Aeronautical information publication
AIRAC	Aeronautical Information Regulation and Control
AIS	Aeronautical information service
AIXM	Aeronautical information exchange model
AMD	Aerodrome Mapping Data
AMDB	Aerodrome Mapping Database
ANSP	Air Navigation Services Provider
ASBU	Aviation System Block Upgrade
ATM	Air traffic management
DAIM	Digital Aeronautical Information Management
DPS	Data Product Specification
DTM	Digital Terrain Model
EUROCONTROL	European Organization for the Safety of Air Navigation
FF-ICE	Flight and Flow Information for a Collaborative Environment
FMS	Flight Management System
GANP	Global Air Navigation Plan
GIS	Geographic Information System
GML	Geography Markup Language
IFP	Instrument Flight Procedure
IM	Information management
IP	Internet protocol
MIDANPIRG	Middle East Air Navigation Planning and Implementation Regional Group
NDIP	National Digital Data Set Implementation Plan
PBN	Performance-Based Navigation
QMS	Quality Management System
SARPs	Standards and Recommended Practices
SWIM	System Wide Information Management
TBO	Trajectory Based Operations
TOD	Terrain and Obstacle Data
UUID	Universal Unique Identifier
UML	Unified Modelling Language
WGS-84	World Geodetic System-1984
XML	Extensible Markup Language

PART I — BACKGROUND, OBJECTIVES, AND GOVERNANCE

1. Introduction

- 1.1 The necessity of quality-assured digital data sets to support the integration of aeronautical information in ATM and aviation-related applications, and the rationale for the transition from product-centric to data-centric environments, are explained in and described in PANS-AIM (Doc 10066), Chapters 1 and 5, and elaborated in EUROCONTROL Guidelines for Harmonised AIP Publication and Data Set Provision (SD 1, Appendix A). Member States should be familiar with those documents as the foundation for this implementation plan.
- 1.2 The term Aeronautical Information Product was introduced with the 16th Edition of Annex 15 to cover all AIS deliverables provided in digital form or as standardized presentation in paper or electronic form. PANS-AIM (Doc 10066) provides expanded specifications for digital data sets and digital data exchange. The five categories of digital data sets specified in Annex 15 as elements of the Aeronautical Information Products are:
- Terrain data set;
 - Obstacle data set;
 - AIP data set;
 - Aerodrome mapping data set; and
 - Instrument flight procedure (IFP) data set.

Note: The ordering above reflects the regulatory priority established in Annex 15 and the recommended sequencing for MID Region implementation. Terrain and obstacle data sets are governed by mandatory Standards (shall) in Annex 15. AIP, aerodrome mapping and IFP data sets are currently governed by Recommended Practices (should). This distinction determines implementation priority under the MID Region deployment framework in Part III.

- 1.3 Providing digital data sets in compliance with standard digital data exchange requirements, including the use of the Aeronautical Information Exchange Model (AIXM), is a fundamental step toward the implementation of System-Wide Information Management (SWIM). For further guidance, refer to PANS-AIM (Doc 10066), Section 5.4, and the ICAO Manual on System-Wide Information Management (SWIM) Concept (Doc 10039).

2. Regulatory Foundation

- 2.1 The provision of digital aeronautical data sets is governed by:
- ICAO Annex 15 — Aeronautical Information Services (terrain and obstacle data sets are mandatory Standards; AIP, aerodrome mapping, and IFP data sets are Recommended Practices)
 - PANS-AIM (Doc 10066) — Procedures for Air Navigation Services — Aeronautical Information Management
 - Doc 8126 — Aeronautical Information Services Manual, 7th Edition, 2022 (Parts I, II and III — informative guidance for AIS operations)
 - Doc 9881 — Guidelines for Electronic Terrain, Obstacle and Aerodrome Mapping Information

Note: Doc 8126 Part IV — Digital Data Sets is under development. It is not yet published and therefore does not form part of the normative basis of this Plan. Upon publication, the AIMDP TF shall assess its impact and propose amendments as required.

- 2.2 A complete list of applicable ICAO documents and supporting guidance material is provided in Appendix A.

3. MID Region Imperative

- 3.1 The MID Region presents particular operational characteristics that strengthen the case for early and comprehensive implementation of digital data sets, including high-density international traffic, a concentration of major international hub aerodromes, and the operational needs of cross-regional ATM coordination.
- 3.2 Harmonised provision of digital data sets across MID Region States will enable seamless data exchange, reduce fragmentation of the aeronautical information chain, and support State obligations under ICAO's Global Air Navigation Plan (GANP) and the Aviation System Block Upgrades (ASBU) framework.

4. Objectives

4.1 The MID Region Implementation Plan for Digital Data sets pursues the following objectives:

- Establish a harmonised regional framework for the provision of all five categories of digital aeronautical data sets in accordance with ICAO Annex 15 and PANS-AIM
- Define the technical standards, encoding specifications, data quality requirements, and distribution mechanisms applicable across the MID Region
- Establish a coordinated implementation timeline enabling progressive, phased transition to full digital data set provision by 2031
- Support States in developing and maintaining National Digital Data Set Implementation Plans
- Provide a monitoring and governance framework to track regional implementation progress and report to MIDANPIRG

5. Governance and Institutional Framework

5.1 MIDANPIRG and the AIM Sub-Group

The MIDANPIRG (MID Air Navigation Planning and Implementation Regional Group) provides strategic oversight of AIM modernization in the MID Region. MIDANPIRG directs the AIM Sub-Group (AIM/SG) to monitor implementation progress and report at each MIDANPIRG meeting.

The AIM Sub-Group (AIM/SG) is the primary working body for AIM matters within MIDANPIRG. Its responsibilities with respect to digital data sets include:

- Monitoring State progress against this Plan and National Plans
- Reviewing and endorsing updates to the Plan
- Recommending regulatory or procedural actions to MIDANPIRG where implementation gaps are identified.

5.2 AIM Digitalization and planning Task Force (AIMDP TF)

The Aeronautical Information Management Digitalization & Planning Task Force (AIMDP TF) was established by the MIDANPIRG/21 meeting to inter alia ensure the synchronized and harmonized deployment of digital AIS data sets across the MID Region. The AIMDP TF aims to foster the harmonization and digitalization of the aeronautical data chain. The Task Force develops and aligns the Regional Plan for the provision of digital data sets, in accordance with ICAO Annex 15, PANS-AIM and AIS Manual. This includes defining the required formats, coding specifications, and implementation timelines to ensure consistent deployment across the MID Region. The AIMDP TF shall continue to provide technical support during the implementation period of this plan, including:

- Reviewing and updating Appendix C (mapping tables) as AIXM standards evolve
- Supporting States with technical queries related to data encoding and validation

5.3 State Responsibilities

Each MID member State shall:

- Develop and maintain a National Digital Data Set Implementation Plan (NDIP) in accordance with the template in Appendix B, and submit it to the ICAO MID Office by End of December each year;
- Update the NDIP at least annually, or following any material change to the national implementation position;
- Report implementation progress to AIM/SG through the ICAO MID Office.

5.4 ICAO MID Office

The ICAO MID Regional Office provides secretariat support to MIDANPIRG AIM/SG and AIMDP TF. With respect to this Plan, the ICAO MID Office shall:

- Maintain a registry of National Digital Data Set Implementation Plans
- Report the current status of MID Region implementation to MIDANPIRG on annual basis.

PART II — DIGITAL AERONAUTICAL DATA SETS: REQUIREMENTS, STANDARDS, AND SPECIFICATIONS

1. GENERAL REQUIREMENTS FOR ALL DIGITAL DATA SETS

1.1. Data Set Categories and Scope

1.1.1. Five categories of digital aeronautical data sets are required under ICAO Annex 15 and PANS-AIM. Their regulatory status and primary intended uses are summarized below:

Category	Regulatory Status	Primary Use
Terrain data set	Standard (shall)	TAWS, EGPWS, airspace design, ATM systems
Obstacle data set	Standard (shall)	Obstacle clearance, procedure design, TAWS
AIP data set	Recommended Practice (should)	Flight planning, data service provision, avionics databases
Aerodrome Mapping data set	Recommended Practice (should)	A-SMGCS, surface movement, electronic charts
IFP data set	Recommended Practice (should)	Procedure coding, avionics databases, FMCS

1.1.2. The distinction between mandatory Standards and Recommended Practices does not reduce the urgency of implementation for the latter categories. The growing dependence of ATM systems and avionics on machine-readable procedure and aerodrome data renders AIP, aerodrome mapping, and IFP data sets operationally essential.

1.1.3. The purpose and intended use of each data set category are further described in PANS-AIM (Doc 10066), Chapter 5, and ICAO Doc 9881 — Guidelines for Electronic Terrain, Obstacle and Aerodrome Mapping Information.

1.2. Data format requirements

1.2.1. For the interoperability of aeronautical data and the effectiveness of the upstream and downstream data chain across the MID Region, AIP data sets, AMDB and obstacle data sets shall be provided in AIXM 5.1/5.1.1 format, as a minimum.

1.2.2. AIXM version 5.2 has been published and is recommended for use with instrument flight procedure (IFP) data sets. It supports IFP data sets, including the elements required for Performance-Based Navigation (PBN). States are encouraged to monitor its implementation status through the AIXM Change Control Board. Further technical information is available at: <https://aixm.aero/page/aixm-52>

1.2.3. The recommended exchange formats for terrain data sets are GeoTIFF and point cloud formats (for example, LiDAR-derived data). Technical specifications, packaging guidance and best practices for terrain data exchange are provided in EUROCONTROL Terrain and Obstacle Data (TOD) Manual available at : <https://www.eurocontrol.int/sites/default/files/2021-07/eurocontrol-tod-manual-ed-3-0.pdf>

1.3. Data quality requirements

1.3.1 The quality of aeronautical data is a direct safety determinant. Inaccurate, incomplete or untimely digital data sets can adversely affect the safety of air navigation. States and aeronautical information service providers therefore have an obligation to ensure that all digital data sets provided under this Plan meet the applicable quality requirements before being made available to users.

1.3.2 Data quality specifications for digital data sets include meeting accuracy, resolution, integrity, traceability, timeliness, completeness, and format requirements. These requirements are specified in ICAO Annex 15, Chapter 3, elaborated in PANS-AIM (Doc 10066), Section 5.3, and further developed in EUROCAE ED-76A / RTCA DO-200B — Standards for Processing Aeronautical Data. Non-compliant digital data sets can potentially affect the safety of air navigation.

1.4. Data product specification

1.4.1 Each provider of a digital data set shall publish a Data Product Specification (DPS) that enables users to evaluate the data set and determine whether it meets their requirements for a specific intended use. The DPS shall be prepared in accordance with ISO 19131 — Geographic Information: Data Product Specifications (SD 7, Appendix A) and PANS-AIM (Doc 10066), Section 5.3.4.

1.4.2 The availability of a DPS for each data set series shall be indicated in the national AIP, in section GEN 3.1.6. For data sets provided through information services, the DPS availability shall also be referenced in the relevant Information Service Overview, in accordance with PANS-AIM (Doc 10066), Section 5.4.2.

1.4.3 The data set provider shall notify users of DPS amendments in a timely manner. At a minimum:

- at least 12 months' advance notice shall be given for changes that require technical adaptations on client systems; and
- at least 56 days' advance notice shall be given for other significant structural or content changes.

1.4.4 Supporting guidance and worked examples of Data Product Specifications are provided in the EUROCONTROL Guidelines for Harmonised AIP Publication and Data Set Provision (SD 1, Appendix A) and in ISO 19131 — Geographic Information: Data Product Specifications (SD 7, Appendix A)

1.5. Metadata requirements for digital data sets

1.5.1 In accordance with ICAO Annex 15 para. 5.3.1.2 and PANS-AIM Section 5.3.2, each data set shall be provided to the next intended user together with at least the following minimum set of metadata:

- a) the names of the organization or entities providing the data set;
- b) the date and time when the data set was provided;
- c) period of validity of the data set; and
- d) any limitations with regard to the use of the data set.

1.5.2 Further guidance on metadata requirements, including additional metadata elements for Obstacle and Terrain data sets and metadata coding in accordance with ISO 19115, are provided in PANS-AIM (Doc 10066), Section 5.3.2, and ISO 19115 — Geographic Information: Metadata (SD 8, Appendix A). A worked example of AIP data set metadata coding is provided in Appendix C, Section 3 of this Plan.

1.6. Validation and verification of digital data sets

1.6.1 Data sets shall be verified and validated before being provided to the next intended users, in accordance with PANS-AIM Section 5.3.1.5/5.3.1.6.

1.6.2 For AIXM-encoded data sets, validation is a two-step process:

Step 1 — XML schema validation: The data set is checked for structural conformance with the AIXM XML schema.

Step 2 — Business rule verification: The data set is checked against aeronautical business rules expressed using the Semantics of Business Vocabulary and Rules (SBVR) standard.

1.6.3 Automated validation and verification rules for AIP and Obstacle data sets, are available at <https://aixm.aero/page/data-verification>

1.7. Omission of AIP Tables Following Data Set Provision

1.7.1 In accordance with PANS-AIM para. 5.2.1.1.3 (applicable from 27 November 2025), a State that provides a digital data set may omit the corresponding AIP tables from the printed/PDF AIP, provided that:

- a) The digital data set fully covers the information that would otherwise appear in the AIP table;
- b) Advance notice is published by means of an Aeronautical Information Circular (AIC) sufficiently in advance for users to adapt their systems — as a minimum, 56 days before the omission takes effect; and
- c) The DPS is publicly available and referenced in AIP section GEN 3.1.6.

1.7.2 States shall indicate in their National Digital Data Set Implementation Plans (Appendix B) which AIP sections they intend to omit and the planned effective date.

1.7.3 The transition period applicable to each data set category is specified in the implementation table in Part III (See Part III, Section 1, Table, Column 7 - Transition Period).

1.7.4 Recommended Transition Steps" covering:

- Establish DPS and publish in AIP GEN 3.1.6
- Validate digital data set against AIXM schema and SBVR rules
- Issue AIC with 56-day advance notice
- Publish digital data set via agreed distribution mechanism
- Update NDIP to reflect omission decision

2. PROVISION OF TERRAIN AND OBSTACLE DATA (TOD)

2.1 The requirements for the provision of terrain and obstacle data (TOD) in electronic form are part of the transition from traditional AIS to Aeronautical Information Management (AIM). The purpose and context of TOD digital data sets, including their role in supporting ATM applications and safety systems, are described in Doc 9881, Guidelines for Electronic Terrain, Obstacle and Aerodrome Mapping Information.

2.2 TOD Relevant Areas , Surfaces and coverage

2.2.1 The geographic areas and three-dimensional surfaces that constitute the spatial scope of the ICAO TOD provisions defined in ICAO Annex 15, Annex 14, and Annex 4, and referenced in PANS-AIM are described in ICAO Doc 9881 — Guidelines for Electronic Terrain, Obstacle and Aerodrome Mapping Information (RD 8, Appendix A) and the EUROCONTROL Terrain and Obstacle Data Manual (SD 2, Appendix A).

2.2.2 ICAO Annex 15 (as amended by Amendment 33 and *incorporated in the 16th Edition and subsequent amendments*) defines four coverage areas for terrain and obstacle data:

- a) Area 1: The entire territory of a State;
- b) Area 2: The vicinity of an aerodrome (further sub-divided into Areas 2a–2d by Amendment 36);
- c) Area 3: An area bordering the movement area on an aerodrome; and
- d) Area 4: The radio altimeter operating area in front of a precision approach runway, Category II or III.

2.2.3 The detailed definitions and numerical requirements for each area are set out in ICAO Annex 15 para. 5.3.3.1 and PANS-AIM Appendix 8.

2.3 TOD Planning and Implementing steps

2.3.1 EUROCONTROL Terrain and Obstacle Data Manual , available at <https://www.eurocontrol.int/publication/eurocontrol-terrain-and-obstacle-data-manual>, outlines a recommended approach to planning and implementing terrain and obstacle data on a national basis. The steps described constitute a list of activities for States to coordinate the provision of TOD.

2.4 Terrain Digital Data sets Provision

2.5.1 AIXM 5.1 does not encompass terrain data. For terrain data sets, commonly used exchange formats are GeoTIFF, Digital Elevation Model (DEM) and Point Cloud (e.g., LiDAR-derived). Technical specifications, best practices, and packaging guidance for terrain data exchange are provided in the EUROCONTROL Terrain and Obstacle Data Manual (SD 2, Appendix A), available at <https://www.eurocontrol.int/publication/eurocontrol-terrain-and-obstacle-data-manual>. States should apply those specifications when producing and distributing terrain data sets.

2.5 Obstacle data set provision

2.5.2 The Aeronautical Information Exchange Model (AIXM) version 5.1 shall be used for modelling and encoding obstacle data in the MID Region. AIXM 5.1 supports all attributes required by PANS-AIM (Doc 10066) for the obstacle data set, including identification of new, edited, or deleted attributes.

2.5.3 Guidelines for a harmonized approach to the provision of an obstacle data set are set out in the EUROCONTROL Guidelines for Harmonised AIP Publication and Data Set Provision, available at : <https://www.eurocontrol.int/publication/eurocontrol-guidelines-harmonised-aip-publication-and-data-set-provision>

2.6 Announcement of the TOD availability in the AIP

2.6.1 In accordance with PANS-AIM Appendix 2, the availability of terrain and obstacle data sets shall be announced in the national AIP in section GEN 3.1.6.

3. PROVISION OF AERODROME MAPPING DATA SETS (AMD)

3.1 Overview and Regulatory Basis

3.1.1 In accordance with ICAO Annex 14, aerodrome mapping data (AMD) should be made available to aeronautical information services for aerodromes where safety and/or performance-based operations indicate potential benefits.

3.1.2 An Aerodrome Mapping Database (AMDB) is an AMD set fulfilling the requirements of industry standards EUROCAE ED-99 / RTCA DO-272 (content requirements) and EUROCAE ED-119 / RTCA DO-291 (exchange requirements).

3.1.3 Aerodrome mapping data should be supported by electronic terrain and obstacle data for Area 3 to ensure consistency and quality of all geographic data associated with the aerodrome.

3.2 Coding specifications for Aerodrome Mapping Data Set

3.2.1 Coding specifications and supporting material for the encoding of AMD features in AIXM 5.1.1, including aerodrome mapping data mappings between RTCA/EUROCAE industry standards and AIXM 5.1.1 features, and metadata aspects are provided at the AIXM web site at https://ext.eurocontrol.int/aixm_confluence/display/ACGAMD/Information+exchange+models.

3.3 Implementation Approach

3.3.1 AMD implementation shall follow a collaborative approach involving all relevant stakeholders. The primary responsibility for initiating AMD provision rests with the AISP, which may delegate data origination to the aerodrome operator.

3.3.2 Detailed implementation guidance, including step-by-step production workflows for each initiating scenario, is maintained by EUROCONTROL and shall be consulted by MID Region States and AISPs: https://ext.eurocontrol.int/aixm_confluence/display/ACGAMD/Implementation

4. PROVISION OF AERONAUTICAL INFORMATION PUBLICATION (AIP) DATA SETS

4.1 Introduction

4.1.1 The main purpose of the AIP Data Set is to ensure the minimum digital data necessary for efficiently and safely conducting flight planning and en-route air navigation. The intended use of the AIP data set, including its use by data service providers, air navigation service providers, and other State AIS, is described in PANS-AIM (Doc 10066), Section 5.2.1.

4.1.2 The content of an AIP Data Set is specified in PANS-AIM (Doc 10066) as a list of subjects and their properties, including airspace, routes, significant points, radio navigation and landing aids, and airport and runway data. The detailed scope applicable in the MID Region, including additional subjects identified through the MID Region gap analysis conducted by the AIMDP TF, is specified in Appendix C to this Plan.

4.2 Coding Specification for AIP Data Set

4.2.1 The Aeronautical Information Exchange Model (AIXM) provides a globally accepted data model and data coding format for the aeronautical data subjects contained in the AIP data set. AIP data set specimen ("DONLON" data) is available at : https://ext.eurocontrol.int/aixm_confluence/pages/viewpage.action?pageId=20415246

4.2.2 Common coding rules and guidelines for the provision of the AIP Data Set in AIXM 5.1(.1) format, with the aim of ensuring interoperability across the downstream AIS data chain, are available at https://ext.eurocontrol.int/aixm_confluence/display/ACGAIP/Introduction. The detailed PANS-AIM to AIXM 5.1/5.1.1 mapping applicable in the MID Region is provided in Appendix C to this Plan.

5. PROVISION OF INSTRUMENT FLIGHT PROCEDURE DATA SETS

5.1 Introduction

5.1.1 Instrument Flight Procedure (IFP) data sets are defined in ICAO Annex 15, 16th edition. Such data sets contain the departure, arrival and approach procedure data for airports used for international air traffic, as published in the AIP. PANS-AIM (Doc 10066) specifies the minimum subjects and properties to be included in IFP data sets.

5.2 Coding Specification for IFP data set

5.2.1 AIXM 5.2 should be considered for the provision of IFP data sets, as it introduces critical data elements in support of Performance-Based Navigation (PBN) procedures. States are encouraged to monitor developments through the AIXM Change Control Board at <https://aixm.aero> and to refer to the AIXM 5.2 release documentation available at <https://aixm.aero/page/aixm-52> for technical information on AIXM versions.

5.2.2 Until formal IFP coding guidelines are published at global level, MID States providing IFP data sets should document their encoding approach in a Data Product Specification (DPS) in accordance with ISO 19131 — Geographic Information: Data Product Specifications (SD 7, Appendix A) and PANS-AIM (Doc 10066), Section 5.3.4, and notify the AIMDP TF accordingly.

PART III – COORDINATED DEPLOYMENT OF THE DIGITAL DATA SETS IN MID REGION

1. IMPLEMENTATION TIMELINE AND MILESTONES

The following table establishes the MID Region coordinated deployment framework for digital data sets, specifying what is to be provided, how it is to be provided, when provision is expected. The deployment framework encompasses the five digital data set categories. Implementation dates reflect the progressive regional timeline agreed by the AIMDP TF. States are strongly encouraged to implement as early as practicable within each window.

#	Data Set Category	Area / Scope	Format	Encoding / Coding Specification	Target Provision Window	AIP Omission Permissible?	Transition Period
1	Terrain data set	Area 1 — Entire State territory	GeoTIFF / DEM/Point Cloud	EUROCONTROL TOD Manual (SD 2, Appendix A); OGC GeoTIFF Standard (SD 6, Appendix A)	2020 – 2027	N/A	Not applicable
2	Terrain data set	Area 2a + Take-off flight path + OLS — International aerodromes	GeoTIFF /DEM/ Point Cloud	EUROCONTROL TOD Manual (SD 2, Appendix A); OGC GeoTIFF Standard (SD 6, Appendix A)	2020 – 2027	N/A	Not applicable
3	Terrain data set	Area 4 — CAT II/III aerodromes	GeoTIFF /DEM/Point Cloud	EUROCONTROL TOD Manual (SD 2, Appendix A); OGC GeoTIFF Standard (SD 6, Appendix A)	2020 – 2027	N/A	Not applicable
4	Terrain data set	Areas 2b, 2c, 2d, 3 — International aerodromes	GeoTIFF /DEM/Point Cloud	EUROCONTROL TOD Manual (SD 2, Appendix A); OGC GeoTIFF Standard (SD 6, Appendix A)	At State discretion	N/A	Not applicable
5	Obstacle data set	Area 1 — Entire State territory (ENR 5.4)	AIXM 5.1/5.1.1	EUROCONTROL AIXM obstacle coding guidelines	2020 – 2027	Yes	5 years from provision date
6	Obstacle data set	Areas 2a, 4, OLS + take-off flight path — International aerodromes (AD 2.10 / AD 3.10)	AIXM 5.1/5.1.1	EUROCONTROL AIXM obstacle coding guidelines	2020 – 2027	Yes	5 years from provision date
7	Obstacle data set	Areas 2b, 2c, 2d, 3 — International aerodromes	AIXM 5.1/5.1.1	EUROCONTROL AIXM obstacle coding guidelines	At State discretion	Yes	5 years from provision date
8	AIP data set	GEN, ENR, AD sections as specified in Part II, Section 4	AIXM 5.1/5.1.1	EUROCONTROL ACGAIP Specification + Appendix C	2026 – 2030	Yes	5 years from provision date
9	Aerodrome Mapping data set	International aerodromes	AIXM 5.1.1	EUROCONTROL ACGAMD Specification	2020 – 2027	N/A	Not applicable
10	IFP data set	All instrument procedures at international aerodromes	AIXM 5.2 (preferred) / AIXM 5.1.1 (interim)	AIXM 5.2 release documentation (https://aixm.aero/page/aixm-52)	2026 – 2031	Yes	5 years from provision date

Note 1: "Provision window" indicates the period within which States should achieve initial provision. States that have already achieved provision before 2025 are recognized as early implementers.

Note 2: "AIP Omission Permissible?" indicates whether the relevant PANS-AIM provisions permit omission of AIP content once the data set is provided. See Part II, Section 1.7.

Note 3: Terrain data sets are not subject to the AIP omission mechanism as terrain data does not appear as tables in the AIP.

Note 4: The format of the terrain data sets georeferencing information depends on the file format and that GeoTIFF/DEM/point cloud are only of the most common file formats.

2. DISTRIBUTION SERVICES

- 2.1 PANS-AIM (5.4.1.1) allows AIS products, including digital data sets, to be distributed either physically (e.g. by post) or electronically. Distribution via physical media (USB, DVD) is a temporary solution already used for AIP/eAIP.
- 2.2 In the context of evolving ATM requirements, the sharing of aeronautical information on a system-wide basis is essential to ensure comprehensive situational awareness across the ATM community. To fully support this objective, aeronautical information, including digital data sets, should be made available as System-Wide Information Management (SWIM) information services, thereby facilitating seamless and interoperable information exchange among all ATM system participants.

3. NATIONAL PLANS FOR THE PROVISION OF DIGITAL DATA SETS

- 3.1 Each member State shall prepare, maintain, and submit a National Digital Data Set Implementation Plan (NDIP), which translates the regional framework of this Plan into specific national commitments and timelines.
- 3.2 The NDIP shall be structured using the Excel template provided in Appendix B. The template covers the following elements:

Element	Content
1	Name of the State
2	AIP Data Set — provision date, encoding specification, remarks
3	Obstacle Data Set (Area 1) — provision date, format, remarks
4	Obstacle Data Sets — international aerodromes (Areas 2a, 4, OLS, and others as applicable)
5	IFP Data Sets — provision date, encoding format, aerodromes covered, remarks
6	Aerodrome Mapping Data Sets — provision date, aerodromes covered, remarks
7	Terrain Data Set (Area 1) — provision date, format, remarks
8	Terrain Data Sets — international aerodromes (Areas 2a, 4, OLS, and others)
9	AIP Omission Decision — list of AIP sections to be omitted and planned effective dates
10	Date of last update / review

3.3 Submission and Update Schedule

Initial NDIP submissions shall be made by the date confirmed by MIDANPIRG; thereafter, NDIPs shall be updated and re-submitted by 31 December each year.

NDIPs shall be updated at least annually, or immediately following any material change to a State's implementation position (e.g., change of provision date, change of encoding format, addition of a new aerodrome).

The ICAO MID Office shall maintain a central registry of NDIPs and publish a consolidated MID Region status dashboard on the ICAO MID website, updated following each AIM/SG meeting.

Appendix A – Regulatory and Guidance Material References

Regulatory References

Ref.	Document
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|------|--|
| RD 1 | ICAO Annex 15 — Aeronautical Information Services, 16th Edition, 2018 (incorporating all amendments) |
| RD 2 | ICAO Procedures for Air Navigation Services — Aeronautical Information Management (PANS-AIM, Doc 10066), 2nd Edition |
| RD 3 | ICAO Aeronautical Information Services Manual (Doc 8126), 7th Edition, 2022 |
| RD 4 | ICAO Annex 14 — Aerodromes, Volume I, Aerodrome Design and Operations (current edition) |
| RD 5 | ICAO Annex 4 — Aeronautical Charts (current edition) |
| RD 6 | ICAO Manual on System-Wide Information Management (SWIM) Concept (Doc 10039), 1st Edition |
| RD 7 | ICAO Procedures for Air Navigation Services — Information Management (PANS-IM, Doc 10199), 1st Edition |
| RD 8 | ICAO Doc 9881 — Guidelines for Electronic Terrain, Obstacle and Aerodrome Mapping Information |

Supporting References

Ref.	Document
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- | | |
|------|--|
| SD 1 | EUROCONTROL Guidelines for Harmonised AIP Publication and Data Set Provision (current edition), available at https://www.eurocontrol.int/publication/eurocontrol-guidelines-harmonised-aip-publication-and-data-set-provision |
| SD 2 | EUROCONTROL Terrain and Obstacle Data Manual (current edition), available at https://www.eurocontrol.int/publication/eurocontrol-terrain-and-obstacle-data-manual |
| SD 3 | EUROCONTROL Specification for AIS Data Sets in AIXM 5.1.1 (current edition) |
| SD 4 | RTCA DO-272D / EUROCAE ED-99D — User Requirements for Aerodrome Mapping Information (current edition) |
| SD 5 | RTCA DO-291B / EUROCAE ED-119B — Interchange Standards for Terrain, Obstacle, and Aerodrome Mapping Data (current edition) |
| SD 6 | OGC GeoTIFF Standard (current edition), available at https://www.ogc.org/standards/geotiff |
| SD 7 | ISO 19131 — Geographic information: Data product specifications (current edition) |
| SD 8 | ISO 19115 — Geographic information: Metadata (current edition) |
| SD 9 | ICAO Doc 9854 — Global Air Traffic Management Operational Concept, 1st Edition, 2005 |

Appendix B – NATIONAL DIGITAL DATA SET IMPLEMENTATION PLAN (NDIP) Standardised Template — Version 1.0, 2026

INSTRUCTIONS FOR USE

This template shall be completed by each member State and submitted to the ICAO MID Office no later than 31 December 2026. States shall use this template without structural modification. Requests for field additions shall be submitted to AIMDP TF for consideration.

National Plan for the provision of Digital Data Sets



National Plan
Template for DDS pro

Appendix C - AIP Data set

1 Introduction

The context and rationale for the AIP data set, including the role of the 16th Edition of ICAO Annex 15 and PANS-AIM (Doc 10066) in enabling the transition from AIP table provision to digital data set provision, and the conditions under which States may omit AIP sections when equivalent digital data sets are made available, are described in PANS-AIM (Doc 10066), Section 5.2.1, and EUROCONTROL Guidelines for Harmonised AIP Publication and Data Set Provision (SD 1, Appendix A).

The following paragraphs specify the MID Region scope of the AIP data set, including:

- a) The AIP sections that may be omitted when an AIP data set is provided, as specified in PANS-AIM para. 5.2.1.1.3, supplemented by additional sections identified through MID Region gap analysis; and
- b) The AIXM 5.1/5.1.1 mapping applicable in the MID Region for encoding each subject and its properties.

1.1 AIP Data Set — Scope of Subjects

- 1.1.1 In accordance with PANS-AIM para. 5.2.1.1.3, when an AIP data set is provided, States may omit the following AIP sections from their AIP, provided that the information is available in the data set:

- a) GEN 2.5 List of radio navigation aids;
- b) ENR 2.1 FIR, UIR, TMA and CTA;
- c) ENR 3.1 Conventional navigation routes;
- d) ENR 3.2 Area navigation routes;
- e) ENR 3.5 Other routes;
- f) ENR 3.6 En-route holding;
- g) ENR 4.1 Radio navigation aids — en-route;
- h) ENR 4.2 Special navigation systems;
- i) ENR 4.4 Name-code designators for significant points;
- j) ENR 4.5 Aeronautical ground lights – en-route;
- k) ENR 5.1 Prohibited, restricted and danger areas;
- l) ENR 5.2 Military exercise and training areas and air defence identification zone (ADIZ);
- m) ENR 5.3.1 Other activities of a dangerous nature;
- n) ENR 5.3.2 Other potential hazards;
- o) ENR 5.5 Aerial sporting and recreational activities;
- p) AD 2.17 Air traffic services airspace;
- q) AD 2.19 Radio navigation and landing aids;
- r) AD 3.16 Air traffic services airspace (Heliports);
- s) AD 3.18 Radio navigation and landing aids (Heliports);

Note: The list reproduces PANS-AIM para. 5.2.1.1.3 for ease of reference. The PANS-AIM provision is authoritative. Where the PANS-AIM text and this list differ, the PANS-AIM text prevails. The effective date of this provision is 27 November 2025.

- 1.1.2 Through a MID Region gap analysis, the following additional AIP sections have been identified as containing data that can be systematically encoded in AIXM 5.1/5.1.1 and should be included in the MID Region AIP data set scope, beyond the minimum required by PANS-AIM para. 5.2.1.1.3:

- | | | |
|-----|--------|--|
| (1) | AD 1.3 | Index to Aerodromes/Heliports |
| (2) | AD 1.5 | Status of certification of aerodromes |
| (3) | AD 2.1 | Aerodrome location/ indicator and name |

(4)	AD 2.2	Aerodrome geographical and administrative data
(5)	AD 2.12	Runway Physical Characteristics
(6)	AD 2.13	Declared Distances
(7)	AD 2.14	Approach and Runway Lighting
(8)	AD 2.15	Other Lighting, Secondary Power Supply
(9)	AD 2.16	Helicopter Landing Area
(10)	AD 3.1	Heliport location indicator and name
(11)	AD 3.2	Heliport geographical and admin data

Note: The inclusion of these additional sections in the MID Region AIP data set scope is a MID Region-specific provision, agreed by the AIMDP TF. It is consistent with, and extends, the minimum scope specified in PANS-AIM para. 5.2.1.1.3. States are encouraged to include these sections in their AIP data set implementations in order to maximise the value and completeness of data set provision."

1.1.3 Minimum Subject Properties (PANS-AIM para. 5.3.3.1.1)

The AIP data set shall include data about the following subjects, with the properties indicated in brackets being included as a minimum (if applicable):

- a) Air traffic services (ATS) Airspace (type, name, lateral limits, vertical limits, class of airspace);
- b) Special activity airspace (type, name, lateral limits, vertical limits, restriction, activation);
- c) ATS route and other route (designator, flight rules);
- d) Route segment (navigation specification, from point, to point, track, length, upper limit, lower limit, minimum en-route altitude (MEA), minimum obstacle clearance altitude (MOCA), direction of cruising level, required navigation performance);
- e) Waypoint – en-route (identification, location, formation);
- f) Aerodrome/Heliport (ICAO location indicator, name, designator IATA, served city, certified ICAO, certification date, certification expiration date, control type, field elevation, reference temperature, magnetic variation, reference point);
- g) Runway (designator, nominal length, nominal width, surface type, strength);
- h) Runway Direction (designator, true bearing, threshold, take off run available (TORA), take-off distance available (TODA), accelerate-stop distance available (ASDA), landing distance available (LDA));
- i) Final approach and take-off (FATO) (designation, length, width, threshold point);
- j) Touchdown and left-off (TLOF) (designator, centre point, length, width, surface type);
- k) Radio navigation aid (type, identification, name, aerodrome/heliport served, hours of operation, magnetic variation, frequency/channel, position, elevation, magnetic bearing, true bearing, zero bearing direction).

All lines a) to k) supplemented by the below (1) & (2) are considered as part of mapping – for details, refer to the paragraph that follows.

- (1) Aeronautical Ground Lights (type, designator, name, intensity, characteristics, hours of operations, position)
- (2) En-route Holding (fix, waypoint, inbound track, turn direction, speed, minimum/maximum holding level, time/distance outbound, special instruction, controlling unit name/frequency)

Note: The highlighted lines are the AIP sections (paragraph 1.1.1 of this Appendix) and list of properties (paragraph 1.1.2 of this Appendix) respectively that are identified during internal “gap analysis” in order to assure the consistency in information and content with AIP when delivering the digital AIP Data set files.

2 Mapping PANS AIM and AIP Data set to AIXM 5.1/AIXM 5.1.1 Model

The following AIXM 5.1/5.1.1 mapping tables specify how each PANS-AIM AIP data set subject and its properties shall be encoded in the MID Region AIP data set. These mapping tables are derived from and consistent with the EUROCONTROL AIP Data Set coding guidelines, and have

been adapted where necessary to reflect MID Region-specific requirements or to address gaps identified in the coding guidelines.

2.1 ATS airspace

The mapping will be for the content of sections (ICAO Doc. 10066 PANS-AIM paragraph 5.2.1.1.3) respectively:

- ✓ ENR 2.1 FIR, UIR, TMA and CTA - *line b*);
- ✓ AD 2.17 ATS Airspace - *line p*);
- ✓ AD 3.16 ATS Airspace, *line r*);

AIXM 5.1/AIXM 5.1.1 Mapping details:

PANS-AIM	AIXM 5.1/AIXM 5.1.1
Type	Airspace.type, and/or Airspace.localType
Name	Airspace.name, and/or Airspace.designator
Lateral Limits	(Airspace.AirspaceVolume.horizontalProjection.Surface, Airspace.AirspaceVolume.horizontalProjection.Surface.horizontalAccuracy) or (Airspace.AirspaceVolume.centreline.Curve, Airspace.AirspaceVolume.centreline.Curve.horizontalAccuracy, Airspace.AirspaceVolume.width)
Vertical Limit – Upper Limit	Airspace.AirspaceVolume.upperLimit, Airspace.AirspaceVolume.upperLimitReference
Vertical Limit – Lower Limit	Airspace.AirspaceVolume.lowerLimit, Airspace.AirspaceVolume.lowerLimitReference and/or AirspaceVolume.annotation.Note.namedProperty equal to 'lowerLimit' .translatedNote.LinguisticNote.note PANS-AIM defines an accuracy for the lower limit of an ATS airspace. There is no dedicated attribute in AIXM 5.1.1. Workaround: A Note may be used to encode that information.
Class of Airspace	Airspace.class.AirspaceLayerClass.classification
Class – Upper Limit	Airspace.class.AirspaceLayerClass.associatedLevels.AirspaceLayer.upperLimit
Class – Lower Limit	Airspace.class.AirspaceLayerClass.associatedLevels.AirspaceLayer.lowerLimit

PANS-AIM	AIXM 5.1/AIXM 5.1.1
ATS Unit	(SearchRescueService.clientAirspace, SearchRescueService.serviceProvider) and/or (InformationService.clientAirspace, InformationService.serviceProvider) and/or (AirTrafficControlService.clientAirspace, AirTrafficControlService.serviceProvider)
ATS Unit Name	Unit.name and/or (SearchRescueService.name) and/or (InformationService.name) and/or (AirTrafficControlService.name)
ATS Unit Call sign	SearchRescueService.call-sign.CallsignDetail.callSign and/or InformationService.call-sign.CallsignDetail.callSign and/or AirTrafficControlService.call-sign.CallsignDetail.callSign
ATS Unit Language	SearchRescueService.call-sign.CallsignDetail.language and/or InformationService.call-sign.CallsignDetail.language and/or AirTrafficControlService.call-sign.CallsignDetail.language
ATS Unit Applicability	SearchRescueService.annotation.Note and/or InformationService.annotation.Note and/or AirTrafficControlService.annotation.Note and/or Airspace.annotation.Note
Frequency	AirTrafficControlService.radioCommunication and/or InformationService.radioCommunication and/or SearchRescueService.radioCommunication
Frequency Value	RadioCommunicationChannel.frequencyTransmission and/or RadioCommunicationChannel.frequencyReception

PANS-AIM	AIXM 5.1/AIXM 5.1.1
Frequency Purpose	RadioCommunicationChannel.rank
SATVOICE number	AirTrafficControlService.annotation.Note and/or InformationService.annotation.Note and/or SearchRescueService.annotation.Note
SATVOICE number value	AirTrafficControlService.annotation.Note and/or InformationService.annotation.Note and/or SearchRescueService.annotation.Note
SATVOICE number purpose	AirTrafficControlService.annotation.Note and/or InformationService.annotation.Note and/or SearchRescueService.annotation.Note
ATS Unit hour of service	SearchRescueService.availability.ServiceOperationalStatus.timeInterval and/or InformationService.availability.ServiceOperationalStatus.timeInterval and/or AirTrafficControlService.availability.ServiceOperationalStatus.timeInterval
Hours of applicability	Airspace.activation.AirspaceActivation.timeInterval
Transition altitude	AirportHeliport.transitionAltitude
Nav Spec	Airspace.annotation[purpose='OTHER:NAV_SPEC'].Note
Remarks	Airspace.annotation

2.2 Special Activity Airspace

The mapping will be for the content of the following sections (ICAO Doc. 10066 PANS-AIM paragraph 5.2.1.1.3) respectively:

- ✓ ENR 5.1 Prohibited, restricted and danger areas – *line k*);
- ✓ ENR 5.2 Military exercise and training areas/Air Defence Identification Zone (ADIZ) - *line l*);
- ✓ ENR 5.3.1 Other activities of a dangerous nature – *line m*);
- ✓ ENR 5.3.2 Other potential hazards – *line n*);
- ✓ ENR 5.5 Aerial sporting and recreational activities – *line o*);

AIXM 5.1/AIXM 5.1.1 Mapping details

PANS-AIM	AIXM 5.1/AIXM 5.1.1
Type	Airspace.type and/or Airspace.localType

PANS-AIM	AIXM 5.1/AIXM 5.1.1
Identification/Designator	Airspace.designator
Name	Airspace.name
Lateral Limits	(Airspace.AirspaceVolume.horizontalProjection.Surface, Airspace.AirspaceVolume.horizontalProjection.Surface.horizontalAccuracy) Or (Airspace.AirspaceVolume.centreline.Curve, Airspace.AirspaceVolume.centreline.Curve.horizontalAccuracy, Airspace.AirspaceVolume.width)
Vertical Limits – Upper Limit	Airspace.AirspaceVolume.upperLimit, Airspace.AirspaceVolume.upperLimitReference
Vertical Limits – Lower Limit	Airspace.AirspaceVolume.lowerLimit, Airspace.AirspaceVolume.lowerLimitReference
Restriction	Airspace.activation.AirspaceActivation.activity
Activation	Airspace.annotation[propertyName='activation'].Note
Time of activity	Airspace.activation.AirspaceActivation.timeInterval
Risk of interception	Airspace.annotation.Note
Advisory measures	Airspace.annotation.Note
Authority responsible for provision of information	Option 1: AuthorityForAirspace.assignedAirspace AuthorityForAirspace.responsibleOrganisation Option 2: Airspace.activation.AirspaceActivation.user Option 3 (in case Frequency needs to be encoded): (SearchRescueService.clientAirspace, SearchRescueService.serviceProvider, SearchRescueService.radioCommunication) Or (InformationService.clientAirspace, InformationService.serviceProvider, InformationService.radioCommunication) Or (AirTrafficControlService.clientAirspace, AirTrafficControlService.serviceProvider, AirTrafficControlService.radioCommunication)

PANS-AIM	AIXM 5.1/AIXM 5.1.1
Operator	Option 1: Airspace.activation.AirspaceActivation.user, OrganisationAuthority.contact.ContactInformation.phoneFax.TelephoneContact.voice Option 2 (in case Frequency has to be defined): (AirTrafficControlService.clientAirspace, AirTrafficControlService.groundCommunication.ContactInformation.phoneFax.TelephoneContact.voice) Or (InformationService.clientAirspace, InformationService.groundCommunication.ContactInformation.phoneFax.TelephoneContact.voice) Or (SearchRescueService.clientAirspace, SearchRescueService.groundCommunication.ContactInformation.phoneFax.TelephoneContact.voice)

2.3 ATS Route and other routes

The mapping will be for the content of the following sections (ICAO Doc. 10066 PANS-AIM paragraph 5.2.1.1.3) respectively:

- ✓ ENR 3.1 Conventional navigation routes – *line c*);
- ✓ ENR 3.2 Area navigation routes – *line d*);
- ✓ ENR 3.5 Other routes – *line e*);

AIXM 5.1/AIXM 5.1.1 Mapping details

PANS-AIM	AIXM 5.1/AIXM 5.1.1
Designator (ATS Route), Designator (Other Route)	Route.designatorPrefix and/or (Route.designatorSecondLetter, Route.designatorNumber) and/or RouteSegment.designatorSuffix and/or Route.multipleIdentifier
Flight rules	Route[flightRule='IFR'].flightRule
ATS Routes, Other Route	Route[type='ATS'].type, Route[contains(type, 'OTHER:').type
Remarks	Route.annotation

2.4 Route segment

The mapping will be for the content of the following sections (ICAO Doc. 10066 PANS-AIM paragraph 5.2.1.1.3) respectively:

- ✓ ENR 3.1 Conventional navigation routes – *line c*);
- ✓ ENR 3.2 Area navigation routes – *line d*);
- ✓ ENR 3.5 Other routes – *line e*);

AIXM 5.1/AIXM 5.1.1 Mapping details

PANS-AIM	AIXM 5.1/AIXM 5.1.1
Navigation Specification	RouteSegment.navigationType The current AIXM 5.1.1 version does not support all PBN values. The navigationType attribute of AIXM only provides as values 'RNAV', 'CONV' and 'TACAN', but no PBN specifications (such as RNAV 10 , RNP 4 etc). Most missing PBN values can be coded using navigationType equal to 'RNAV' or 'OTHER:RNP' and requiredNavigationPerformance with the navigation accuracy value, e.g. '10' or '4'.
Navigation Performance	RouteSegment.requiredNavigationPerformance
From point – Designator	RouteSegment.start.EnRouteSegmentPoint.pointChoice_navaidSystem or RouteSegment.start.EnRouteSegmentPoint.pointChoice_fixDesignatedPoint or RouteSegment.start.EnRouteSegmentPoint.pointChoice_airportReferencePoint For the mapping the assumption is made that RunwayCentrelinePoint, TouchDownLiftOff, AirportHeliport and Point are not used as "From" point.
From point – Reporting	RouteSegment.start.EnRouteSegmentPoint.reportingATC
To point – Designator	RouteSegment.end.EnRouteSegmentPoint.pointChoice_navaidSystem or RouteSegment.end.EnRouteSegmentPoint.pointChoice_fixDesignatedPoint or RouteSegment.end.EnRouteSegmentPoint.pointChoice_airportReferencePoint
To point – Reporting	RouteSegment.end.EnRouteSegmentPoint.reportingATC
Track	RouteSegment.trueTrack and/or RouteSegment.reverseTrueTrack and/or RouteSegment.magneticTrack and/or RouteSegment.reverseMagneticTrack
Length	RouteSegment.length, RouteSegment.pathType PANS-AIM requires an accuracy to be specified for the Airway segments length. AIXM 5.1.1 does not have a dedicated attribute for that purpose. Workaround for AIXM 5.1(.1): Code a corresponding Note .
Upper limit	RouteSegment.upperLimit, RouteSegment.upperLimitReference

PANS-AIM	AIXM 5.1/AIXM 5.1.1
Lower limit	RouteSegment.lowerLimit, RouteSegment.lowerLimitReference
Minimum En route Altitude	RouteSegment.minimumEnrouteAltitude and RouteSegment.annotation.Note.propertyName value equal-to 'minimumEnrouteAltitude' PANS-AIM requires a accuracy to be specified for the MEA. AIXM 5.1.1 does not have a dedicated attribute for that purpose. Workaround for AIXM 5.1(.1): Code a corresponding Note .
Minimum Obstacle Clearance Altitude	RouteSegment.minimumObstacleClearanceAltitude and RouteSegment.annotation.Note.propertyName value equal-to 'minimumObstacleClearanceAltitude' PANS-AIM requires a accuracy to be specified for the MEA. AIXM 5.1.1 does not have a dedicated attribute for that purpose. Workaround for AIXM 5.1(.1): Code a corresponding Note .
Minimum flight altitude	(RouteSegment.minimumObstacleClearanceAltitude and RouteSegment.annotation.Note.propertyName value equal-to 'minimumObstacleClearanceAltitude') or (RouteSegment.minimumEnrouteAltitude And RouteSegment.annotation.Note.propertyName value equal-to 'minimumEnrouteAltitude') AIXM 5.1.1 does not have a dedicated attribute for that purpose. As, in PANS-AIM there is no definition for Minimum flight altitude. For this mapping it is assumed that it may be the either the MEA or the MOCA for helicopters. Workaround for AIXM 5.1(.1): Code a RouteSegment.minimumObstacleClearanceAltitude, or RouteSegment.minimumEnrouteAltitude
Lateral Limits	RouteSegment.widthLeft, RouteSegment.widthRight
Direction of cruise levels – Forward	RouteSegment.availability.RouteAvailability[direction='FORWARD'].levels.AirspaceLayer.discreteLevelSeries.series
Direction of cruise levels – Backward	RouteSegment.availability.RouteAvailability[direction='BACKWARD'].levels.AirspaceLayer.discreteLevelSeries.series
Class of airspace	RouteSegment.availability.RouteAvailability.levels.AirspaceLayer.annotation[purpose='OTHER:CLASS'].Note

PANS-AIM	AIXM 5.1/AIXM 5.1.1
PBN requirements - Sensor requirements	Option RouteSegment.annotation[purpose='OTHER:PBN'].Note
Controlling unit	(SearchRescueService.clientRoute.RoutePortion, SearchRescueService.serviceProvider) and/or (InformationService.clientRoute.RoutePortion, InformationService.serviceProvider) and/or (AirTrafficControlService.clientRoute.RoutePortion, AirTrafficControlService.serviceProvider)
Controlling unit – Name	(InformationService.serviceProvider and/or AirTrafficControlService.serviceProvider), Unit.name
Controlling unit – Channel	(AirTrafficControlService.radioCommunication, and/or InformationService.radioCommunication, and/or SearchRescueService.radioCommunication) and (RadioCommunicationChannel.frequencyTransmission, and/or RadioCommunicationChannel.frequencyReception, and/or RadioCommunicationChannel.channel)
Controlling unit - Logon address	Unit.contact.ContactInformation InformationService For TrafficSeperationService two dedicated attributes are provided: dataLinkEnable and dataLinkChannel. For InformationService only one attribute datalink is provided. In addition it is possible to encode datalink information for an Unit via the object OnlineContact using the attributes linkage, network and protocol.
Change over point	ChangeOverPoint.distance, ChangeOverPoint.applicableRoutePortion, ChangeOverPoint.location_position
Restrictions	RouteSegment.annotation,
Availability	RouteSegment.availability.RouteAvailability.timeInterval RouteSegment.availability.RouteAvailability.status

2.5 Waypoint – en-route

The mapping will be for the content of the following sections (ICAO Doc. 10066 PANS-AIM paragraph 5.2.1.1.3) respectively:

- ✓ ENR 4.4 Name Code Designators for Significant Point – *line i*);

AIXM 5.1/AIXM 5.1.1 Mapping details

PANS-AIM	AIXM 5.1/AIXM 5.1.1
Identification	DesignatedPoint.designator, DesignatedPoint.name
Position	DesignatedPoint.location, DesignatedPoint.location.horizontalAccuracy
Formation – Navaid	AngleIndication.pointChoice_navaidSystem and/or DistanceIndication.pointChoice_navaidSystem
Formation – Bearing	AngleIndication.angle and/or AngleIndication.angleType and/or AngleIndication.trueAngle and/or AngleIndication[indicationDirection='FROM'].fix, and/or AngleIndication.annotation[propertyName='angle'].Note
Formation – Distance	DistanceIndication.distance, and/or DistanceIndication.fix, and/or DistanceIndication.annotation[propertyName='distance'].Note
Reference to route	RouteSegment.routeFormed, RouteSegment.start.EnRouteSegmentPoint.pointChoice_fixDesignatedPoint, RouteSegment.end.EnRouteSegmentPoint.pointChoice_fixDesignatedPoint
Terminal Area	DesignatedPoint.annotation

2.6 Aerodrome / Heliport

The mapping will be for the following sections (ICAO Doc. 10066 PANS-AIM paragraph 5.2.1.1.3) respectively:

- ✓ AD 1.3 “Index to Aerodromes/Heliports”, – new line (1);
- ✓ AD 1.5 “Status of certification of aerodromes”, – new line (2);
- ✓ AD 2.1 “Aerodrome location indicator and name”, – new line (3);
- ✓ AD 2.2 “Aerodrome geographical and administrative data, – new line (4);
- ✓ AD 2.15 “Other Lighting, Secondary Power Supply, – new line (8);

- ✓ AD 3.1 “Heliport location indicator and name, – new line (10);
- ✓ AD 3.2 “Heliport geographical and admin data”, – new line (11);

AIXM 5.1/AIXM 5.1.1 Mapping details

PANS-AIM	AIXM 5.1/AIXM 5.1.1
Aerodrome/Heliport	AirportHeliport.type
Designator - ICAO location indicator	AirportHeliport.locationIndicatorICAO, AirportHeliport.designator
Designator - Designator IATA	AirportHeliport.designatorIATA, AirportHeliport.designator
Designator – Other	AirportHeliport.designator
Name	AirportHeliport.name
Served city	AirportHeliport.servedCity.City.name,
Administrative authority	AirportHeliport.responsibleOrganisation.theOrganisationAuthority, OrganisationAuthority.name, OrganisationAuthority.designator, OrganisationAuthority.contact
Control type	AirportHeliport.controlType
Certified ICAO	AirportHeliport.certifiedICAO
Certification date	AirportHeliport.certificationDate
Certification expiration date	AirportHeliport.certificationExpirationDate
Field elevation – Elevation	AirportHeliport.fieldElevation, AirportHeliport.fieldElevationAccuracy
Field elevation - Geoid undulation	AirportHeliport.ARP.ElevatedPoint.geoidUndulation
Reference temperature	AirportHeliport.referenceTemperature
Magnetic variation – Angle	AirportHeliport.magneticVariation, AirportHeliport.magneticVariationAccuracy
Magnetic variation – Date	AirportHeliport.dateMagneticVariation
Magnetic variation - Annual change	AirportHeliport.magneticVariationChange
Airport reference point – Position	AirportHeliport.ARP.ElevatedPoint, AirportHeliport.ARP.ElevatedPoint.horizontalAccuracy,
A reference surface	AirportHeliport.verticalDatum
Airport reference point – Site	AirportHeliport.annotation[propertyName='arp'].Note
Airport reference point – Direction	AirportHeliport.annotation[propertyName='arp'].Note
Airport reference point – Distance	AirportHeliport.annotation[propertyName='arp'].Note

PANS-AIM	AIXM 5.1/AIXM 5.1.1
Type of Traffic Permitted - IFR/VFR/International/National/Schedule/Non Schedule/Private	AirportHeliport.availability.AirportHeliportAvailability.usage.AirportHeliportUsage.selection.ConditionCombination.flight.FlightCharacteristic.rule, AirportHeliport.availability.AirportHeliportAvailability.usage.AirportHeliportUsage.selection.ConditionCombination.flight.FlightCharacteristic.military, AirportHeliport.availability.AirportHeliportAvailability.usage.AirportHeliportUsage.selection.ConditionCombination.flight.FlightCharacteristic.origin, AirportHeliport.availability.AirportHeliportAvailability.usage.AirportHeliportUsage.selection.ConditionCombination.flight.FlightCharacteristic.purpose
checking of an altimeter system can be accomplished	AirportHeliport.altimeterCheckLocation
windDirectionIndicator	AirportHeliport.windDirectionIndicator
landingDirectionIndicator	AirportHeliport.landingDirectionIndicator
transitionAltitude	AirportHeliport.transitionAltitude
transitionLevel	AirportHeliport.transitionLevel
lowestTemperature	AirportHeliport.lowestTemperature
abandoned	AirportHeliport.abandoned
ABN/IBN location, characteristics and operational hours	AeronauticalGroundLight[type='IBN'] Or AeronauticalGroundLight[type='ABN'], AeronauticalGroundLight.location.ElevatedPoint, AeronauticalGroundLight.colour, AeronauticalGroundLight.flashing, AeronauticalGroundLight.annotation, AeronauticalGroundLight.aerodromeBeacon
LDI location and LGT	AirportHeliport.annotation[propertyName='landingDirectionIndicator'][purpose='DESCRIPTION'].Note
Anemometer location and LGT	AirportHeliport.annotation[purpose='OTHER:Anemometer'].Note
TWY lighting	TaxiwayLightSystem[position='EDGE'] Or TaxiwayLightSystem[position='CL'] Or TaxiwayLightSystem[position='OTHER:floodlight'], TaxiwayLightSystem.intensityLevel, TaxiwayLightSystem.colour, TaxiwayLightSystem.position, TaxiwayLightSystem.element.LightElement.type, TaxiwayLightSystem.lightedTaxiway and Taxiway.designator, Taxiway.width, Taxiway.surfaceProperties.SurfaceCharacteristics.composition, Taxiway.surfaceProperties.SurfaceCharacteristics.classPCN, Taxiway.surfaceProperties.SurfaceCharacteristics.pavementTypePCN, Taxiway.surfaceProperties. SurfaceCharacteristics.pavementSubgradePCN, Taxiway.surfaceProperties.SurfaceCharacteristics.maxTyrePressurePCN, Taxiway.surfaceProperties.SurfaceCharacteristics.evaluationMethodPCN, Taxiway.associatedAirportHeliport
Secondary power supply/switch-over time	AirportHeliport.annotation[propertyName='secondaryPowerSupply'][purpose='DESCRIPTION'].Note
Remarks	AirportHeliport.annotation.Note

2.7 Runway

The mapping will be for the following sections (ICAO Doc. 10066 PANS-AIM paragraph 5.2.1.1.3) respectively:

- ✓ AD 2.12 “Runway Physical Characteristics” – new line (5);
- ✓ AD 2.14 “Approach and Runway Lighting” – new line (7);

AIXM 5.1/AIXM 5.1.1 Mapping details

PANS-AIM	AIXM 5.1/AIXM 5.1.1
Designator	Runway.designator
Type	Runway.[type='RWY']
Nominal length	Runway.nominalLength, Runway.lengthAccuracy
Nominal width	Runway.nominalWidth, Runway.widthAccuracy
Surface type	Runway.surfaceProperties.SurfaceCharacteristics.composition
Strength – PCN	Runway.surfaceProperties.SurfaceCharacteristics.classPCN
Strength - Pavement type	Runway.surfaceProperties.SurfaceCharacteristics.pavementTypePCN
Strength - Subgrade category	Runway.surfaceProperties.SurfaceCharacteristics.pavementSubgradePCN
Strength - Allowable pressure	Runway.surfaceProperties.SurfaceCharacteristics.maxTyrePressurePCN
Strength - Evaluation method	Runway.surfaceProperties.SurfaceCharacteristics.evaluationMethodPCN
Shoulder - Width	Runway.widthShoulder
Runway geometry	RunwayElement[type='NORMAL'], RunwayElement.associatedRunway, RunwayElement.extent
Strip Length	Runway.lengthStrip
Strip Width	Runway.widthStrip
Shoulder Type	RunwayElement[type='SHOULDER'], RunwayElement.associatedRunway
Shoulder Geometry	RunwayElement[type='SHOULDER'], RunwayElement.associatedRunway, RunwayElement.extent
Runway Remarks	Runway.annotation
OFZ	RunwayProtectArea[type='OFZ'], RunwayProtectArea.annotation
Runway Approach light intensity, type & length	ApproachLightingSystem.intensityLevel, ApproachLightingSystem.type, ApproachLightingSystem.length, ApproachLightingSystem.servedRunwayDirection
Threshold colour	RunwayDirectionLightSystem[position='THR'], RunwayDirectionLightSystem.colour, RunwayDirectionLightSystem.associatedRunwayDirection

PANS-AIM	AIXM 5.1/AIXM 5.1.1
Threshold wing bar	RunwayDirectionLightSystem[position='END'], RunwayDirectionLightSystem.colour, RunwayDirectionLightSystem.annotation[purpose= 'OTHER:WING_BAR_DESC'].Note RunwayDirectionLightSystem.associatedRunwayDirection
Visual approach slope indicator systems type, position, slope & Minimum eye height over threshold	VisualGlideSlopeIndicator.type, VisualGlideSlopeIndicator.position, VisualGlideSlopeIndicator.slopeAngle, VisualGlideSlopeIndicator.minimumEyeHeightOverThreshold, VisualGlideSlopeIndicator.runwayDirection
Runway Touchdown zone light system	RunwayDirectionLightSystem[position='TDZ'], RunwayDirectionLightSystem.colour, RunwayDirectionLightSystem.intensityLevel, RunwayDirectionLightSystem.annotation, RunwayDirectionLightSystem.associatedRunwayDirection
Runway Center Line Light system	RunwayDirectionLightSystem[position='CL'], RunwayDirectionLightSystem.colour, RunwayDirectionLightSystem.intensityLevel, RunwayDirectionLightSystem.annotation, RunwayDirectionLightSystem.associatedRunwayDirection
Runway Edge Light System	RunwayDirectionLightSystem[position='EDGE'], RunwayDirectionLightSystem.colour, RunwayDirectionLightSystem.intensityLevel, RunwayDirectionLightSystem.annotation, RunwayDirectionLightSystem.associatedRunwayDirection
RWY End LGT colour WBAR	RunwayDirectionLightSystem[position='END'], RunwayDirectionLightSystem.colour, RunwayDirectionLightSystem.intensityLevel, RunwayDirectionLightSystem.annotation[purpose= 'OTHER:WING_BAR_DESC'].Note, RunwayDirectionLightSystem.associatedRunwayDirection
Stopway Light System	RunwayProtectAreaLightSystem[position='CL'] Or RunwayProtectAreaLightSystem[position='END'] Or RunwayProtectAreaLightSystem[position='EDGE'], RunwayProtectAreaLightSystem.colour, RunwayProtectAreaLightSystem.intensityLevel, RunwayProtectAreaLightSystem.annotation, RunwayProtectAreaLightSystem.lightedArea
Runway Direction Light System Remarks	RunwayDirectionLightSystem.annotation

2.8 Runway Direction

The mapping will be for the following sections (ICAO Doc. 10066 PANS-AIM paragraph 5.2.1.1.3) respectively:

- ✓ AD 2.12 “Runway Physical Characteristics”, - new line (5);
- ✓ AD 2.13 “Declared Distances”, – new line (6);

AIXM 5.1/AIXM 5.1.1 Mapping details

PANS-AIM	AIXM 5.1/AIXM 5.1.1
Designator	RunwayDirection.designator
True bearing	RunwayDirection.trueBearing, RunwayDirection.trueBearingAccuracy
Magnetic Breaing	RunwayDirection.magneticBearing
Threshold - Position	RunwayCentrelinePoint.location.ElevatedPoint, RunwayCentrelinePoint.location.ElevatedPoint.horizontalAccuracy
Threshold - Elevation	RunwayCentrelinePoint.location.ElevatedPoint.elevation, RunwayCentrelinePoint.location.ElevatedPoint.verticalAccuracy
Threshold - Geoid undulation	RunwayCentrelinePoint.location.ElevatedPoint.geoidUndulation, RunwayCentrelinePoint.location.ElevatedPoint.verticalAccuracy
Threshold - Type	RunwayCentrelinePoint[role='DISTHR'].role Or RunwayCentrelinePoint[role='THR'].role Or RunwayCentrelinePoint[role='END'].role Or RunwayCentrelinePoint[role='TDZ'].role
Runway Slope	RunwayDirection.annotation[purpose='OTHER:RWY_SLOPE'].Note
Stopway Slope	RunwayDirection.annotation[purpose='OTHER:SWY_SLOPE'].Note
Threshold - Displacement	RunwayCentrelinePoint[role='DISTHR'].associatedDeclaredDistance.RunwayDeclaredDistance[type='DTHR'].declaredValue.RunwayDeclaredDistanceValue.distance, RunwayCentrelinePoint[role='DISTHR'].associatedDeclaredDistance.RunwayDeclaredDistance[type='DTHR'].declaredValue.RunwayDeclaredDistanceValue.distanceAccuracy
Declared distance - TORA	RunwayCentrelinePoint.role.associatedDeclaredDistance.RunwayDeclaredDistance[type='TORA'].declaredValue.RunwayDeclaredDistanceValue.distance, RunwayCentrelinePoint.role.associatedDeclaredDistance.RunwayDeclaredDistance[type='TORA'].declaredValue.RunwayDeclaredDistanceValue.distanceAccuracy
Declared distance - TODA	RunwayCentrelinePoint.role.associatedDeclaredDistance.RunwayDeclaredDistance[type='TODA'].declaredValue.RunwayDeclaredDistanceValue.distance, RunwayCentrelinePoint.role.associatedDeclaredDistance.RunwayDeclaredDistance[type='TODA'].declaredValue.RunwayDeclaredDistanceValue.distanceAccuracy
Declared distance - ASDA	RunwayCentrelinePoint.role.associatedDeclaredDistance.RunwayDeclaredDistance[type='ASDA'].declaredValue.RunwayDeclaredDistanceValue.distance, RunwayCentrelinePoint.role.associatedDeclaredDistance.RunwayDeclaredDistance[type='ASDA'].declaredValue.RunwayDeclaredDistanceValue.distanceAccuracy

PANS-AIM	AIXM 5.1/AIXM 5.1.1
Declared distance - LDA	RunwayCentrelinePoint.role.associatedDeclaredDistance.RunwayDeclaredDistance[type='LDA'].declaredValue.RunwayDeclaredDistanceValue.distance, RunwayCentrelinePoint.role.associatedDeclaredDistance.RunwayDeclaredDistance[type='LDA'].declaredValue.RunwayDeclaredDistanceValue.distanceAccuracy
Declared distances - Remarks	RunwayCentrelinePoint.associatedDeclaredDistance.RunwayDeclaredDistance.annotation Or RunwayCentrelinePoint.associatedDeclaredDistance.RunwayDeclaredDistance.declaredValue.RunwayDeclaredDistanceValue.annotation
STOPWAY	RunwayProtectArea[type='STOPWAY'].width, RunwayProtectArea[type='STOPWAY'].length, RunwayProtectArea[type='STOPWAY'].lighting, RunwayProtectArea[type='STOPWAY'].surfaceProperties, RunwayProtectArea[type='STOPWAY'].protectedRunwayDirection
CLEARWAY	RunwayProtectArea[type='CWY'].width, RunwayProtectArea[type='CWY'].length, RunwayProtectArea[type='CWY'].lighting, RunwayProtectArea[type='CWY'].surfaceProperties, RunwayProtectArea[type='CWY'].protectedRunwayDirection
Runway End safety Area	RunwayProtectArea[type='RESA'].width, RunwayProtectArea[type='RESA'].length, RunwayProtectArea[type='RESA'].lighting, RunwayProtectArea[type='RESA'].surfaceProperties, RunwayProtectArea[type='RESA'].protectedRunwayDirection
Runway Obstacle free zone	RunwayProtectArea[type='OFZ'].width, RunwayProtectArea[type='OFZ'].length, RunwayProtectArea[type='OFZ'].lighting, RunwayProtectArea[type='OFZ'].surfaceProperties, RunwayProtectArea[type='OFZ'].protectedRunwayDirection
Arresting System	RunwayDirection.annotation[purpose='OTHER:ARRESTING-SYSTEM'].Note

2.9 FATO (Final Approach and Take Off)

The mapping will be for the following sections (ICAO Doc. 10066 PANS-AIM paragraph 5.2.1.1.3) respectively:

- ✓ AD 2.16 “Helicopter Landing Area” – new line (9);

AIXM 5.1/AIXM 5.1.1 Mapping details

PANS-AIM	AIXM 5.1/AIXM 5.1.1
Designator	Runway.designator, Runway.associatedAirportHeliport, or RunwayDirection.designator, RunwayDirection.usedRunway

PANS-AIM	AIXM 5.1/AIXM 5.1.1
Type	Runway[type='FATO']
Length	Runway.nominalLength, Runway.lengthAccuracy
Width	Runway.nominalWidth
Surface Characteristics	Runway.surfaceProperties.SurfaceCharacteristics.composition, Runway.surfaceProperties.SurfaceCharacteristics.classPCN, Runway.surfaceProperties.SurfaceCharacteristics.pavementTypePCN, Runway.surfaceProperties.SurfaceCharacteristics.pavementSubgradePCN, Runway.surfaceProperties.SurfaceCharacteristics.maxTyrePressurePCN, Runway.surfaceProperties.SurfaceCharacteristics.evaluationMethodPCN
True Bearing	RunwayDirection.trueBearing, RunwayDirection.trueBearingAccuracy
Magnetic Bearing	RunwayDirection.magneticBearing
Threshold point	RunwayCentrelinePoint[role = 'THR']
Threshold point - Position	RunwayCentrelinePoint[role='THR'].location.ElevatedPoint , RunwayCentrelinePoint[role='THR'].location.ElevatedPoint.horizontalAccuracy
Threshold point - Elevation	RunwayCentrelinePoint[role='THR'].location.ElevatedPoint.elevation, RunwayCentrelinePoint[role='THR'].location.ElevatedPoint.verticalAccuracy
Threshold point - Geoid undulation	RunwayCentrelinePoint[role='THR'].location.ElevatedPoint.geoidUndulation, RunwayCentrelinePoint[role='THR'].location.ElevatedPoint.verticalAccuracy
FATO Approach Light System	ApproachLightingSystem.intensityLevel, ApproachLightingSystem.type, ApproachLightingSystem.length, ApproachLightingSystem.servedRunwayDirection
Remarks	Runway.annotation

2.10 TLOF (Touchdown and Lift-Off Area)

The mapping will be for the following sections (ICAO Doc. 10066 PANS-AIM paragraph 5.2.1.1.3) respectively:

- ✓ AD 2.16 “Helicopter Landing Area” – new line (9);

AIXM 5.1/AIXM 5.1.1 Mapping details

PANS-AIM	AIXM 5.1/AIXM 5.1.1
Designator	TouchDownLiftOff.designator

PANS-AIM	AIXM 5.1/AIXM 5.1.1
Centre point - Position	TouchDownLiftOff.aimingPoint.ElevatedPoint, TouchDownLiftOff.aimingPoint.ElevatedPoint.horizontalAccuracy
Centre point - Elevation	TouchDownLiftOff.aimingPoint.ElevatedPoint.elevation, TouchDownLiftOff.aimingPoint.ElevatedPoint.verticalAccuracy
Centre point - Geoid undulation	TouchDownLiftOff.aimingPoint.ElevatedPoint.geoidUndulation, TouchDownLiftOff.aimingPoint.ElevatedPoint.horizontalAccuracy
Length	TouchDownLiftOff.length, TouchDownLiftOff.annotation[propertyName='length'].Note
Width	TouchDownLiftOff.width, TouchDownLiftOff.annotation[propertyName='width'].Note
Slope	TouchDownLiftOff.slope
Markings	TouchDownLiftOffMarking.markingICAOSTandard, TouchDownLiftOffMarking.condition, TouchDownLiftOffMarking.element.MarkingElement.colour, TouchDownLiftOffMarking.element.MarkingElement.style, TouchDownLiftOffMarking.element.MarkingElement.extent_surfaceExtent.ElevatedSurface, TouchDownLiftOffMarking.markedTouchDownLiftOff
Surface type	TouchDownLiftOff.SurfaceCharacteristics.composition, TouchDownLiftOff.surfaceProperties.SurfaceCharacteristics.classPCN, TouchDownLiftOff.surfaceProperties.SurfaceCharacteristics.pavementTypePCN, TouchDownLiftOff.surfaceProperties.SurfaceCharacteristics.pavementSubgradePCN , TouchDownLiftOff.surfaceProperties.SurfaceCharacteristics.maxTyrePressurePCN, TouchDownLiftOff.surfaceProperties.SurfaceCharacteristics.evaluationMethodPCN
Remarks	TouchDownLiftOff.annotation

2.11 Radio Navigation Aid

The mapping will be for the following sections (ICAO Doc. 10066 PANS-AIM paragraph 5.2.1.1.3) respectively:

- ✓ GEN 2.5 “List of radio navigation aids” – line a;
- ✓ ENR 4.1 “Radio navigation aids— en-route” – line g;
- ✓ ENR 4.2 “Special navigation systems ” – line h;
- ✓ AD 2.19 “Radio navigation and landing aids” – line q;
- ✓ AD 3.18 “Radio navigation and landing aids. – line s;

AIXM 5.1/AIXM 5.1.1 Mapping details

PANS-AIM	AIXM 5.1/AIXM 5.1.1
Type	Navaid.type
Identification	Navaid.designator and/or (VOR.designator Or DME.designator Or Glidepath.designator Or Localizer.designator Or NDB.designator Or MarkerBeacon.auralMorseCode)
Name	Navaid.name and/or VOR.name Or DME.name Or Glidepath.name Or Localizer.name Or NDB.name
Aerodrome served	Navaid.servedAirport

PANS-AIM	AIXM 5.1/AIXM 5.1.1
Hours of operation	Navaid.NavaidOperationalStatus[operationalStatus='OPERATIONAL'].timeInterval and/or VOR.availability.NavaidOperationalStatus[operationalStatus='OPERATIONAL'].timeInterval Or DME.availability.NavaidOperationalStatus[operationalStatus='OPERATIONAL'].timeInterval Or Glidepath.availability.NavaidOperationalStatus[operationalStatus='OPERATIONAL'].timeInterval Or Localizer.availability.NavaidOperationalStatus[operationalStatus='OPERATIONAL'].timeInterval Or NDB.availability.NavaidOperationalStatus[operationalStatus='OPERATIONAL'].timeInterval
Magnetic variation - Angle	VOR.magneticVariation VOR.magneticVariationAccuracy Or DME.magneticVariation DME.magneticVariationAccuracy Or Glidepath.magneticVariation Glidepath.magneticVariationAccuracy Or Localizer.magneticVariation Localizer.magneticVariationAccuracy Or NDB.magneticVariation, NDB.magneticVariationAccuracy
Magnetic variation - Date	VOR.dateMagneticVariation Or DME.dateMagneticVariation Or Glidepath.dateMagneticVariation Or Localizer.dateMagneticVariation Or NDB.dateMagneticVariation

PANS-AIM	AIXM 5.1/AIXM 5.1.1
Frequency	Localizer.frequency or Glidepath.frequency or VOR.frequency or MarkerBeacon.frequency or NDB.frequency or SDF.frequency Or DME.ghostFrequency
Channel	TACAN.channel or DME.channel or Azimuth.channel
Position	(Navaid.location.ElevatedPoint, Navaid.location.ElevatedPoint.horizontalAccuracy) and/or (VOR.location.ElevatedPoint, VOR.location.ElevatedPoint.horizontalAccuracy) Or (DME.location.ElevatedPoint, DME.location.ElevatedPoint.horizontalAccuracy) Or (Glidepath.location.ElevatedPoint, Glidepath.location.ElevatedPoint.horizontalAccuracy) Or (Localizer.location.ElevatedPoint, Localizer.location.ElevatedPoint.horizontalAccuracy) Or (NDB.location.ElevatedPoint, NDB.location.ElevatedPoint.horizontalAccuracy)

PANS-AIM	AIXM 5.1/AIXM 5.1.1
Elevation	Navaid.location.ElevatedPoint.elevation, Navaid.location.ElevatedPoint.verticalAccuracy, Navaid.location.ElevatedPoint.verticalDatum, (DME.location.ElevatedPoint.elevation, DME.location.ElevatedPoint.verticalAccuracy, DME.location.ElevatedPoint.verticalDatum) Or (Glidepath.location.ElevatedPoint.elevation, Glidepath.location.ElevatedPoint.verticalAccuracy, Glidepath.location.ElevatedPoint.verticalDatum) Or (Localizer.location.ElevatedPoint.elevation, Localizer.location.ElevatedPoint.verticalAccuracy, Localizer.location.ElevatedPoint.verticalDatum) Or (NDB.location.ElevatedPoint.elevation, NDB.location.ElevatedPoint.verticalAccuracy, NDB.location.ElevatedPoint.verticalDatum) Or (VOR.location.ElevatedPoint.elevation, VOR.location.ElevatedPoint.verticalAccuracy, VOR.location.ElevatedPoint.verticalDatum)
Magnetic bearing /True bearing	Localizer.magneticBearing, Localizer.magneticBearingAccuracy, Localizer.trueBearing, Localizer.trueBearingAccuracy
Zero bearing direction	VOR.zeroBearingDirection
Purpose (A, E)	Navaid.purpose
Runway served	Navaid.runwayDirection
Type of supported Operations (e.g. ILS CAT)	Navaid.signalPerformance
Course Quality	Navaid.courseQuality
Integrity Level	Navaid.integrityLevel
Datum	Navaid.Datum
Collection	Navaid.NavaidComponent.collocationGroup
Station declination (angle) for ILS and VORDME;	Localizer.declination
Declination	VOR.declination

PANS-AIM	AIXM 5.1/AIXM 5.1.1
Azimuth remarks	Azimuth.annotation
Angle i.e. GP angle	Glidepath.slope
RDH	Glidepath.rdh
DOC(designated operational coverage)	RadioFrequencyArea, RadioFrequencyArea.equipment_navaidEquipment, VOR.annotation Or DME.annotation Or Glidepath.annotation Or Localizer.annotation Or NDB.annotation
Operating authority	NavaidEquipment.authority.OrganisationAuthority.name or NavaidEquipment.annotation or Navaid.annotation
Remarks	Navaid.annotation, VOR.annotation Or DME.annotation Or Glidepath.annotation Or Localizer.annotation Or NDB.annotation

2.12 Aeronautical Ground Light

The mapping will be for the following section (ICAO Doc. 10066 PANS-AIM paragraph 5.2.1.1.3) respectively:

- ✓ ENR 4.5 “Aeronautical Ground Lights — En-route” – *line j*;

AIXM 5.1/AIXM 5.1.1 Mapping details

PANS-AIM	AIXM 5.1/AIXM 5.1.1
Type	AeronauticalGroundLight.type
Name	AeronauticalGroundLight.name
Intensity	AeronauticalGroundLight.annotation.Note
Characteristics	AeronauticalGroundLight.colour, AeronauticalGroundLight.flashing, AeronauticalGroundLight.annotation.Note
Hours of operations	AeronauticalGroundLight.annotation.Note
Position	AeronauticalGroundLight.location.ElevatedPoint

2.13 En-Route Holding

The mapping will be for the following section (ICAO Doc. 10066 PANS-AIM paragraph 5.2.1.1.3) respectively:

- ✓ ENR 3.6 “En - Route Holding” – *line f*;

AIXM 5.1/AIXM 5.1.1 Mapping details

PANS-AIM	AIXM 5.1/AIXM 5.1.1
Identification	N/A
Type	HoldingPattern[type='ENR'].type
Fix	HoldingPattern.holdingPoint.EnRouteSegmentPoint.pointChoice_fixDesignatedPoint Or HoldingPattern.holdingPoint.EnRouteSegmentPoint.pointChoice_navaidSystem
Waypoint	HoldingPattern.holdingPoint.EnRouteSegmentPoint.pointChoice_fixDesignatedPoint Or HoldingPattern.holdingPoint.EnRouteSegmentPoint.pointChoice_navaidSystem
Inbound track	HoldingPattern.inboundCourse
Turn Direction	HoldingPattern.turnDirection
Speed	HoldingPattern.speedLimit
Level - Minimum holding level	HoldingPattern.lowerLimit, HoldingPattern.lowerLimitReference
Level - Maximum holding level	HoldingPattern.upperLimit, HoldingPattern.upperLimitReference
Time/distance outbound	HoldingPattern.outboundLegSpan_endTime.HoldingPatternDuration.duration Or HoldingPattern.outboundLegSpan_endDistance.HoldingPatternDistance.length
Special holding entry procedure	HoldingPattern.instruction

PANS-AIM	AIXM 5.1/AIXM 5.1.1
Controlling Unit	AirTrafficControlService.Name, AirTrafficControlService.call-sign, AirTrafficControlService.radioCommunication, AirTrafficControlService.clientHolding, RadioCommunicationChannel.frequencyTransmission

3 Metadata to be included in AIP Data set File

3.1 Scope

Metadata shall be collected for aeronautical data processes and exchange points throughout the aeronautical information data chain, from origination to distribution to the next intended user.

Each quality management system shall include the necessary policies, processes and procedures, including those for the use of metadata, to ensure and verify that aeronautical data are traceable throughout the aeronautical data chain in order to allow any data anomalies or errors detected to be identified by root cause, corrected and communicated to affected users.

3.2 Metadata requirements

Generally, AIS has the responsibility to verify the collected data from the surveyor/originator. Moreover, AIS has the obligation to provide data sets to the next intended user. Metadata is essential in the understanding, processing and delivery of information by using an information service. Metadata should enable information service consumers to evaluate the originating source of information, the quality of service and information before consuming the information service.

Information service providers should specify the origins and/or sources of the data and they should also provide information on any subsequent modifications applied in the *Source of Information* metadata field of the information Service Overview.

If an information service provider does not make the source of information available, the *Source of Information* metadata field shall specify “NIL”.

Information service providers shall provide a description of the geographic coverage of the data and information exchanged in the information service payload in the *Geographical Extent of Information* metadata field of the information Service Overview to allow information service consumers understand the geographical coverage of the information being provided.

The geographic coverage should be expressed in terms of ICAO region, FIR, Aerodrome, polygon, etc. More granular information such as coverage at Airport X, FIR Y should be provided as it may facilitate search responses when provided.

The *Figure* below is summarizing the ICAO Annex 15 requirements regarding the metadata thru the data chain in general, but the specific metadata requirements are shown in the “ICAO Data Set” section of the Figure. These should be supplemented by the need to use the ISO 19100 series as the reference framework, the need for data protection and the need to include specific requirements for geographical information metadata (ref. ISO Standards 19115).

The metadata to be collected shall include, as a minimum (ICAO Doc. 10066 PANS-AIM):

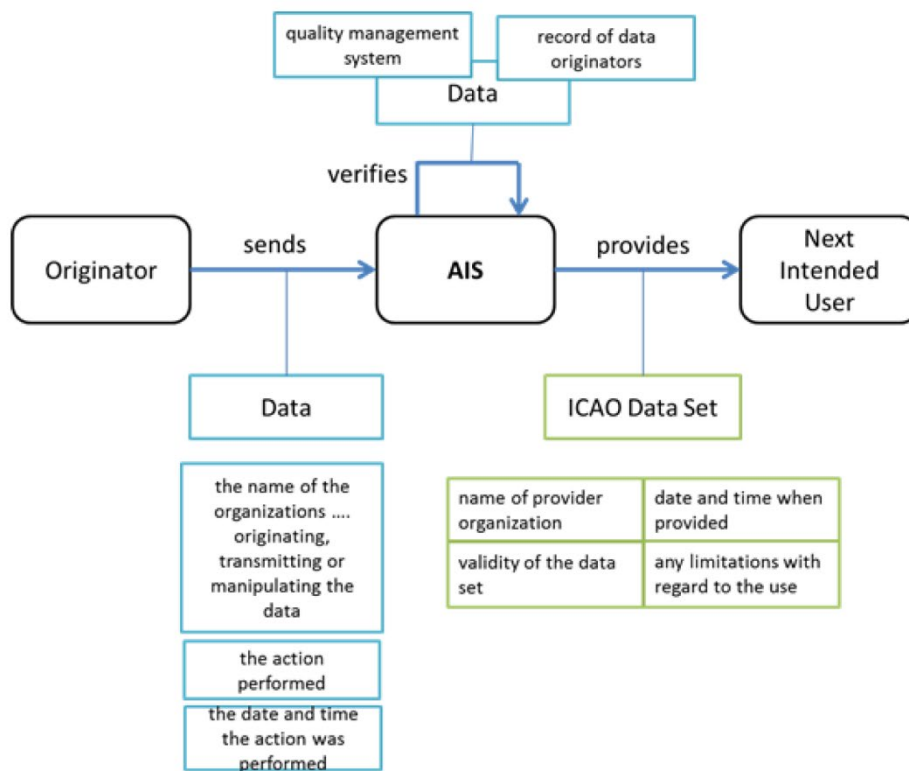
a) The names of the organizations or entities providing the data set;

- b) The date and time when the data set was provided;
- c) Period of validity of the data set (not required, validity of each feature lifetime will be present with each feature);
- d) Any limitations with regard to the use of the data set;

Additionally, metadata included in AIP Data sets are:

- i. AIP Amendment Number
- ii. Publication Date
- iii. Effective Date

For Example: AIP AMDT No: AIRAC AMDT 12/2025, Publication date: 2025-10-16T00:00:00.000Z, Effective date: 2025-11-27T00:00:00.000Z



Below is a sample Metadata code and value list highlighted in “yellow” that is included in AIP Data set.

Important Note: Metadata will be present at Message Level.

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  xmlns:gmd="http://www.isotc211.org/2005/gmd"
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```

PERFORMANCE BASED NAVIGATION SUB-GROUP (PBN SG)

1. Terms of Reference

1.1 The terms of reference of the PBN Sub-Group are:

- a) ensure that the implementation of PBN in the MID Region is coherent and compatible with developments 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;
- b) monitor the status of implementation of the MID Region PBN-related ASBU threads/elements included in the MID Region Air Navigation Strategy as well as other required PBN supporting infrastructure, identify the associated difficulties and deficiencies and provide progress reports, as required;
- c) keep under review the MID Region PBN performance objectives/priorities, develop action plans to achieve the agreed performance targets and propose changes to the MID Region PBN plans/priorities, as appropriate;
- d) seek to achieve common understanding and support from all stakeholders involved in or affected by the PBN and GNSS developments/activities in the MID Region;
- e) provide a platform for harmonization of developments and deployments of PBN concentrating on PBN for approach and terminal areas;
- f) monitor and review the latest developments in the area of PBN and procedure design, provide expert inputs for PBN-related issues; and propose solutions for meeting ATM operational requirements;
- g) monitor and review the latest GNSS developments and activities;
- h) provide regular progress reports to MIDANPIRG concerning its work programme; and
- i) review periodically its Terms of Reference and propose amendments, as necessary.

1.2 In order to meet the Terms of Reference, the PBN 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;
- b) provide necessary inputs to the MID Region Air Navigation Strategy through the monitoring of the agreed Key Performance Indicators related to PBN;
- c) identify and review those specific deficiencies and problems that constitute major obstacles to the provision of efficient PBN implementations, and recommend necessary remedial actions;
- d) Address PBN implementation aspects of States in the MID Region, including States National PBN Implementation Plans, Share and exchange best PBN Implementation practices between States

within the Region

- e) review and support the MID Flight Procedure Programme activities, as required, including coordination of capacity building activities related to training and qualification of the procedure design personnel and all other personnel involved in PBN implementation;
- f) monitor the progress of studies, projects, trials and demonstrations by the MID Region States, and other ICAO Regions in PBN and GNSS;
- g) in coordination with MIDANPIRG CNS SG :
 - develop and maintain strategies for navigation infrastructure to support contingency operations and ensure service continuity during GNSS disruptions;
 - identify and propose solutions to operational challenges arising from GNSS Radio Frequency Interference (RFI)
- h) Review and update MID PBN Regional Plan (MID Doc 007), as needed
- i) Address and promote operational improvements and benefits accrued from PBN implementation, through review of the existing global and regional guidance materials; and provide further guidance, as needed; and
- j) Coordinate with relevant MIDANPIRG and RASG-MID Subsidiary bodies issues with common interests.

2. Composition

2.1 The Sub-Group is composed of:

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

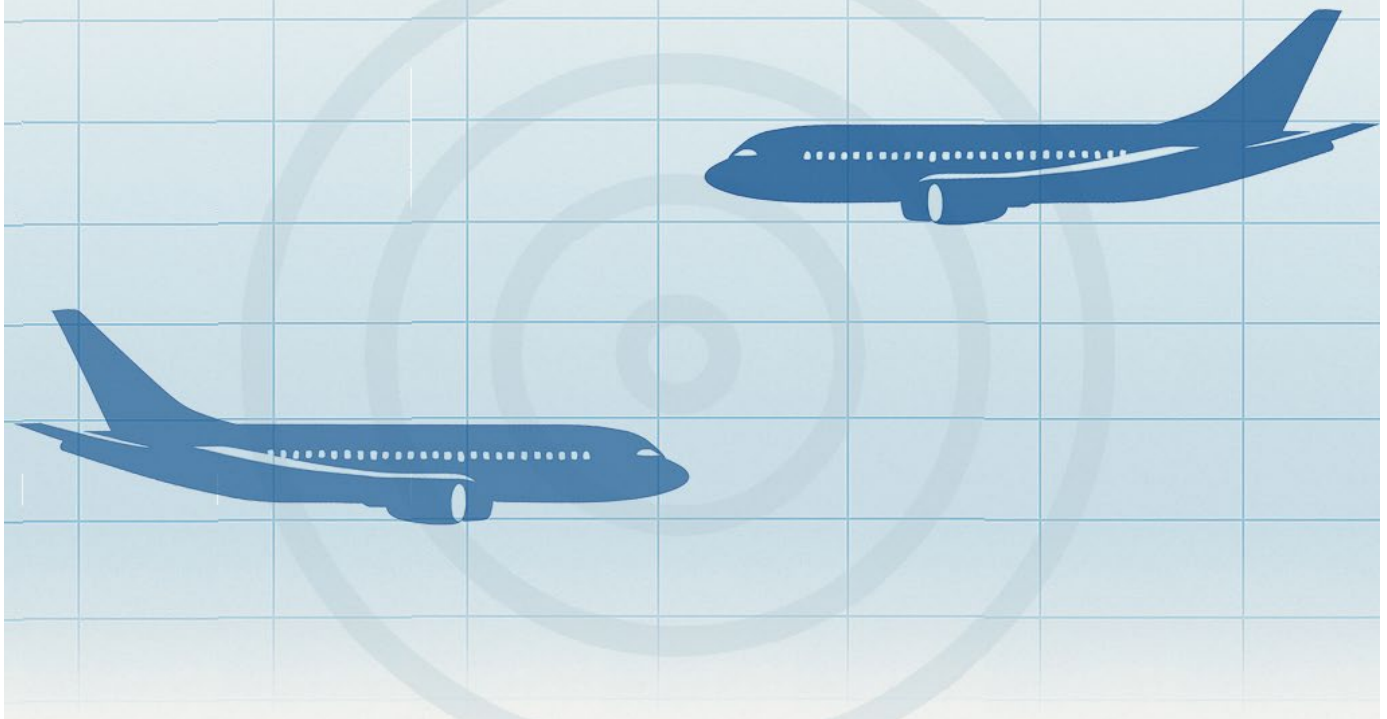
3. WORKING ARRANGEMENTS

3.1 The Chairperson, in close co-operation with the Secretary, shall make all necessary arrangements for the most efficient working of the Subgroup. The Subgroup shall at all times conduct its activities in the most efficient manner possible with a minimum of formality and paper work (paperless meetings). Permanent contact shall be maintained between the Chairperson, Secretary and Members of the Subgroup to advance the work. Best advantage should be taken of modern communications facilities, particularly video-conferencing (Virtual Meetings) and e-mails. Face-to-face meetings will be conducted when it is necessary to do so.



MID RVSM Safety Monitoring Report 2025

Middle East Regional Monitoring Agency



EXECUTIVE SUMMARY– MID RVSM SMR 2025

The Middle East Regional Monitoring Agency (MIDRMA) continues its mandate to ensure that operations within the ICAO Middle East Reduced Vertical Separation Minimum (MID RVSM) airspace maintain the highest safety standards established by ICAO. This report, the MID RVSM Safety Monitoring Report 2025 (SMR 2025), presents the outcomes of the annual safety assessment conducted by the MIDRMA and demonstrates that RVSM operations in the Region remained safe and compliant throughout the reporting period.

The safety analysis draws upon two main data sources: the Traffic Data Sample (TDS) collected between 01 May and 31 May 2025, and all Large Height Deviation (LHD) reports received for the period 1 January – 31 December 2025. Using these inputs with other data related to aircraft ASE parameters, the MIDRAS AI software enhanced with advanced analytical capabilities was employed to calculate the vertical collision risk in accordance with the ICAO collision risk model (CRM).

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 results confirm that the technical risk associated with aircraft height-keeping performance is 8.932×10^{-11} fatal accidents per flight hour, remaining well below the ICAO Target Level of Safety (TLS) of 2.5×10^{-9} .

Objective 2 : *The overall risk of collision due to all causes, which includes the technical risk and all risks 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 overall risk, which includes both technical and operational factors, was assessed at 9.278×10^{-10} , also significantly below the ICAO TLS of 5×10^{-9} .

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.*

Despite these positive results, incomplete LHD reporting remains a persistent concern. The limited number of reports received from several high-density FIRs continues to reduce confidence in the operational component of the CRM. The MIDRMA reiterates the importance of accurate and timely LHD reporting from all Member States to preserve the integrity of the regional safety assessment.

During 2025, the MIDRMA also recorded steady progress toward the implementation of the ADS-B Height Monitoring System (AHMS), developed in collaboration with MAAR, and the FAA/NAARMO. Building on previous achievements, several States—including Bahrain, Oman and Kuwait, shared

archived ADS-B data to support system validation. The full operational phase of AHMS is expected to begin once the necessary archived ADSB data is officially submitted and the related decisions are endorsed by the Middle East Civil Aviation Authorities, anticipated by January 2026.

In summary, the SMR 2025 demonstrates that the Middle East RVSM airspace continues to meet all ICAO safety objectives. Nevertheless, ongoing attention to LHD data quality, timely TDS submissions and quality, and sustained cooperation among MID States remain critical to ensure that RVSM operations in the Region continue to achieve an acceptable and sustainable level of safety.

The findings reaffirm that the Middle East RVSM airspace continues to operate safely, maintaining a comfortable safety margin comparable to previous years.

KEY OBJECTIVES

Objective	Description	Status
1	Technical risk of collision due to height-keeping performance meets ICAO TLS (2.5×10^{-9} fatal accidents per flight hour)	Achieved
2	Overall risk (technical + operational) meets ICAO TLS (5×10^{-9} fatal accidents per flight hour)	Achieved
3	Address safety issues, recommend improvements, and ensure risk does not increase	Ongoing

SAFETY ANALYSIS HIGHLIGHTS

Technical Risk: 8.932×10^{-11} fatal accidents per flight hour (well below ICAO TLS)

Overall Risk: 9.278×10^{-10} fatal accidents per flight hour (well below ICAO TLS)

Average Aircraft Speed: 464.44 kts

Risk Type	Risk Estimation	ICAO TLS	Remarks
Technical Risk	8.932×10^{-11}	2.5×10^{-9}	Below ICAO TLS
Overall Risk	9.278×10^{-10}	5×10^{-9}	Below ICAO TLS

MAJOR FINDINGS

- a. RVSM operations in the MID Region remain safe and stable.
- b. Technical and overall risks are significantly below ICAO targets.
- c. Incomplete Large Height Deviation (LHD) reporting from several high-density FIRs reduces confidence in operational risk assessment.
- d. Progress continues on the ADS-B Height Monitoring System (AHMS), with full implementation expected by January 2026.
- e. Persistent coordination challenges at Muscat–Mumbai FIR boundary and Sana’a FIR interfaces require dedicated technical meetings.

RECOMMENDATIONS

- a. Improve LHD Reporting: All Member States must submit timely and accurate LHD reports to enhance safety assessment confidence.
- b. Support AHMS Implementation: Continued cooperation and data sharing are essential for the successful rollout of AHMS.
- c. Enhance Regional Coordination: Face-to-face technical meetings are recommended to resolve outstanding safety protocol issues.

AIRSPACE DESCRIPTION

- a. All MID States have implemented RVSM in accordance with ICAO Annex 11, the PANS-ATM (Doc 4444), and ICAO Documents 9574 & 7030. RVSM operations in the Region are supported by a mix of conventional and modern surveillance systems including radar, Mode-S, ADS-B, multilateration, and various automated coordination tools used by the Area Control Centers (ACCs).
- b. The MID RVSM airspace constitutes one of the world’s busiest and most complex cross-regional interfaces, with major traffic flows connecting Europe, Asia, Africa, and North America. Daily operations involve a high volume of long-haul traffic, military activity, and dense overflight movements, particularly within the FIRs of Bahrain, Muscat, Jeddah, Kuwait, Tehran, Baghdad, Amman, Cairo, and Emirates.
- c. To ensure continued safe and efficient RVSM operations, Member States are required to comply with the data submission obligations established by the MIDRMA, including the provision of annual Traffic Data Samples (TDS), Large Height Deviation (LHD) reports, and height-monitoring results. These inputs form the foundation of the annual safety assessment and allow the MIDRMA to monitor adherence to ICAO safety objectives.

TRAFFIC DATA SAMPLE (TDS) REVIEW

Submission Status and Quality Review

The annual Traffic Data Sample (TDS) remains one of the key inputs required for the MIDRMA to conduct a reliable regional RVSM safety assessment. In accordance with MIDANPIRG Conclusions and established MIDRMA procedures, all MID States are required to submit a complete TDS covering

the agreed monitoring period for each year. For the SMR 2025, the designated period for TDS collection was 01 May – 31 May 2025.

TDS Submission Status

- a. The majority of MID States demonstrated good cooperation by submitting their TDS within or close to the expected timeframe. However, a number of FIRs either submitted their data late, incomplete or did not provide a TDS at all. Missing or incomplete TDS inputs reduce the regional accuracy of aircraft exposure estimates and place a heavier dependency on interpolated or historical data trends.
- b. As in previous years, the most significant gaps continue to originate from high-volume traffic FIRs. These FIRs handle large flows of international traffic, and therefore their absence or incomplete TDS has a measurable impact on CRM model fidelity. The MIDRMA reiterates that complete TDS submission by all States is essential to maintain confidence in the annual risk estimations.

TDS Format and Technical Quality

Most States submitted data in formats compatible with the MIDRMA's automated processing tools. The technical quality of these files varied, with some containing:

- a. Missing altitude information
- b. Duplicate or overlapping TDS.
- c. Incorrect flight levels and time sequencing
- d. Flights excluded from the designated RVSM altitude band
- e. Although such issues were resolved through manual cleaning and automated filtering using MIDRAS AI, they nevertheless increase processing complexity and may introduce uncertainty into CRM exposure calculations

Incomplete TDS submissions directly affect:

- a. Accuracy of flight-hours estimation
- b. Exposure calculations within the CRM
- c. Confidence levels of the overall safety assessment
- d. To ensure the sustainability of the RVSM safety monitoring program, the MIDRMA stresses the importance of timely, complete, and high-quality TDS submissions from all MID States.

Impact on Safety Assessment

Despite several gaps, the MIDRMA was able to process a sufficiently large and representative dataset to conduct the 2025 RVSM safety analysis. However, the reliability of the model would be considerably improved with full compliance from all FIRs, especially those with high traffic density or major cross-regional flow segments.

CONCLUSIONS

1. The analysis performed by the Middle East Regional Monitoring Agency (MIDRMA) confirms that the overall safety of RVSM operations within the ICAO MID Region remained well within internationally accepted limits during 2025. Both the technical and overall risk values are significantly below the ICAO Target Levels of Safety (TLS), reaffirming that the Region continues to operate a safe and stable RVSM environment.
2. The technical risk, representing the probability of vertical collision arising solely from aircraft height-keeping performance, was calculated at 8.932×10^{-11} fatal accidents per flight hour, comfortably below the ICAO TLS of 2.5×10^{-9} . This confirms that aircraft altimetry systems and maintenance standards across the Region continue to deliver excellent performance and remain consistent with global benchmarks.
3. The overall risk, encompassing both technical errors and operational deviations, including coordination, communication, and contingency events, was assessed at 9.278×10^{-10} fatal accidents per flight hour, remaining well below the ICAO overall TLS of 5×10^{-9} . These results reflect continued compliance with RVSM Safety Objective 2.
4. However, the confidence level associated with the operational risk element remains constrained by the insufficient number of Large Height Deviation (LHD) reports received from several Member States. The absence of consistent reporting, particularly for Categories **A, B, C, D, J, and K**, limits the accuracy of the Collision Risk Model (CRM) and may mask localized risk trends. The MIDRMA once again emphasizes that systematic and timely submission of LHD reports is a fundamental component of the regional safety assurance process.
5. The ADS-B Height Monitoring System (AHMS) initiative advanced considerably during 2025. Technical coordination with FAA/NARMO and MAAR progressed toward the formal transfer of the ADS-B ASE processing software. Multiple States (Bahrain, Oman and Kuwait) provided archived ADS-B data supporting successful trial analyses. Once the decision related to regular submission of the archived ADSB data by the member states is endorsed and completed—expected by January 2026—the AHMS will enable large scale RVSM height monitoring for all MID States.
6. Persistent coordination challenges along the Muscat–Mumbai FIR boundary and within the Sana’a FIR interfaces continue to generate a share of the reported LHDs. The MIDRMA strongly recommends holding a dedicated, face-to-face technical meeting between the concerned ACCs, ICAO MID, and the MIDRMA to finalize long-term solutions and close the outstanding RVSM Safety Protocols.
7. Overall, the results of SMR 2025 reaffirm that the Middle East RVSM airspace continues to meet ICAO’s safety requirements. Continued collaboration among all Member States, full participation in data submission programmes, and active support for AHMS implementation will ensure the sustained safety and efficiency of RVSM operations throughout the Region.

TECHNICAL HEIGHT-KEEPING PERFORMANCE RISK ASSESSMENT

RVSM SAFETY OBJECTIVE NO. 1

The risk of collision in MID RVSM airspace is due solely to technical height-keeping performance, which 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 safety objective addresses the technical risk of collision in the MID RVSM airspace that arises solely from aircraft height-keeping performance. This objective focuses on ensuring that aircraft altimetry systems, when operating under RVSM approval, maintain the required level of accuracy and stability to support the reduced vertical separation of 1000 ft.

The objective is evaluated by verifying that the probability of loss of vertical separation due to technical height-keeping errors remains within the ICAO Target Level of Safety (TLS) of 2.5×10^{-9} fatal accidents per flight hour, as defined by ICAO.

This safety objective is concerned exclusively with technical performance factors, including altimetry system design, installation integrity, maintenance practices, and long-term system stability. Operational factors, human errors, and air traffic control-related events are explicitly excluded from this objective and are addressed separately under Safety Objective No. 2.

SCOPE:

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*	Doha	Emirates
Jeddah	Kuwait	Khartoum	Muscat	Sana'a	Tehran	Tripoli	

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

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

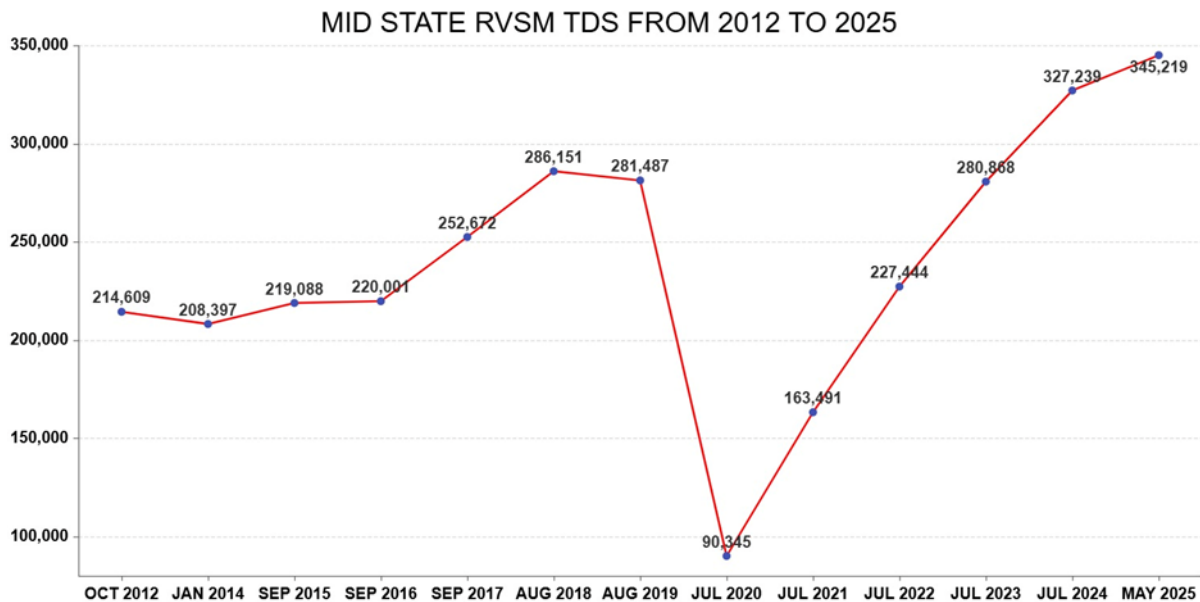
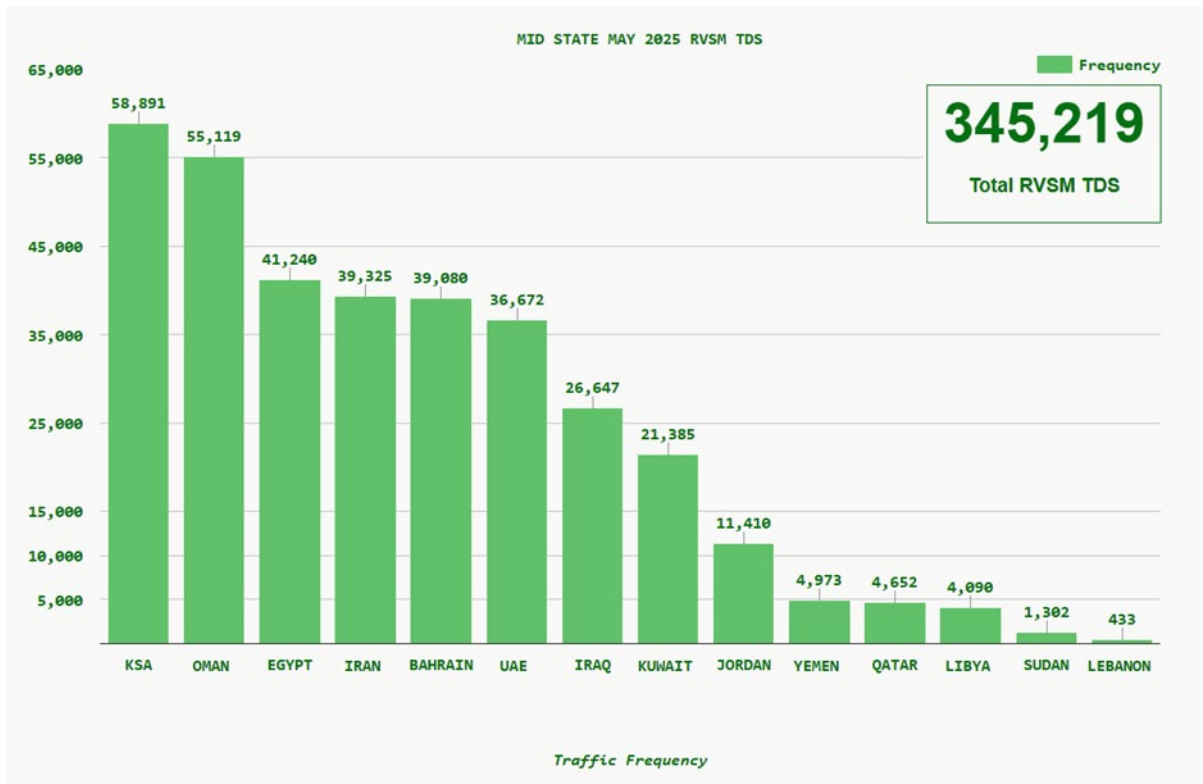
The Data Sampling periods covered by SMR 2025 are as displayed in the table below:

Report Elements	Time Period
Traffic Data Sample	01/05/2025 - 31/05/2025
Operational & Technical Errors	01/01/2025 - 31/12/2025

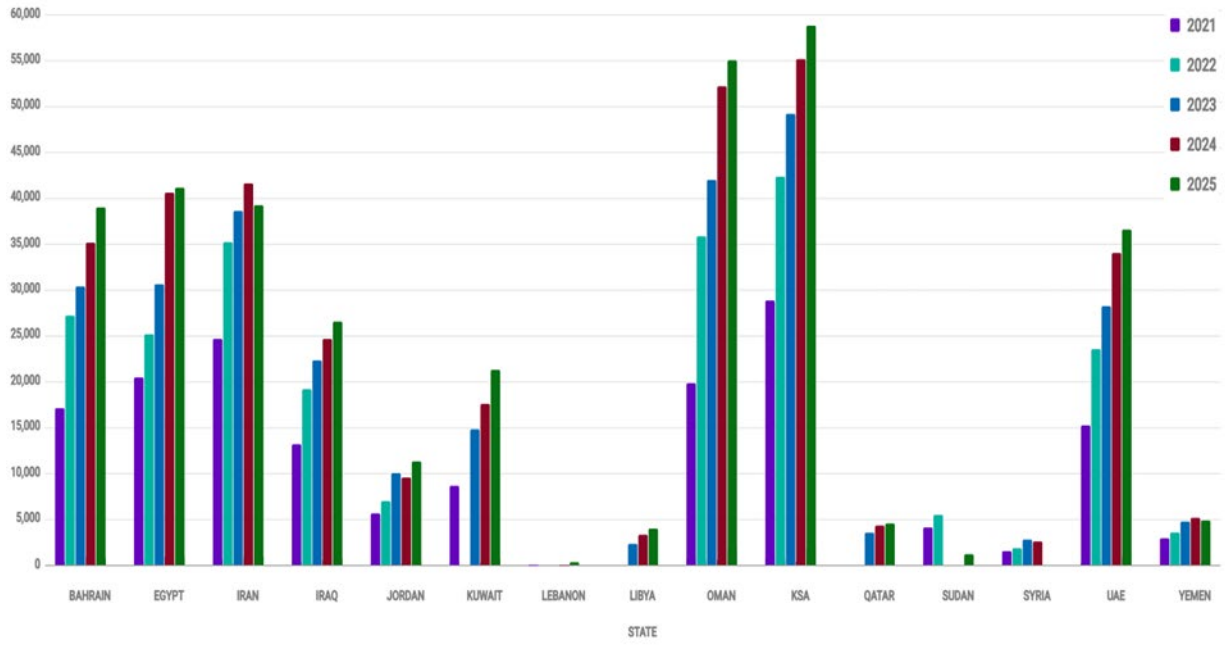
Despite the encouraging results, the MIDRMA reiterates that the incomplete and improperly formatted TDS submissions from several States, combined with the near absence of LHD reports, continue to undermine the confidence level of the final risk estimation. This issue remains a serious obstacle to maintaining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

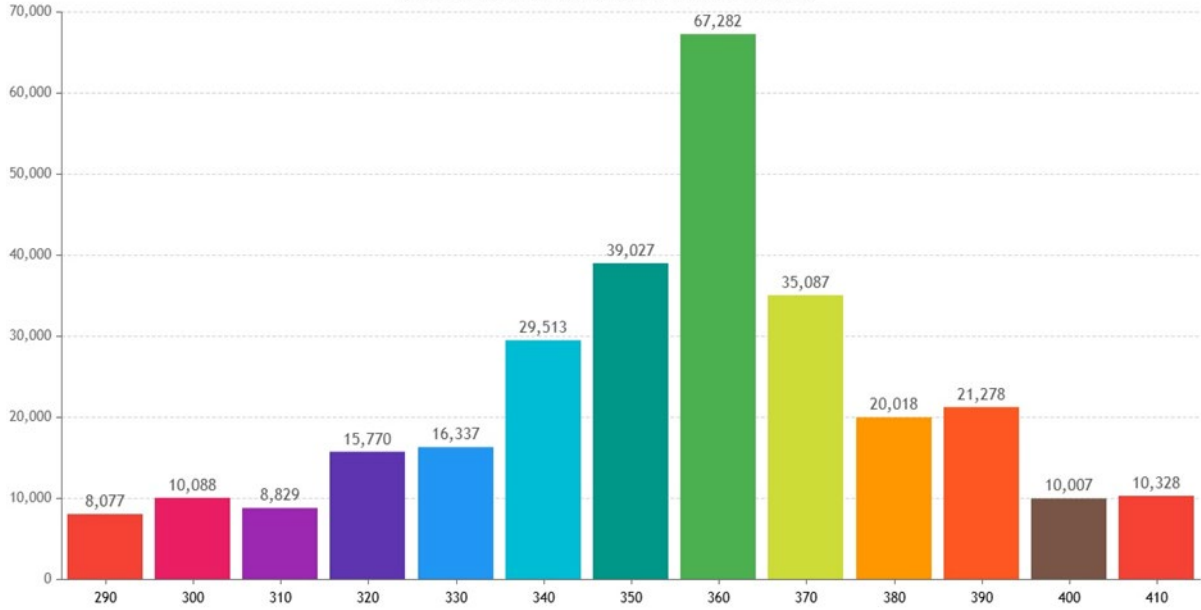
The graphs below illustrate the distribution of submitted Traffic Data Samples (TDS) across all MID States, the overall number of flights analyzed, and the long-term trend of TDS submissions from 2012 to 2025. These visuals reflect a steady increase in total data volume.



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



OCCUPANCY OF MID RVSM FLIGHT LEVELS



#	Route	Frequency	FIR
1	DAVUS-TASMI	9799	Kuwait
2	RATVO-SIDAD	8383	Baghdad
3	TUMAK-DAVUS	6756	Bahrain
4	TASMI-NINVA	6576	Baghdad
5	ALPOB-ULADA	5947	Bahrain
6	RABAP-OBNET	5444	Bahrain
7	ULINA-DEESA	4577	Amman
8	SIDAD-RABAP	4576	Kuwait
9	DAROR-NALPO	4546	Bahrain
10	SIDAD-LONOS	3893	Kuwait
11	RASKI-MENSA	3507	Muscat
12	TASMI-KABAN	3466	Baghdad
13	LONOS-GIRMO	2762	Bahrain
14	TONVO-RASKI	2693	Muscat
15	HECA-ULINA	2506	Cairo
16	RASKI-PASOV	2351	Muscat
17	KUPRO-TONVO	2268	Emirates
18	PARAR-MENSA	2180	Muscat
19	TONVO-PARAR	2164	Muscat
20	OEJN-OERK	1985	Jeddah

Top 20 Busiest Routes

TECHNICAL RISK ESTIMATION FOR 2025

The technical height-keeping performance risk for the MID RVSM airspace during the 2025 monitoring period was estimated using the Collision Risk Model (CRM), in accordance with ICAO-approved RVSM safety monitoring methodology.

The CRM integrates aircraft height-keeping performance characteristics with regional traffic data to estimate the technical vertical collision risk (N_{az}). This risk represents the likelihood of a fatal mid-air collision attributable solely to technical height-keeping errors between aircraft operating at adjacent RVSM flight levels.

For the 2025 monitoring period, the calculated technical vertical risk for the MID Region is:

$$8.932 \times 10^{-11} \text{ fatal accidents per flight hour}$$

This value remains significantly below the ICAO TLS, providing strong evidence that aircraft operating within the MID RVSM airspace continue to exhibit satisfactory technical height-keeping performance.

The result also demonstrates the continued effectiveness of RVSM approval, monitoring, and corrective processes implemented across the region.

TRAFFIC DATA AND AIRCRAFT PARAMETERS USED

The technical risk assessment for 2025 is based on a comprehensive set of Traffic Data Samples (TDS) and aircraft geometric parameters representative of operations throughout the MID RVSM airspace.

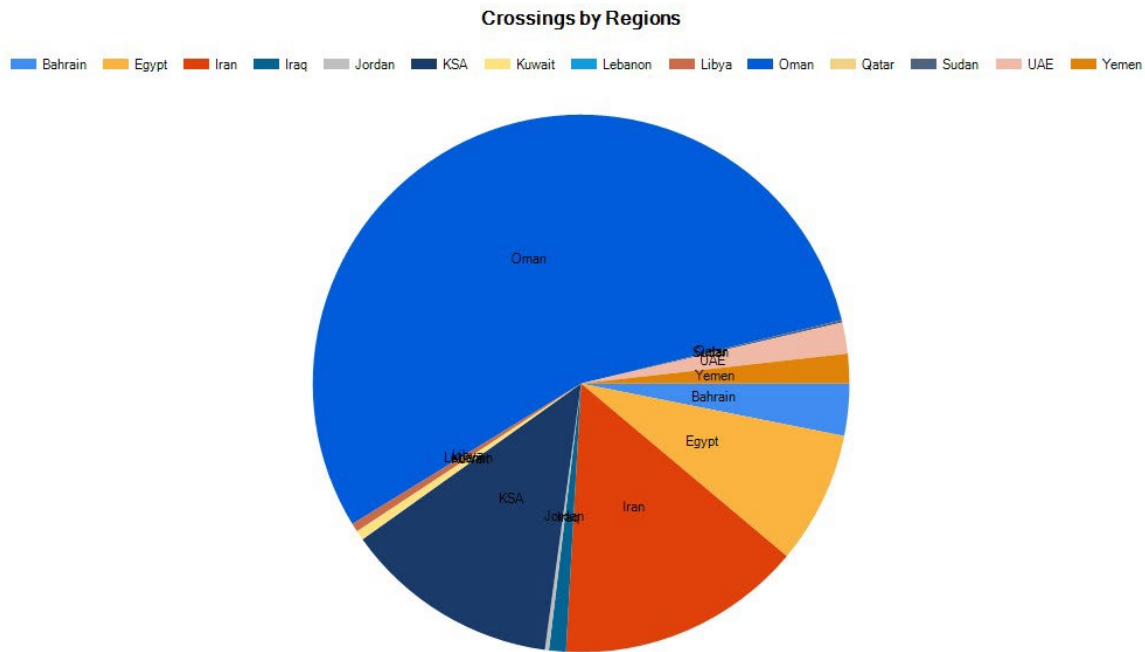
These data include aircraft movement statistics, flight times, distances flown, and average operating speeds, combined with representative aircraft dimensions used to model collision geometry within the CRM. The derived parameters reflect the diversity of aircraft types and traffic patterns present in the region.

For the 2025 assessment, the key parameters used were:

- **Average aircraft diameter (λ_{xy}):** 0.027573 NM (167.53 ft)
- **Average aircraft wingspan (λ_y):** 0.025412 NM (154.41 ft)
- **Average aircraft height (λ_z):** 0.0079215 NM (48.13 ft)
- **Number of flights analysed:** 345,219
- **Total flying time:** 213,085 hours
- **Total flying distance:** 98,230,253 NM
- **Average ground speed:** 464.44 kt
- **Average passing frequency:** 1.246×10^{-1}

These parameters were used consistently across all regional computations and are considered statistically representative of MID RVSM operations during the 2025 monitoring cycle.

Note: MIDRMA's analysis indicates that Muscat FIR continues to operate within an increasingly complex and highly congested traffic environment in the ICAO Middle East RVSM airspace and, for the fourth consecutive year, remains the most complex and congested FIR in the Middle East Region. During the reporting period, a noticeable increase in technical risk indicators has been observed within the Oman FIR RVSM airspace, largely attributable to the sustained growth in traffic density and operational complexity. Notwithstanding these challenges, the overall safety performance of the airspace remains robust, reflecting the continued commitment and professionalism of Oman's Air Traffic Services in maintaining RVSM operations at a high standard. The observed trends highlight the importance of continued vigilance, proactive risk mitigation measures, and close coordination among all stakeholders, to ensure that safety levels are preserved as traffic demand continues to evolve.



ASSUMPTIONS AND VALIDITY OF THE ASSESSMENT

To ensure that the estimated technical risk values are reliable and meaningful, a number of key assumptions underpinning the CRM computations were examined and confirmed to be valid for the 2025 assessment.

These assumptions include the validity of the estimated **frequency of horizontal overlap**, the representativeness of the traffic samples used, and the continued compliance of aircraft with ICAO height-keeping performance specifications. In particular:

- a. The calculated probability of vertical overlap due to technical height-keeping errors, $P_z(1000) = 1.86 \times 10^{-9}$, is well below the ICAO maximum allowable value of 1.7×10^{-8} .
- b. Aircraft operating at 1000 ft RVSM separation comply with the Global Height-Keeping Performance Specification.
- c. Individual aircraft meet the required performance limits for the components of Total Vertical Error (TVE).
- d. The MID RVSM height-monitoring programme remains active, systematic, and effective.
- e. The input data used by the CRM has been validated and screened for consistency and accuracy.
- f. Established procedures exist to identify, investigate, and correct any deficiencies in aircraft technical height-keeping performance.

- g. The assessment methodology remains aligned with ICAO-approved practices and is periodically reviewed to ensure continued applicability.

Collectively, these conditions confirm that the technical risk results for 2025 are robust and credible.

PROBABILITY OF LATERAL OVERLAP – PY(0)

The **probability of lateral overlap, Py(0)** represents the likelihood that two aircraft operating nominally at adjacent RVSM flight levels are laterally overlapped while flying along the same or closely spaced routes. This parameter is a critical input to the CRM, as it directly influences the estimation of vertical collision risk.

For the 2025 monitoring period, Py(0) values were computed for each MIDRMA Member State using the ICAO-approved methodology implemented through the MID Risk Analysis Software. The calculations take into account traffic density, route structure, and aircraft passing frequencies within each FIR.

- a. The results indicate that:
- b. Py(0) values across the MID RVSM airspace remain within expected and acceptable ranges
- c. No abnormal lateral overlap characteristics were identified in any FIR
- d. The average regional passing frequency was calculated as 1.24565×10^{-1} , supporting the validity of the lateral overlap assumptions used in the CRM

Accordingly, the lateral overlap component of the 2025 technical risk assessment is considered appropriate and representative of actual operations within the MID RVSM airspace.

COMPLIANCE WITH PZ(1000) REQUIREMENT

The **Pz(1000)** parameter represents the probability that two aircraft operating at adjacent RVSM flight levels lose vertical separation due to technical height-keeping errors.

For the MID RVSM airspace in 2025:

- a. **Pz(1000) = 1.86×10^{-9}**
- b. This value fully complies with the ICAO Global System Performance Specification limit of **1.7×10^{-8}**

This result confirms that aircraft height-keeping performance continues to meet ICAO requirements throughout the MID Region.

CONCLUSION – SAFETY OBJECTIVE NO. 1

The 2025 technical risk assessment demonstrates that Safety Objective No. 1 (Technical Height-Keeping Performance) continues to be satisfied within the MID RVSM airspace.

The analysis confirms that:

- a. The calculated technical risk remains significantly below the ICAO TLS

- b. Aircraft height-keeping performance remains stable and compliant
- c. No evidence of systemic technical degradation was identified

Accordingly, the MID RVSM airspace continues to operate at an acceptable and compliant level of technical safety with respect to aircraft height-keeping performance.

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).

RECOMMENDATIONS FOR RVSM SAFETY OBJECTIVE NO. 1:

1. Sustain Height-Monitoring Activities

MIDRMA should continue to conduct systematic RVSM height-monitoring activities in accordance with ICAO requirements to ensure the ongoing verification of aircraft height-keeping performance. Particular attention should be given to newly approved aircraft types and fleets with limited monitoring history to confirm continued compliance with the Global Height-Keeping Performance Specification.

2. Enhance the Use of ADS-B–Based Height Monitoring (AHMS)

Member States are encouraged to actively support the transition toward ADS-B–based height monitoring by facilitating the regular provision of archived ADS-B data to MIDRMA. Once fully implemented, AHMS will significantly expand monitoring coverage, improve detection capability, and strengthen confidence in regional technical risk assessments.

3. Maintain Compliance with Minimum Monitoring Requirements (MMRs)

All Member States should ensure that aircraft operators comply with the Minimum Monitoring Requirements (MMRs) issued by MIDRMA. States are encouraged to regularly review their national RVSM oversight processes to ensure that aircraft subject to monitoring obligations are tracked, monitored, and followed up in a timely manner.

4. Early Identification and Corrective Action for Height-Keeping Deviations

MIDRMA, in coordination with States and operators, should continue to promptly identify aircraft exhibiting unsatisfactory height-keeping performance and ensure that appropriate corrective actions are taken without delay. This includes verification of altimetry system maintenance, configuration, and calibration before the aircraft continues unrestricted RVSM operations.

5. Promote Preventive Maintenance and Continued Airworthiness

States should emphasize preventive maintenance practices and strict adherence to altimetry system maintenance standards as part of their continuing airworthiness oversight.

This proactive approach will help sustain the high level of technical performance observed across the MID RVSM airspace.

6. Strengthening Technical Awareness and Training

MIDRMA, in cooperation with ICAO and relevant partners, should continue to support technical workshops and awareness activities for State inspectors, maintenance organizations, and operators, focusing on height-keeping performance, Total Vertical Error (TVE) components, and the interpretation of monitoring results.

7. Maintain Alignment with ICAO Global Practices

MIDRMA should continue to align its technical risk assessment methodology with ICAO guidance material and global best practices, ensuring consistency with other Regional Monitoring Agencies and supporting the credibility of the MID RVSM safety monitoring programme.

OVERALL SAFETY (OPERATIONAL AND TECHNICAL RISK)

Safety objective no. 2 aims to ensure that the overall risk of collision due to all causes including technical risk, operational errors, and in-flight contingencies within the ICAO Middle East (MID) RVSM airspace remains at or below the ICAO established overall target level of safety (TLS) of 5×10^{-9} fatal accidents per flight hour.

Based on the safety assessment conducted for the 2025 reporting cycle, the **estimated overall collision risk** for the MID RVSM airspace was calculated to be 9.278×10^{-10} fatal accidents per flight hour. This computed value continues well below the ICAO overall TLS, thereby indicating that RVSM Safety Objective No. 2 has been formally satisfied for the reporting period.

While the calculated result demonstrates compliance with ICAO safety targets, it must be interpreted with caution due to the limitations associated with the availability and quality of operational safety data, particularly large height deviation (LHD) reports, which remain a critical input to the overall risk assessment.

LARGE HEIGHT DEVIATION (LHD) REPORTS – 2025

- a. The MIDRMA continues to express serious concern regarding the persistently inadequate submission of Large Height Deviation (LHD) reports across the ICAO MID Region. Despite sustained efforts by the Agency, including formal correspondence, repeated monthly reminders, and continuous coordination with designated focal points in all Member States, the level of LHD reporting during 2025 remained critically insufficient.
- b. Throughout the twelve-month reporting period of 2025, only three (3) LHD reports were received. Of these, two reports were submitted by Emirates ATC, whose proactive engagement and consistent cooperation with regional safety monitoring requirements are highly acknowledged and appreciated. The remaining single report was received from Jeddah ATC.
- c. It is important to highlight that this reporting deficiency specifically affects **LHD categories** of direct operational relevance to RVSM safety, namely **Categories A, B, C, D, J, and K**, which represent events associated with flight crew actions, ATC errors, and TCAS-related occurrences. These categories are essential for accurately assessing operational risk and validating compliance with Safety Objective No. 2.
- d. The continued absence of meaningful LHD data severely undermines the robustness of the operational risk assessment and significantly reduces the confidence level associated with the calculated overall collision risk. From a regional safety oversight perspective, this situation remains unacceptable and necessitates urgent corrective action by all MIDRMA Member States to ensure compliance with ICAO reporting obligations.

DISTRIBUTION OF REPORTED LHDS BY MID FIRS

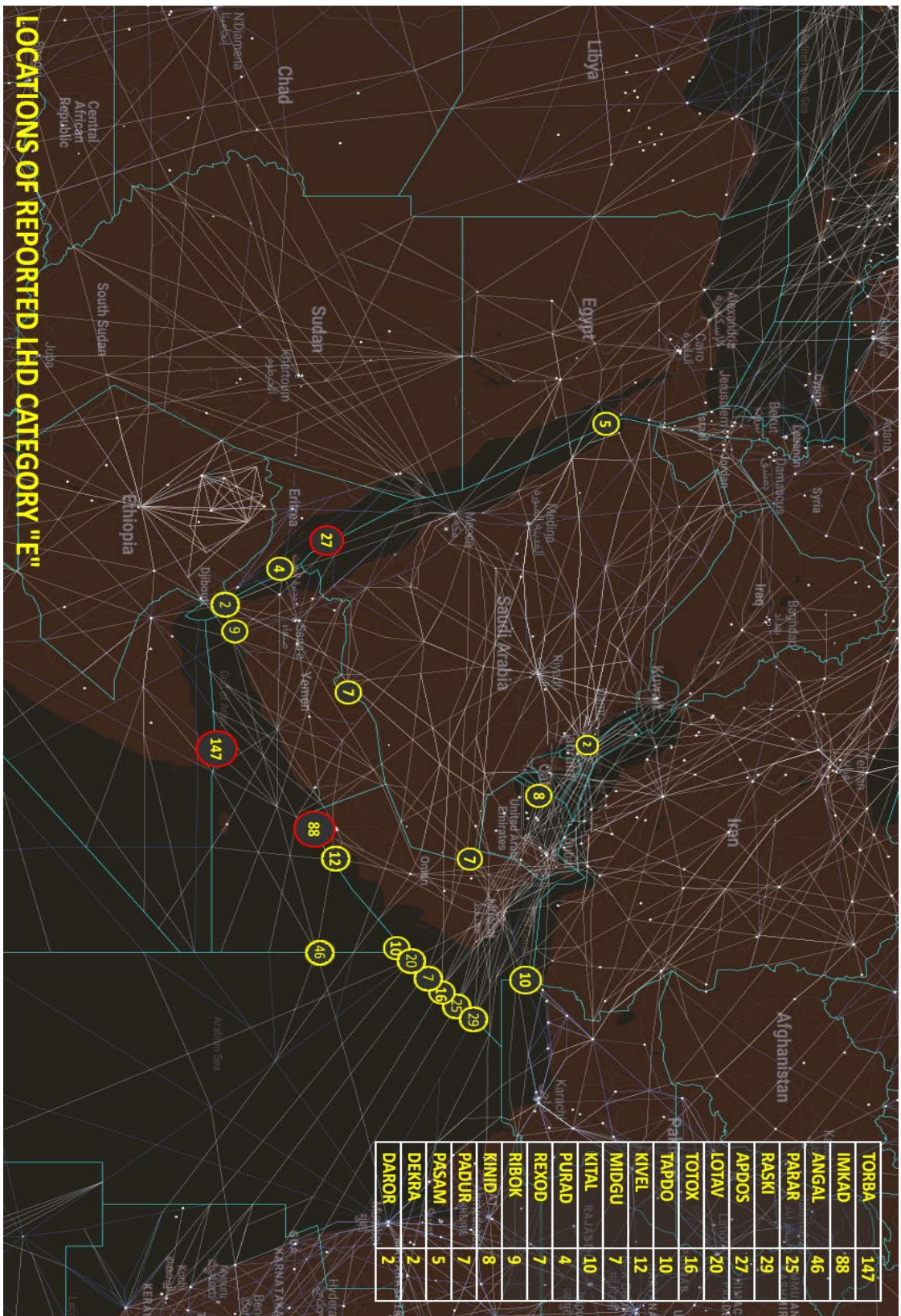
- a. The table below presents the number of reported LHDS and related LHDS across MID FIRs during the 2025 reporting cycle. The figures clearly demonstrate substantial disparities in reporting practices among FIRs, further reinforcing concerns regarding the completeness and representativeness of the available data.

MID FIRs	No. of Reported LHDS	No. of Related LHDS
Bahrain	8	5
Baghdad	2	-
Amman	-	2
Tehran	-	3
Cairo	9	3
Damascus	-	2
Khartoum	-	-
Kuwait	-	1
Muscat	83	95
Jeddah/ Riyadh	11	59
Qatar	14	-
Tripoli	-	-
Emirates	2	5
Sana'a	337	8

MID FIRs	Related to other Adjacent FIRs	No. of Related LHDS
Sana'a	Addis Ababa	148
Sana'a	Asmara	6
Sana'a	Djibouti	0
Sana'a	Mumbai	46
Muscat	Karachi	10
Muscat	Mumbai	60

LHD Reports Related to other Regions

- b. Several FIRs reported no LHDS at all, while others submitted large volumes of coordination-related reports **category E** , This imbalance further complicates the regional operational risk assessment and limits the ability to derive statistically reliable conclusions. The map below illustrates the locations of reported LHD Cat. E



LOCATIONS OF REPORTED LHD CATEGORY "E"

OPERATIONAL RISK ASSOCIATED WITH LHD CATEGORIES

- a. The validated LHD reports for the 2025 Safety Monitoring Report cycle were classified according to standard ICAO LHD categories and used as inputs for the calculation of the overall vertical collision risk under Safety Objective No. 2.
- b. While a large number of coordination-related LHD Category E reports were exchanged between specific FIR interfaces, only three (3) validated LHD occurrences affecting RVSM safety objectives were eligible for inclusion in the overall collision risk model. Notably, no LHDs were reported under Categories B, C, D, J, or K, which are typically associated with the most severe operational safety implications in RVSM airspace.

Note: The LHD reports in this table were validated for the whole SMR 2025 reporting cycle:

LHD Cat. Code	Large Height Deviation (LHD) Categories	No. of LHDs	LHD Duration (Sec.)
A	The flight crew fails to climb or descend the aircraft as cleared.	1	7
B	Flight crew climbing or descending without ATC clearance.	-	-
C	Incorrect operation or interpretation of airborne equipment	-	-
D	ATC system loop error	-	-
E	ATC transfer of control coordination errors due to human factors	-	-
F	ATC transfer of control coordination errors due to technical issues	-	-
G	Aircraft contingency leading to a sudden inability to maintain level	-	-
H	Airborne equip. Failure and unintentional or undetected FL change	1	28
I	Turbulence or other weather-related cause	-	-
J	TCAS resolution advisory and flight crew correctly responds	-	-
K	TCAS resolution advisory and flight crew incorrectly responds	-	-
L	ACFT being provided with RVSM separation is not RVSM-approved	-	-
M	Other	1	60
	Total	3	95

SUMMARY OF OPERATIONAL RISK ASSOCIATED WITH LARGE HEIGHT DEVIATION REPORTS FOR SMR 2025 REPORTING CYCLE

Note 1: For the second time, an RVSM Safety Monitoring Report (SMR) has been issued with such a low number of Large Height Deviation (LHD) reports, raising serious concerns about the accuracy of the overall risk assessments. Particularly alarming is the complete absence of reports for LHD categories that have a severe impact on RVSM operations.

Note 2: The **hotspots and the airways occupancy** of all MIDRMA member states are available for review in Appendix C of this Safety Monitoring Report.

The absence of LHDs in critical categories raises serious concerns regarding under-reporting rather than an absence of operational deviations.

The limited dataset substantially constrains the ability to accurately assess operational risk trends and validate the calculated overall collision risk.

For the second time, an RVSM Safety Monitoring Report has been issued with such a low number of LHD reports, highlighting a systemic reporting deficiency rather than an isolated occurrence.

RVSM SAFETY PROTOCOL – EASTERN BOUNDARIES OF MUSCAT FIR

- a. The most recent review of RVSM safety at the eastern boundaries of Muscat FIR confirms that concerns related to Large Height Deviations between Muscat and Mumbai ATC units persist throughout 2025.
- b. Although several corrective and preventive measures have been implemented since the introduction of the RVSM safety protocol, the number of exchanged LHD reports remains unacceptably high.
- c. This sustained trend indicates that the issue is systemic rather than sporadic, suggesting that existing mitigation measures have not yet achieved their intended safety outcomes. Without the implementation of more robust and sustained corrective actions, the situation will continue to pose a significant safety risk to RVSM operations at this critical FIR interface.
- d. Enhanced coordination procedures, improved data-sharing mechanisms, and strengthened monitoring and investigation processes are urgently required to ensure that corrective actions result in measurable and lasting safety improvements.

- e. Further details related to Muscat–Mumbai LHD exchanges are provided in **Appendix A** of this report.

RVSM SAFETY PROTOCOL – SANA’A FIR

- a. A comparative analysis of 2024 and 2025 indicates a continued and concerning increase in LHD reports involving Sana’a FIR and its adjacent FIRs. During 2024, 218 LHDs were reported, compared with 265 LHDs in 2025, representing an increase of approximately 21.6%.
- b. The most significant increases were observed in coordination with Addis Ababa FIR and Muscat FIR, while a reduction was noted with Jeddah FIR. This uneven distribution suggests that while localized improvements have been achieved in some interfaces, systemic coordination challenges persist in others.

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
Oct 2025	10	0	13	6	9	38
Nov 2025	15	1	6	2	7	31
Dec 2025	23	1	6	9	5	44
Total Report	171	7	47	55	98	378

LHD Reports filed by Sana’a ATC related to adjacent FIRs

- c. The continuing rise in LHD occurrences, particularly between Sana’a and Muscat FIRs, reflects unresolved deficiencies in handover coordination, flight level verification, and real-time communication procedures. Unless decisive corrective actions are implemented, these deviations may compromise the long-term safety of RVSM operations within the affected airspace.

RVSM APPROVALS AND COMPLIANCE MONITORING

- a. In accordance with **ICAO Documents 9574 and 9937**, the MIDRMA continues to perform systematic monitoring of RVSM operational compliance to ensure that aircraft operating within the MID RVSM airspace hold valid State RVSM approvals.
- b. Due to limitations in obtaining comprehensive traffic data from all Member States, compliance monitoring is primarily conducted using monthly RVSM traffic data provided by Bahrain, Baghdad, and Emirates FIRs. The MIDRMA expresses its sincere appreciation to the Civil Aviation Authorities of Bahrain, Iraq, and the United Arab Emirates for their consistent and high-quality data submissions, which remain essential for effective regional safety oversight.
- c. A limited number of non-RVSM-approved aircraft were identified during the 2025 monitoring cycle. These cases were generally attributed to administrative delays or temporary lapses in approval validity, rather than intentional non-compliance. Member States are therefore urged to ensure that RVSM approval databases are maintained accurately and updated promptly.
- d. Detailed results related to non-RVSM-approved aircraft are presented in **Appendix B** of this report.

CONCLUSIONS – RVSM SAFETY OBJECTIVE NO. 2

1. The estimated overall collision risk within the ICAO Middle East RVSM airspace for the 2025 Safety Monitoring Report reporting cycle remains below the ICAO Overall Target Level of Safety (TLS) of 5×10^{-9} fatal accidents per flight hour, thereby indicating formal compliance with RVSM Safety Objective No. 2.
2. The calculated overall risk value reflects the combined contribution of technical risk, operational errors, and in-flight contingencies; however, the reliability of this assessment is significantly affected by limitations in the availability and quality of operational safety data, particularly Large Height Deviation (LHD) reports.
3. The extremely low number of LHD reports received during the 2025 reporting period, especially those associated with operationally critical LHD categories (A, B, C, D, J, and K), raises serious concerns regarding the completeness and representativeness of the operational risk component used in the overall collision risk calculation.
4. The continued absence of standardized and timely LHD reporting from the majority of MIDRMA Member States substantially reduces the confidence level of the operational risk assessment and limits the ability to accurately identify regional safety trends and emerging operational hazards.

5. Persistent LHD hotspots identified at specific FIR interfaces, notably at the eastern boundaries of Muscat FIR and within the Sana'a FIR coordination environment, indicate that systemic operational and coordination deficiencies remain unresolved despite the implementation of existing safety protocols.
6. The observed increase in LHD occurrences under established RVSM safety protocols demonstrates that current corrective and preventive measures have not yet achieved the desired and sustained level of safety improvement, necessitating further review and strengthening of coordination, communication, and monitoring arrangements.
7. While the MIDRMA continues to conduct monitoring of RVSM approval compliance in accordance with ICAO Documents 9574 and 9937, the effectiveness of this activity remains constrained by incomplete traffic data submissions from several Member States.
8. The MIDRMA considers the ongoing deficiencies in Traffic Data Sample (TDS) submissions and LHD reporting to constitute a serious regional safety oversight concern, which requires urgent and coordinated corrective action by all Member States, supported by the ICAO MID Office.

RVSM SAFETY OBJECTIVE NO. 3 – SAFETY IMPROVEMENT, RECOMMENDATIONS, AND CONTINUOUS ASSURANCE

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.

- a. RVSM Safety Objective No. 3 aims to ensure that safety-related issues identified through the RVSM safety monitoring process are effectively addressed through corrective actions, strengthened procedures, and continuous engagement with Member States. This objective is qualitative in nature and is not assessed through numerical indicators; instead, its achievement is demonstrated through the existence and effective operation of a structured and sustainable safety improvement process.
- b. Throughout the reporting period, the Middle East Regional Monitoring Agency (MIDRMA) has systematically reviewed the outcomes of RVSM safety monitoring activities and translated identified safety concerns into clear observations, conclusions, and recommendations. These outcomes have been formally communicated to the concerned States through the Safety Monitoring Report, bilateral coordination, and relevant regional safety forums, ensuring that safety issues are clearly highlighted and appropriately addressed at both operational and regulatory levels.

- c. The MIDRMA has maintained continuous coordination with Member States to support the implementation of safety improvements related to RVSM operations. Particular attention has been given to issues associated with inter-FIR coordination, the management and reporting of Large Height Deviations (LHDs), the quality and consistency of Traffic Data Sample (TDS) submissions, and the continued oversight of RVSM approvals. This proactive and structured approach ensures that identified safety issues are not left unresolved and that preventive measures are implemented in a timely manner to avoid the escalation of risk.
- d. In addition, the consistent application of ICAO-approved monitoring methodologies has ensured that safety improvement remains an integral component of the RVSM oversight framework in the Middle East Region. The established cycle of monitoring, analysis, reporting, and follow-up provides assurance that safety observations lead to tangible improvements in operational practices and oversight arrangements, thereby preventing the accumulation of latent risks over time.
- e. As part of its continuous efforts to further enhance regional safety oversight, the MIDRMA has also focused on strengthening its risk analysis capabilities through the development of the Middle East Risk Assessment Software with ADS-B Integration and Response (MIDRAS-AIR), as detailed in a dedicated working paper. This initiative represents a strategic enhancement of the MIDRMA's analytical framework by leveraging advanced data integration and automation to support more robust and proactive safety assessments. In parallel, the MIDRMA is implementing an upgrade to the online Large Height Deviation (LHD) reporting system, aimed at improving usability, consistency, and reporting efficiency. All RVSM focal points will be fully briefed well in advance of the upgrade to ensure a smooth transition and the continued effectiveness of regional LHD reporting.
- f. Based on the above, the MIDRMA considers that **RVSM Safety Objective No. 3 has been successfully achieved**. A robust and effective mechanism is in place to ensure that safety issues identified through RVSM monitoring are systematically reviewed, communicated, and addressed. This continuous safety improvement process provides confidence that RVSM operations in the Middle East Region are actively managed and that emerging safety concerns are mitigated in a timely manner.
- g. The achievement of RVSM Safety Objective No. 3 complements the outcomes of Safety Objectives No. 1 and No. 2 by ensuring that technical and operational risks identified through monitoring activities are followed by appropriate corrective and preventive actions. Together, these objectives provide comprehensive assurance that the RVSM system in the Middle East Region continues to operate safely and in accordance with ICAO provisions.

RECOMMENDATIONS

1. In order to sustain and further strengthen the achievements under RVSM Safety Objective No. 3, the MIDRMA recommends that Member States continue to actively support the regional safety improvement process by maintaining close coordination with the MIDRMA on all RVSM-related safety matters. Particular emphasis should be placed on timely and effective follow-up of safety observations and recommendations arising from the RVSM Safety Monitoring Report.
2. Member States are encouraged to ensure that operational procedures at FIR boundaries remain clearly defined, regularly reviewed, and effectively implemented, with special attention given to coordination practices that have the potential to generate Large Height Deviations (LHDs). Continued awareness and reinforcement of proper LHD reporting practices are essential to support accurate safety oversight and the identification of emerging safety trends.
3. States should also continue to support initiatives aimed at enhancing regional risk analysis capabilities, including the development and future implementation of advanced analytical tools such as MIDRAS-AIR. Active participation in system briefings, training activities, and consultations related to new tools and system upgrades, including the online LHD reporting platform, will be essential to ensure their effective and consistent use across the region.

CONCLUSIONS

1. RVSM Safety Objective No. 3 addresses the critical need for a continuous and structured approach to safety improvement within the Middle East RVSM airspace. While this objective is not assessed through quantitative measures, its achievement is demonstrated through the establishment and sustained operation of effective mechanisms for identifying, communicating, and addressing safety-related issues.
2. Based on the actions undertaken during the reporting period, the MIDRMA concludes that RVSM Safety Objective No. 3 has been successfully achieved. Safety issues identified through RVSM monitoring activities are systematically reviewed and translated into practical recommendations, supported by continuous engagement with Member States and the ongoing enhancement of analytical and reporting tools.
3. The continued application of this safety improvement framework, together with sustained collaboration between the MIDRMA and Member States, provides strong assurance that RVSM operations in the Middle East Region will remain safe, resilient, and aligned with ICAO provisions over the long term.

LHD REPORTS SUBMITTED BY MUSCAT ACC RELATED TO MUMBAI ACC

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

39	12652	Oct 01, 2025	Muscat	Mumbai	RASKI	Revised FL Not Coordinated	E
40	12653	Oct 01, 2025	Muscat	Mumbai	KITAL	ACFT Entered FIR Without Coordination	E
41	12654	Oct 02, 2025	Muscat	Mumbai	RASKI	ACFT Entered FIR Without Coordination	E
42	12655	Oct 02, 2025	Muscat	Mumbai	RASKI	ACFT Entered FIR Without Coordination	E
43	12656	Oct 02, 2025	Muscat	Mumbai	REXOD	ACFT Entered FIR Without Coordination	E
44	12657	Oct 02, 2025	Muscat	Mumbai	PARAR	Revised FL Not Coordinated	E
45	12658	Oct 02, 2025	Muscat	Mumbai	TOTOX	ACFT Entered FIR Without Coordination	E
46	12659	Oct 03, 2025	Muscat	Mumbai	KITAL	ACFT Entered FIR Without Coordination	E
47	12660	Oct 04, 2025	Muscat	Mumbai	KITAL	ACFT Entered FIR Without Coordination	E
48	12661	Oct 04, 2025	Muscat	Mumbai	LOTAV	Revised FL Not Coordinated	E
49	12662	Oct 04, 2025	Muscat	Mumbai	LOTAV	Revised FL Not Coordinated	E
50	12663	Oct 05, 2025	Muscat	Mumbai	ASPUX	Revised FL Not Coordinated	E
51	12664	Oct 07, 2025	Muscat	Mumbai	PARAR	Revised FL Not Coordinated	E
52	12665	Oct 07, 2025	Muscat	Mumbai	RASKI	Revised FL Not Coordinated	E
53	12666	Oct 07, 2025	Muscat	Mumbai	LOTAV	Revised FL Not Coordinated	E
54	12673	Oct 08, 2025	Muscat	Mumbai	RASKI	Revised FL Not Coordinated	E
55	12674	Oct 08, 2025	Muscat	Mumbai	PARAR	Revised FL Not Coordinated	E
56	12675	Oct 08, 2025	Muscat	Mumbai	LOTAV	Revised FL Not Coordinated	E
57	12676	Oct 09, 2025	Muscat	Mumbai	RASKI	Revised FL Not Coordinated	E
58	12677	Oct 10, 2025	Muscat	Mumbai	REXOD	ACFT Entered FIR Without Coordination	E
59	12678	Oct 10, 2025	Muscat	Mumbai	RASKI	ACFT Entered FIR Without Coordination	E
60	12679	Oct 10, 2025	Muscat	Mumbai	RASKI	ACFT Entered FIR Without Coordination	E
61	12845	Dec 04, 2025	Muscat	Mumbai	RASKI	Revised FL Not Coordinated	E
62	12846	Dec 04, 2025	Muscat	Mumbai	KITAL	Revised FL Not Coordinated	E
63	12847	Dec 04, 2025	Muscat	Mumbai	PARAR	Revised FL Not Coordinated	E
64	12848	Dec 06, 2025	Muscat	Mumbai	RASKI	Revised FL Not Coordinated	E
65	12849	Dec 05, 2025	Muscat	Mumbai	PARAR	Revised FL Not Coordinated	E
66	12850	Dec 05, 2025	Muscat	Mumbai	PARAR	Revised FL Not Coordinated	E
67	12851	Dec 06, 2025	Muscat	Mumbai	PARAR	Revised FL Not Coordinated	E
68	12852	Dec 06, 2025	Muscat	Mumbai	KITAL	ACFT Entered FIR Without Coordination	E
69	12853	Dec 08, 2025	Muscat	Mumbai	RASKI	Revised FL Not Coordinated	E
70	12885	Dec 12, 2025	Muscat	Mumbai	PARAR	Revised FL Not Coordinated	E
71	12886	Dec 11, 2025	Muscat	Mumbai	REXOD	Revised FL Not Coordinated	E
72	12887	Dec 13, 2025	Muscat	Mumbai	LOTAV	ACFT Entered FIR Without Coordination	E
73	12888	Dec 14, 2025	Muscat	Mumbai	RASKI	ACFT Entered FIR Without Coordination	E
74	12890	Dec 15, 2025	Muscat	Mumbai	REXOD	Revised FL Not Coordinated	E
75	12891	Dec 16, 2025	Muscat	Mumbai	PARAR	ACFT Entered FIR Without Coordination	E
76	12892	Dec 16, 2025	Muscat	Mumbai	PARAR	ACFT Entered FIR Without Coordination	E
77	12893	Dec 17, 2025	Muscat	Mumbai	RASKI	Revised FL Not Coordinated	E
78	12894	Dec 17, 2025	Muscat	Mumbai	RASKI	Revised FL Not Coordinated	E
79	12895	Dec 17, 2025	Muscat	Mumbai	RASKI	ACFT Entered FIR Without Coordination	E
80	12896	Dec 19, 2025	Muscat	Mumbai	RASKI	Revised FL Not Coordinated	E
81	12897	Dec 19, 2025	Muscat	Mumbai	PARAR	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:	Cat .
1	LHD003030	30-01-2025	Mumbai	Muscat	PARAR	No or late FL revision	E
2	LHD003031	03-01-2025	Mumbai	Muscat	PARAR	No transfer information	E
3	LHD003032	04-01-2025	Mumbai	Muscat	RASKI	No or late FL revision	E
4	LHD003033	07-01-2025	Mumbai	Muscat	PARAR	No or late FL revision	E
5	LHD003034	07-01-2025	Mumbai	Muscat	TOTOX	No or late FL revision	E
6	LHD003035	13-01-2025	Mumbai	Muscat	TOTX	No or late FL revision	E
7	LHD003037	18-01-2025	Mumbai	Muscat	RASKI	No or late FL revision	E
8	LHD003038	19-01-2025	Mumbai	Muscat	PARAR	No or late FL revision	E
9	LHD003039	21-01-2025	Mumbai	Muscat	TOTOX	No or late FL revision	E
10	LHD003040	28-01-2025	Mumbai	Muscat	RASKI	No or late FL revision	E
11	LHD003067	09-02-2025	Mumbai	Muscat	PARAR	No or late FL revision	E
12	LHD003068	09-02-2025	Mumbai	Muscat	KITAL	No or late FL revision	E
13	LHD003069	12-02-2025	Mumbai	Muscat	LOTAV	No or late FL revision	E
14	LHD003109	03-03-2025	Mumbai	Muscat	PARAR	No transfer information	E
15	LHD003110	03-03-2025	Mumbai	Muscat	PARAR	No transfer information	E
16	LHD003111	08-03-2025	Mumbai	Muscat	PARAR	No or late FL revision	E
17	LHD003112	09-03-2025	Mumbai	Muscat	LOTAV	No or late FL revision	E
18	LHD003113	24-03-2025	Mumbai	Muscat	KITAL	No or late FL revision	E
19	LHD003114	24-03-2025	Mumbai	Muscat	REXOD	No or late FL revision	E
20	LHD003153	03-04-2025	Mumbai	Muscat	PARAR	No or late FL revision	E
21	LHD003154	05-04-2025	Mumbai	Muscat	RASKI	No or late FL revision	E
22	LHD003155	05-04-2025	Mumbai	Muscat	PARAR	No or late FL revision	E
23	LHD003156	11-04-2025	Mumbai	Muscat	PARAR	No or late FL revision	E
24	LHD003157	17-04-2025	Mumbai	Muscat	PARAR	No or late FL revision	E
25	LHD003158	21-04-2025	Mumbai	Muscat	LOTAV	No or late FL revision	E
26	LHD003159	23-04-2025	Mumbai	Muscat	LOTAV	No or late FL revision	E
27	LHD003176	05-05-2025	Mumbai	Muscat	TOTOX	No or late FL revision	E
28	LHD003178	08-05-2025	Mumbai	Muscat	LOTAV	No or late FL revision	E
29	LHD003179	14-05-2025	Mumbai	Muscat	REXOD	No or late FL revision	E
30	LHD003180	22-05-2025	Mumbai	Muscat	TOTOX	No or late FL revision	E
31	LHD003181	22-05-2025	Mumbai	Muscat	TOTOX	No or late FL revision	E
32	LHD003182	27-05-2025	Mumbai	Muscat	REXOD	No or late FL revision	E
33	LHD003183	27-05-2025	Mumbai	Muscat	TOTOX	No transfer information	E
34	LHD003217	29-06-2025	Mumbai	Muscat	KITAL	No transfer information	E
35	LHD003218	27-06-2025	Mumbai	Muscat	KITAL	No or late FL revision	E
36	LHD003253	04-07-2025	Mumbai	Muscat	KITAL	No estimate time revi.	E
37	LHD003254	09-07-2025	Mumbai	Muscat	PARAR	No or late FL revision	E

38	LHD003255	23-07-2025	Mumbai	Muscat	PARAR	No transfer information	E
39	LHD003256	03-07-2025	Mumbai	Muscat	LOTAV	No or late estimate rev.	E
40	LHD003305	03-08-2025	Mumbai	Muscat	LOTAV	No or late FL revision	E
41	LHD003306	22-08-2025	Mumbai	Muscat	LOTAV	No or late FL revision	E
42	LHD003307	29-08-2025	Mumbai	Muscat	LOTAV	No or late estimate rev.	E
43	LHD003308	30-09-2025	Mumbai	Muscat	PARAR	No or late FL revision	E
44	LHD003309	24-08-2025	Mumbai	Muscat	RASKI	No or late FL revision	E
45	LHD003309	24-08-2025	Mumbai	Muscat	RASKI	No or late FL revision	E
46	LHD003330	07-10-2025	Mumbai	Muscat	ANGAL	No or late FL revision	E
47	LHD003331	20-10-2025	Mumbai	Muscat	ANGAL	No or late FL revision	E
48	LHD003347	29-10-2025	Mumbai	Muscat	ANGAL	No or late FL revision	E
49	LHD003348	30-10-2025	Mumbai	Muscat	ANGAL	No or late FL revision	E
50	LHD003379	14-11-2025	Mumbai	Muscat	TOTOX	No or late FL revision	E
51	LHD003380	18-11-2025	Mumbai	Muscat	TOTOX	No transfer information	E
52	LHD003381	29-11-2025	Mumbai	Muscat	LOTAV	No or late FL revision	E
53	LHD003431	12-12-2025	Mumbai	Muscat	REXOD	No or late FL revision	E
54	LHD003433	18-12-2025	Mumbai	Muscat	TOTOX	No or late FL revision	E
55	LHD003432	29-12-2025	Mumbai	Muscat	KITAL	No or late FL revision	E

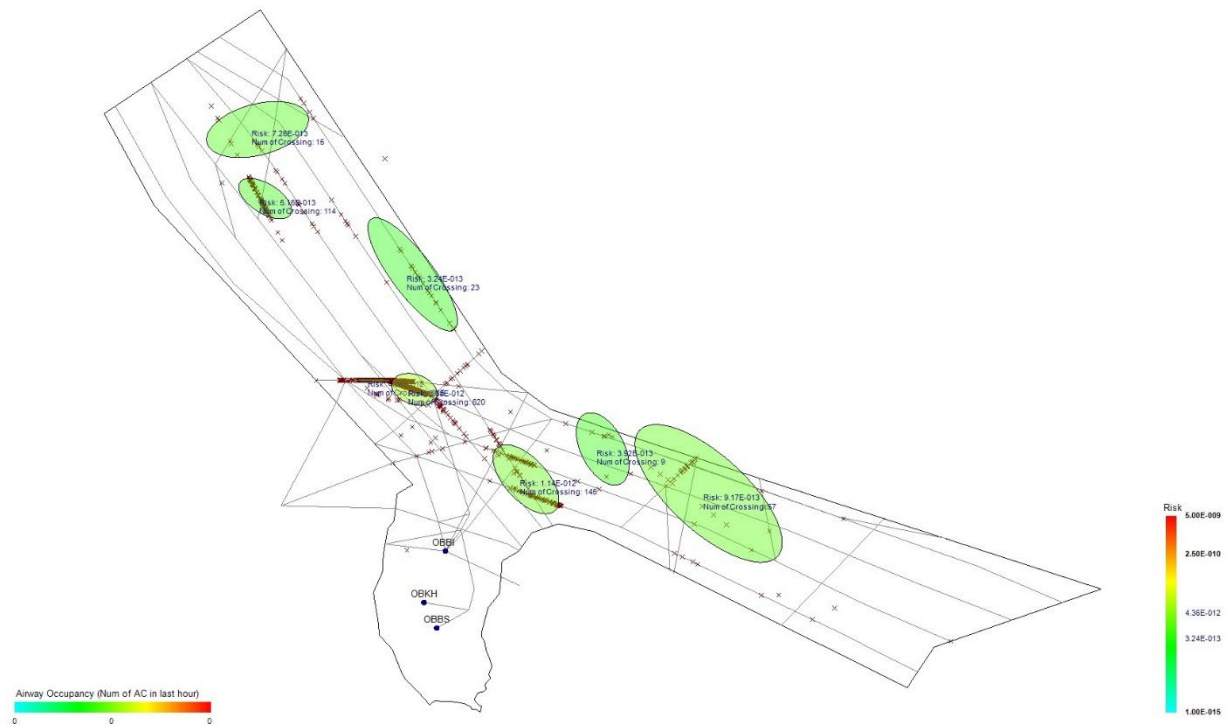
NON-RVSM APPROVED AIRCRAFT

#	Registration of Violating ACFT	ICAO Type	First Observed on	RMA Observed	STATE/RMA Responsible
1	PKLSW	B739	08-03-23	MIDRMA	AAMA
2	PKLVF	B739	20-01-23	MIDRMA	AAMA
3	PKSTD	A320	19-01-23	MIDRMA	AAMA
4	PKLSV	B739	21-12-22	MIDRMA	AAMA
5	PKBGZ	B738	13-12-22	MIDRMA	AAMA
6	PKBKM	A320	30-11-22	MIDRMA	AAMA
7	PKLSU	B739	27-11-22	MIDRMA	AAMA
8	PKSTH	A320	27-11-22	MIDRMA	AAMA
9	PKSJH	A320	06-11-22	MIDRMA	AAMA
10	60208A	C17	30-03-20	MIDRMA	AAMA
11	40001A	C17	25-01-20	MIDRMA	AAMA
12	9SPRR	IL76	09-06-24	MIDRMA	AFIRMA
13	XTEBO	IL76	07-06-24	MIDRMA	AFIRMA
14	5NBYJ	E290	06-06-24	MIDRMA	AFIRMA
15	TTDAB	H25B	31-05-24	MIDRMA	AFIRMA
16	5NADM	B744	28-05-24	MIDRMA	AFIRMA
17	5YFQC	B734	20-05-24	MIDRMA	AFIRMA
18	5HTCP	B39M	19-05-24	MIDRMA	AFIRMA
19	5NBBN	B772	18-05-24	MIDRMA	AFIRMA
20	5HONE	GLF5	15-05-24	MIDRMA	AFIRMA
21	5HTCQ	B39M	15-05-24	MIDRMA	AFIRMA
22	5NHMM	B744	15-05-24	MIDRMA	AFIRMA
23	5YFQA	B734	15-05-24	MIDRMA	AFIRMA
24	5NBOD	GLF4	28-01-22	MIDRMA	AFIRMA
25	5YFAN	CRJ2	15-07-20	MIDRMA	AFIRMA
26	5YWBH	C56X	14-07-20	MIDRMA	AFIRMA
27	ETATF	B350	08-07-20	MIDRMA	AFIRMA
28	ZSCQP	CRJ9	07-07-20	MIDRMA	AFIRMA
29	CCBGV	B789	08-06-22	MIDRMA	CARSAM
30	FAB2857	KC39	22-05-22	MIDRMA	CARSAM

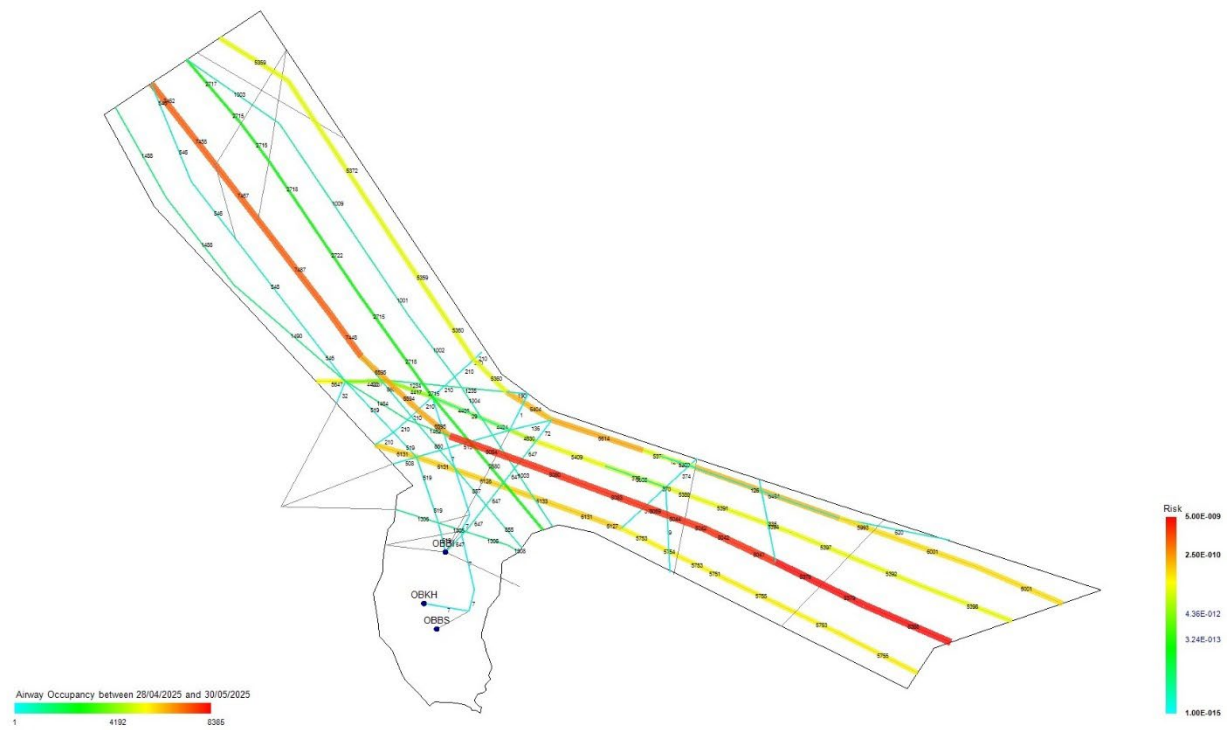
31	21140	IL76	19-06-22	MIDRMA	CHINARMA
32	ICJSN	C25C	15-05-23	MIDRMA	EURRMA
33	URFSE	IL76	11-12-22	MIDRMA	EURRMA
34	URAZR	B77W	03-02-22	MIDRMA	EURRMA
35	URAZN	B753	01-02-22	MIDRMA	EURRMA
36	URAZO	B753	01-02-22	MIDRMA	EURRMA
37	URFSD	IL76	24-12-21	MIDRMA	EURRMA
38	URFSC	IL76	05-12-21	MIDRMA	EURRMA
39	EW550TH	IL76	04-12-21	MIDRMA	EURRMA
40	URSQO	B738	02-12-21	MIDRMA	EURRMA
41	URFSA	IL76	09-05-21	MIDRMA	EURRMA
42	UR11316	AN12	22-07-20	MIDRMA	EURRMA
43	IN307	IL38	03-12-20	MIDRMA	MAAR
44	KJ3452	IL76	03-08-20	MIDRMA	MAAR
45	CB8001	C17	29-07-20	MIDRMA	MAAR
46	CB8004	C17	24-07-20	MIDRMA	MAAR
47	80002A	C17	23-07-20	MIDRMA	MAAR
48	K3604	E35L	17-07-20	MIDRMA	MAAR
49	KJ3454	IL76	16-03-20	MIDRMA	MAAR
50	STPSA	F900	18-10-23	EURRMA	MIDRMA
51	5ALEX	BE200	09-07-22	EURRMA	MIDRMA
52	STALL	CRJ1	11-06-22	MIDRMA	MIDRMA
53	N993JA	A333	18-03-25	MIDRMA	NAARMO
54	N993JA	A333	18-03-25	MIDRMA	NAARMO
55	N882RR	PC12	10-03-25	MIDRMA	NAARMO
56	N505MS	C55B	03-06-24	MIDRMA	NAARMO
57	N788DP	B737	25-02-24	MIDRMA	NAARMO
58	N890DA	GLF5	25-02-23	MIDRMA	NAARMO
59	N800AJ	CL60	10-02-23	MIDRMA	NAARMO
60	N651CV	C650	21-11-22	MIDRMA	NAARMO
61	N320MK	GLF3	24-09-22	MIDRMA	NAARMO
62	N46HB	F9000	22-08-22	MIDRMA	NAARMO
63	N411VP	EA50	01-05-22	MIDRMA	NAARMO
64	N605AS	PC12	11-04-22	MIDRMA	NAARMO
65	N981DB	H25B	05-04-22	MIDRMA	NAARMO

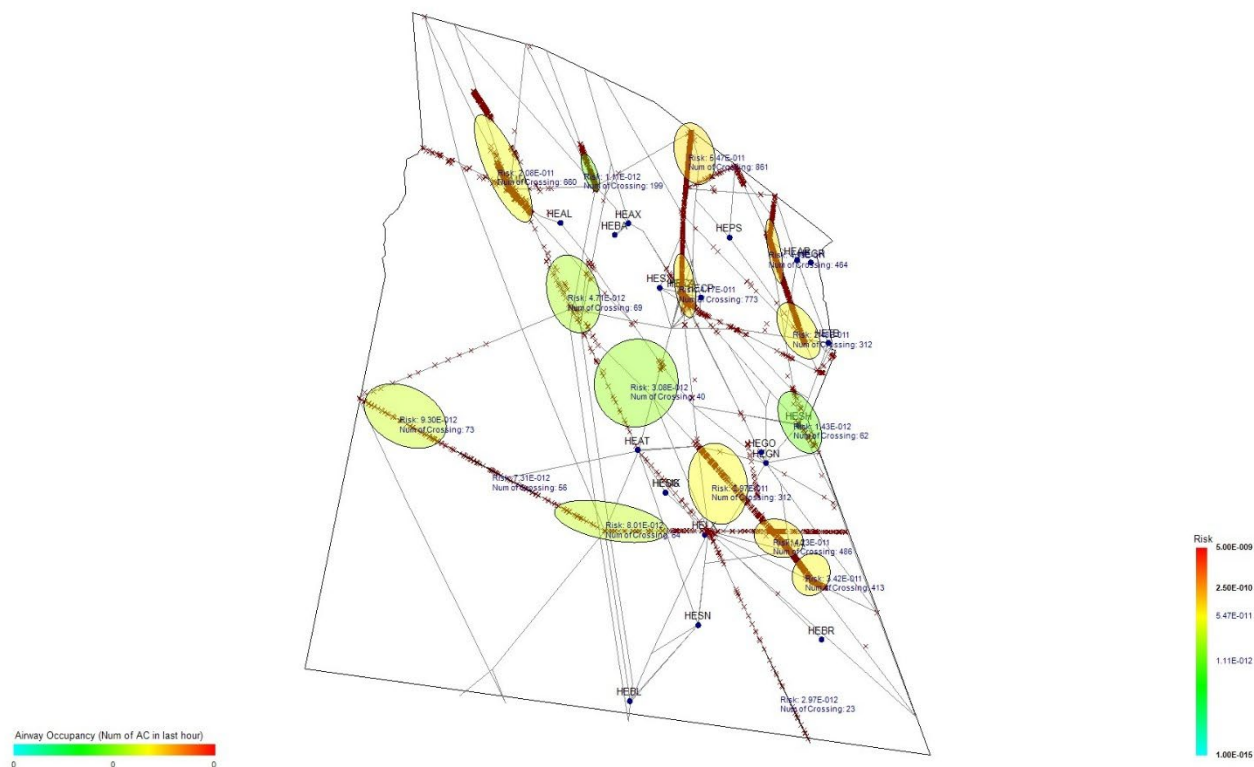
66	N981DB	H25B	05-04-22	MIDRMA	NAARMO
67	N145DB	E35L	22-01-22	MIDRMA	NAARMO
68	N685MF	GLF4	08-12-21	MIDRMA	NAARMO
69	N298RB	GLF4	14-05-21	MIDRMA	NAARMO
70	N1112B	B350	16-07-20	MIDRMA	NAARMO
71	N44UA	CL60	07-06-20	MIDRMA	NAARMO

MID RVSM SMR 2025 HOTSPOTS AND AWYS OCCUPANCY

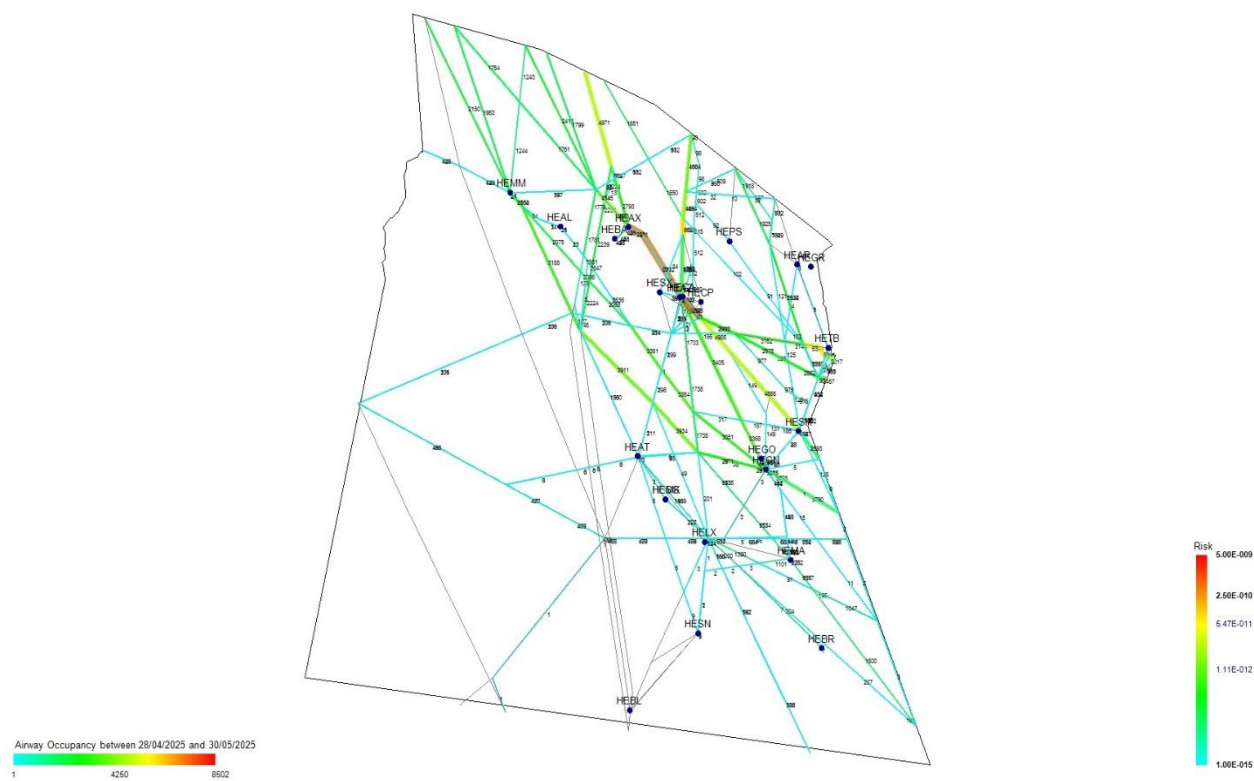


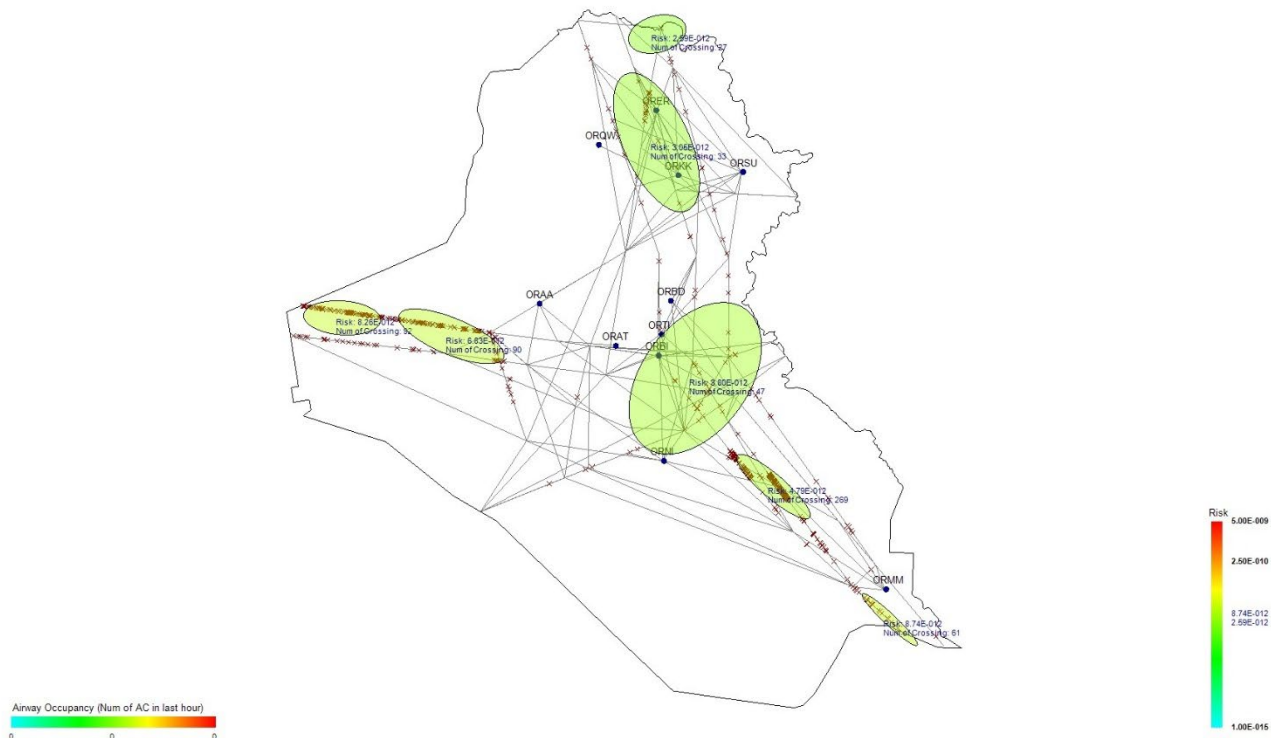
BAHRAIN FIR



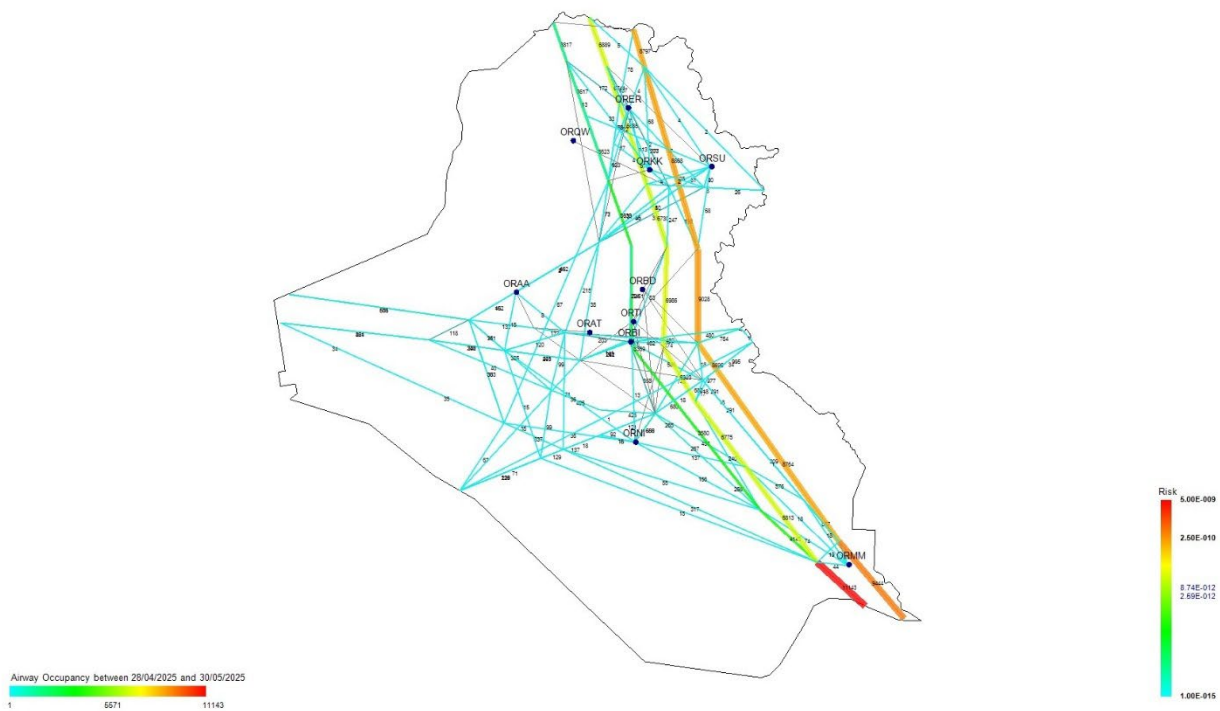


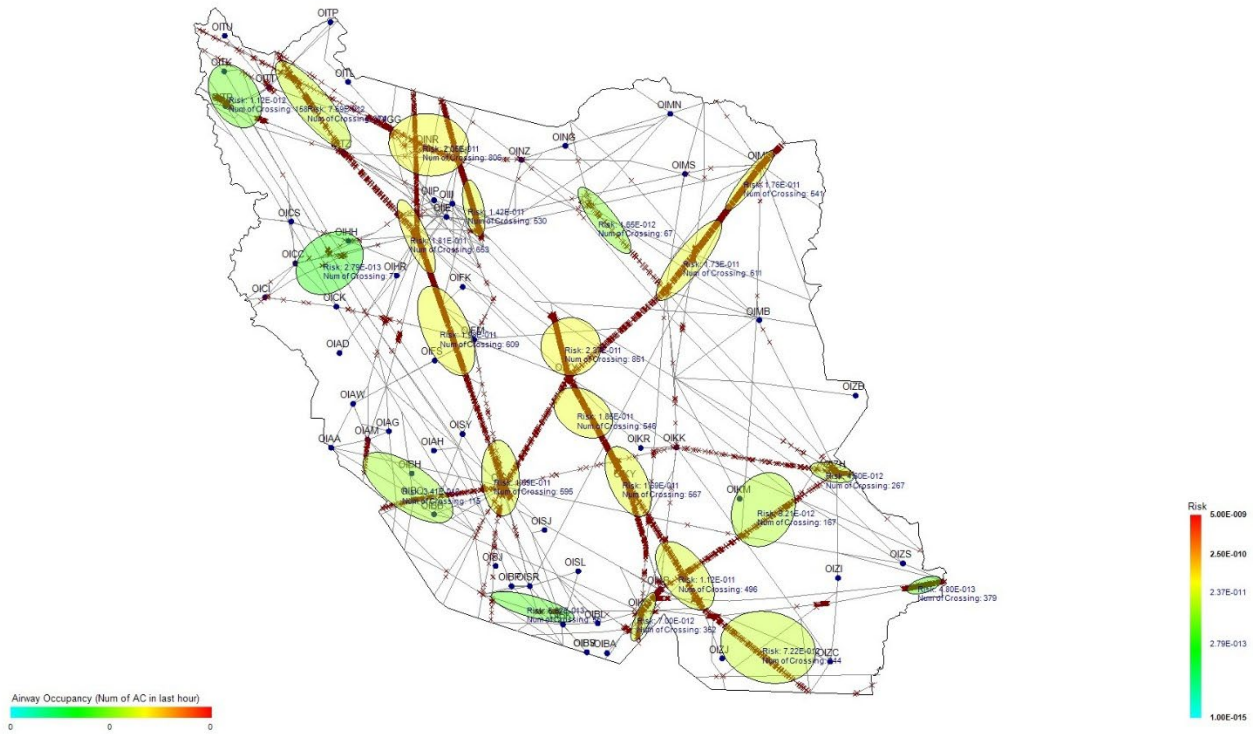
CAIRO FIR



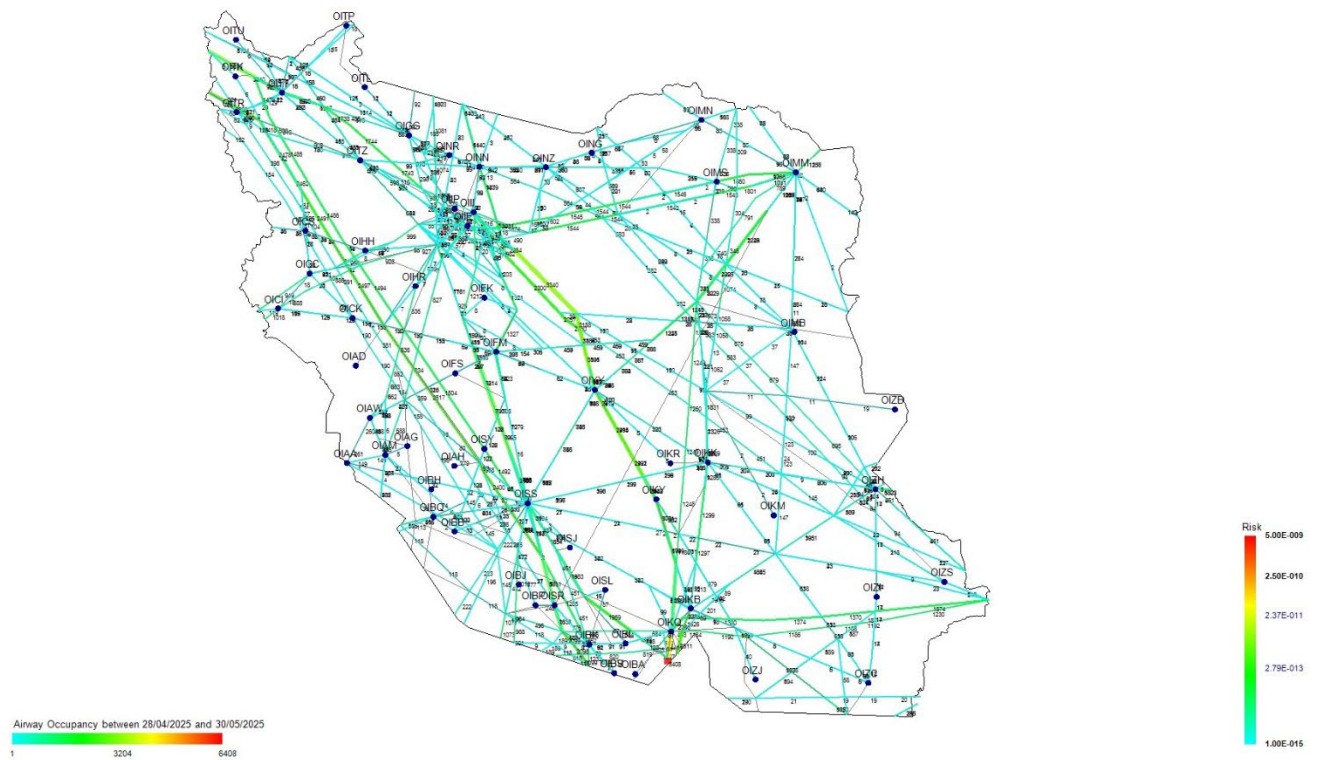


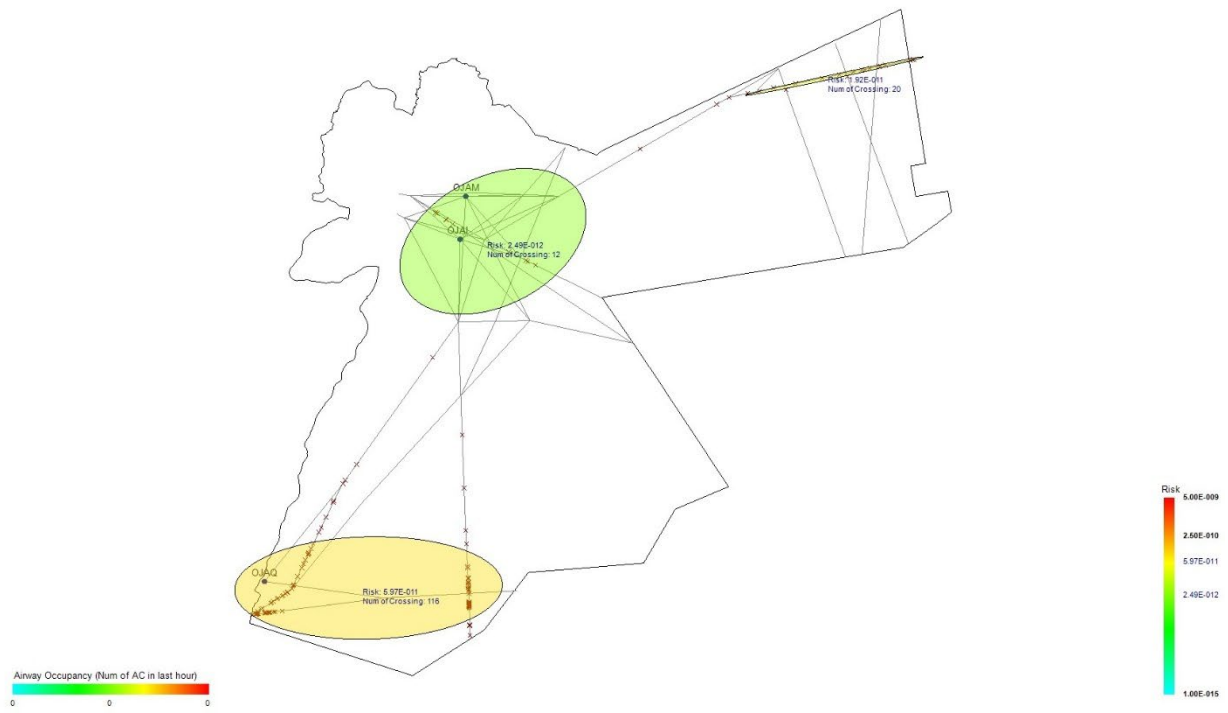
BAGHDAD FIR



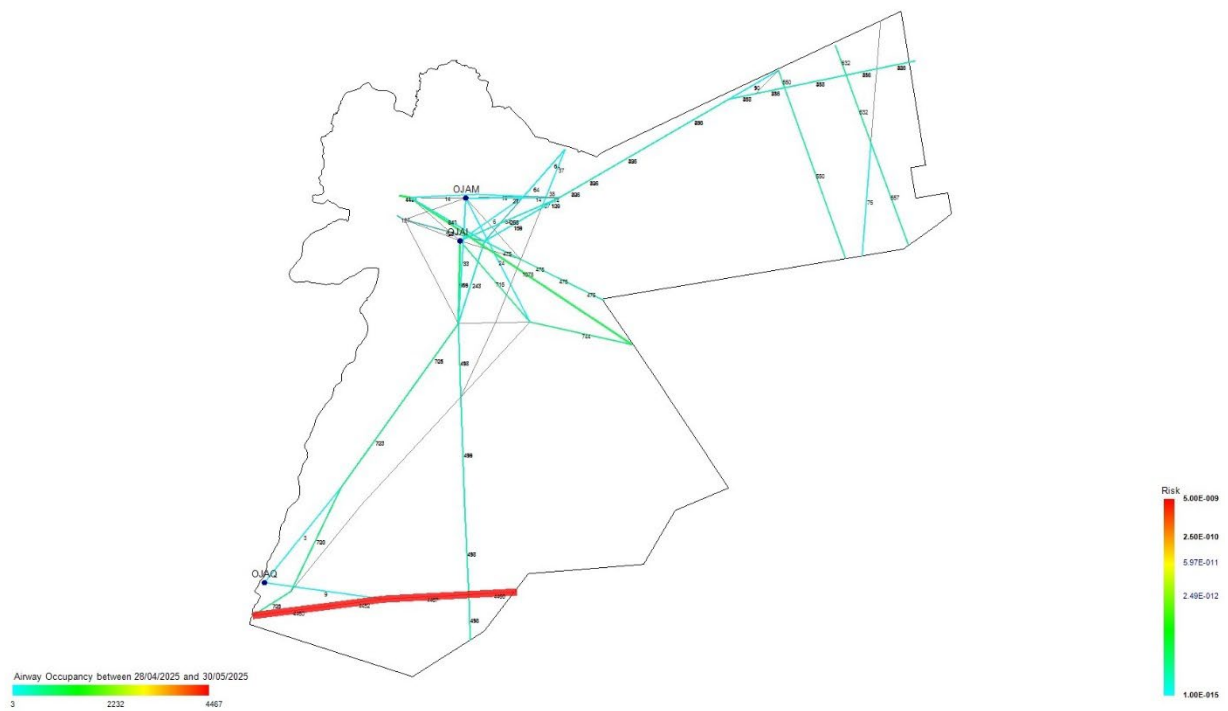


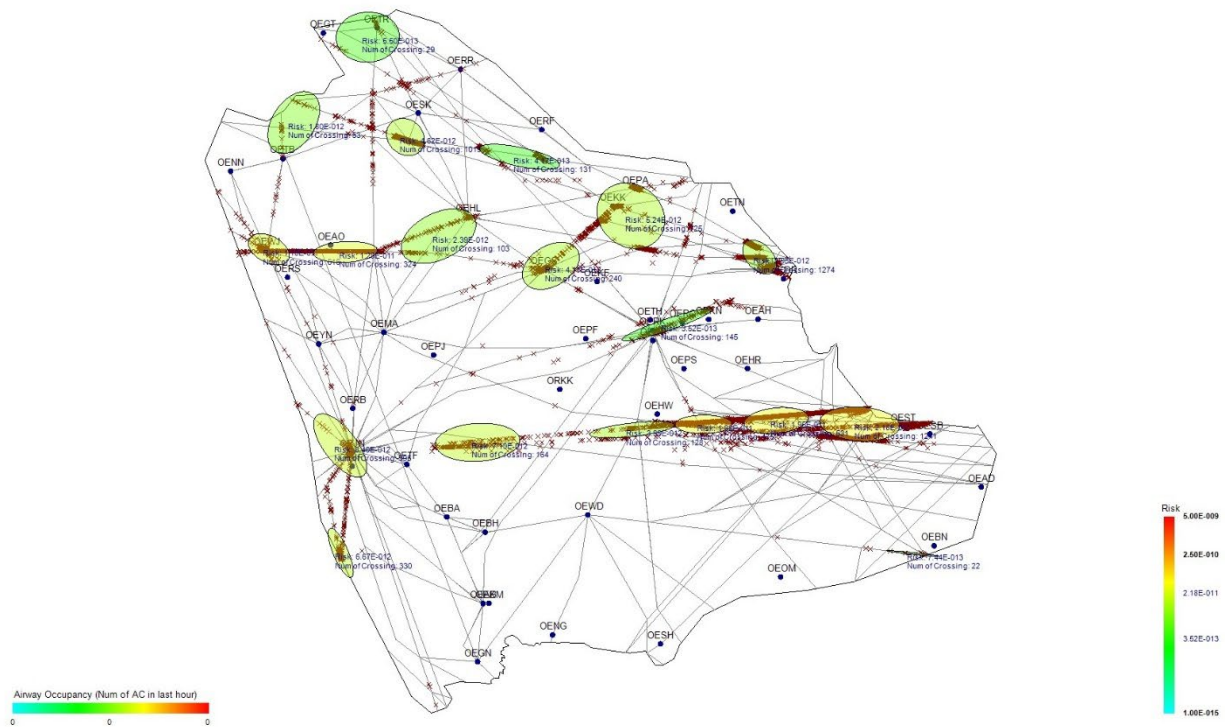
TEHRAN FIR



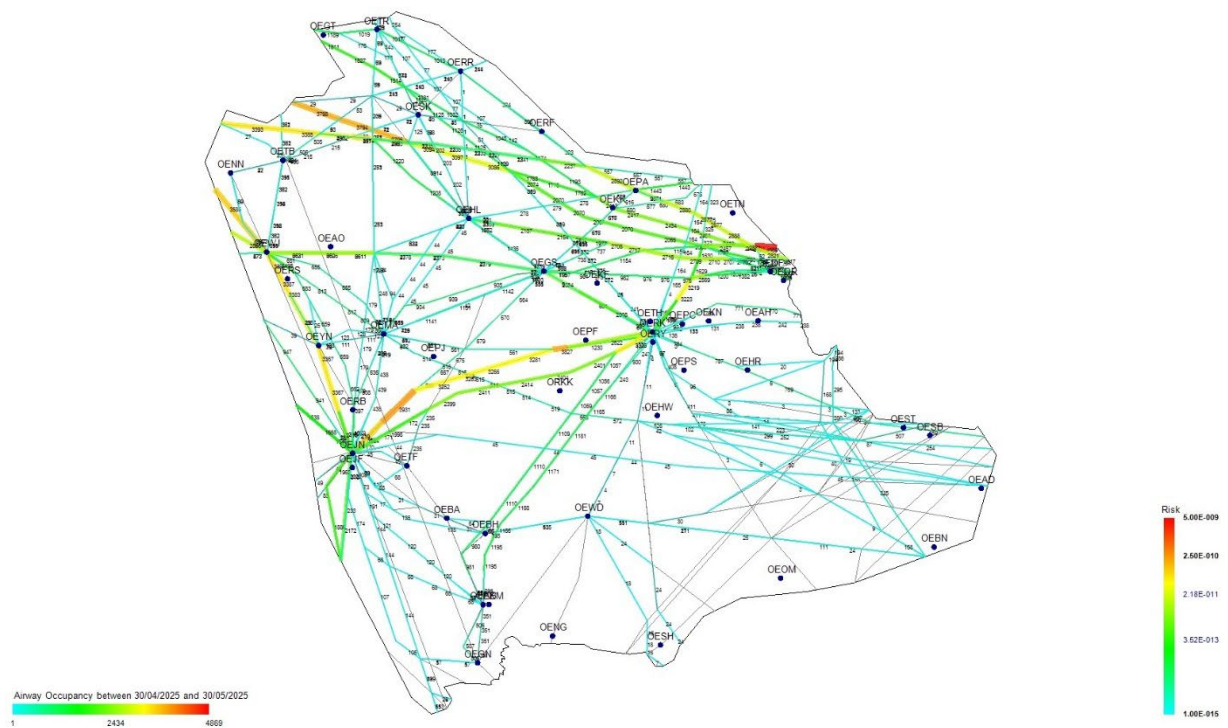


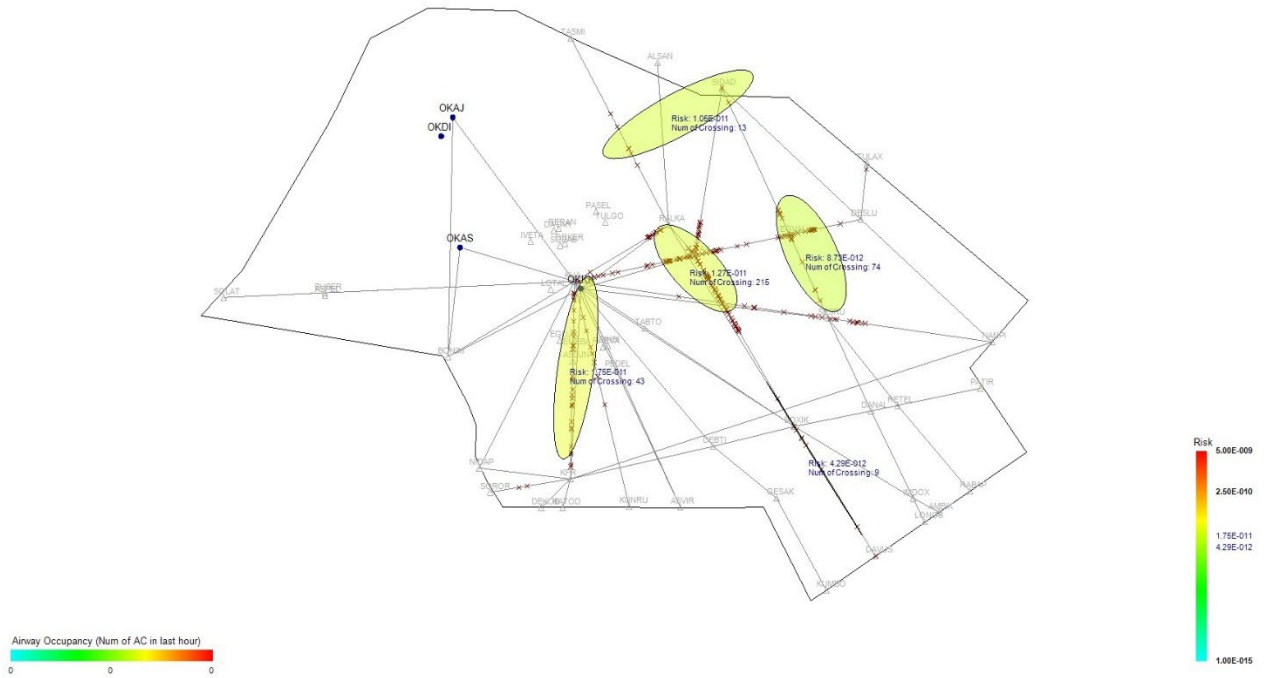
AMMAN FIR



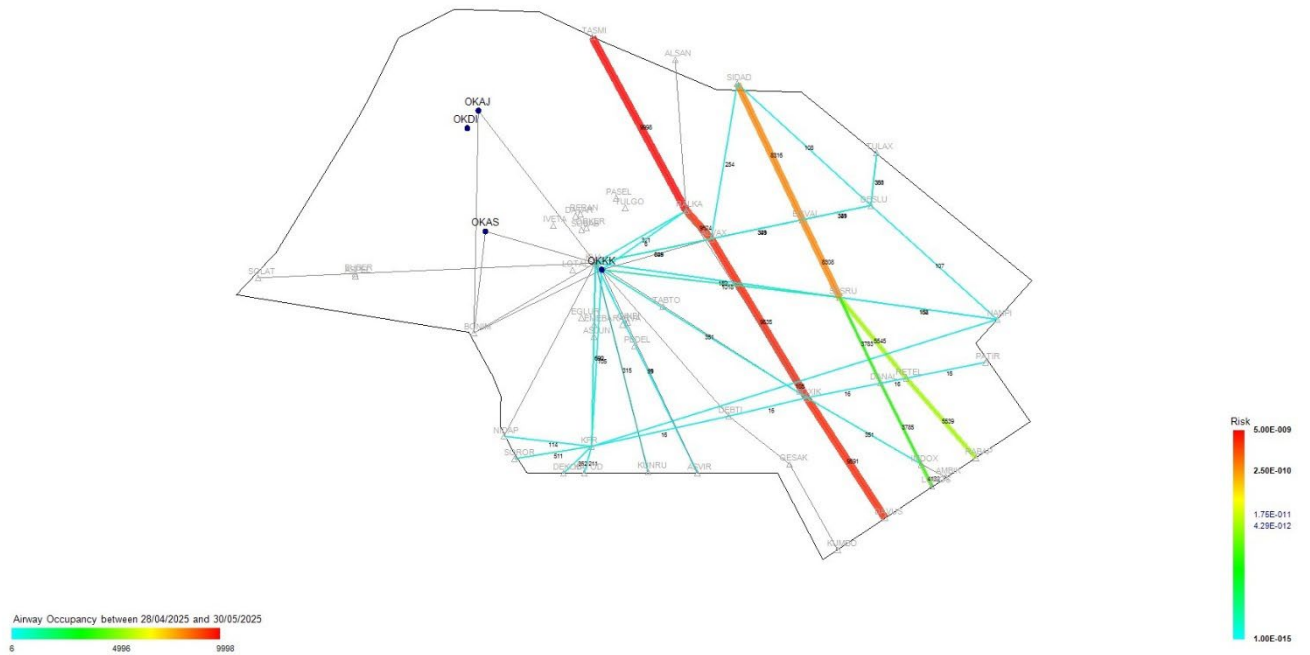


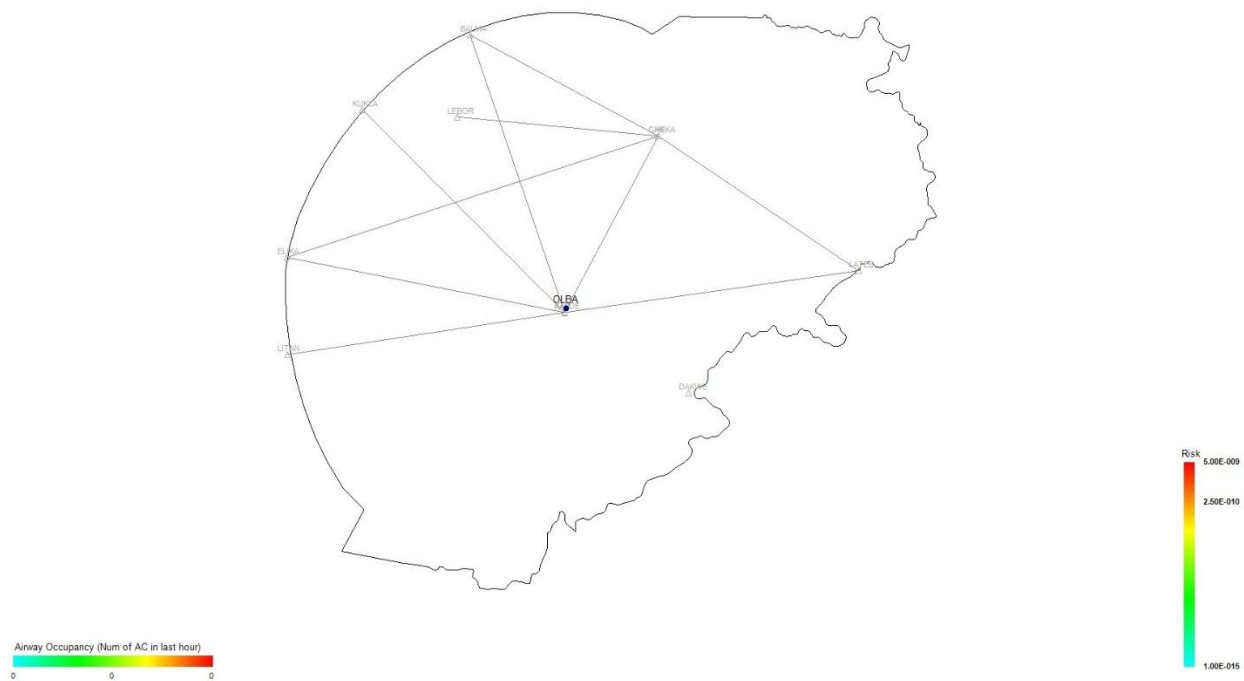
JEDDAH FIR



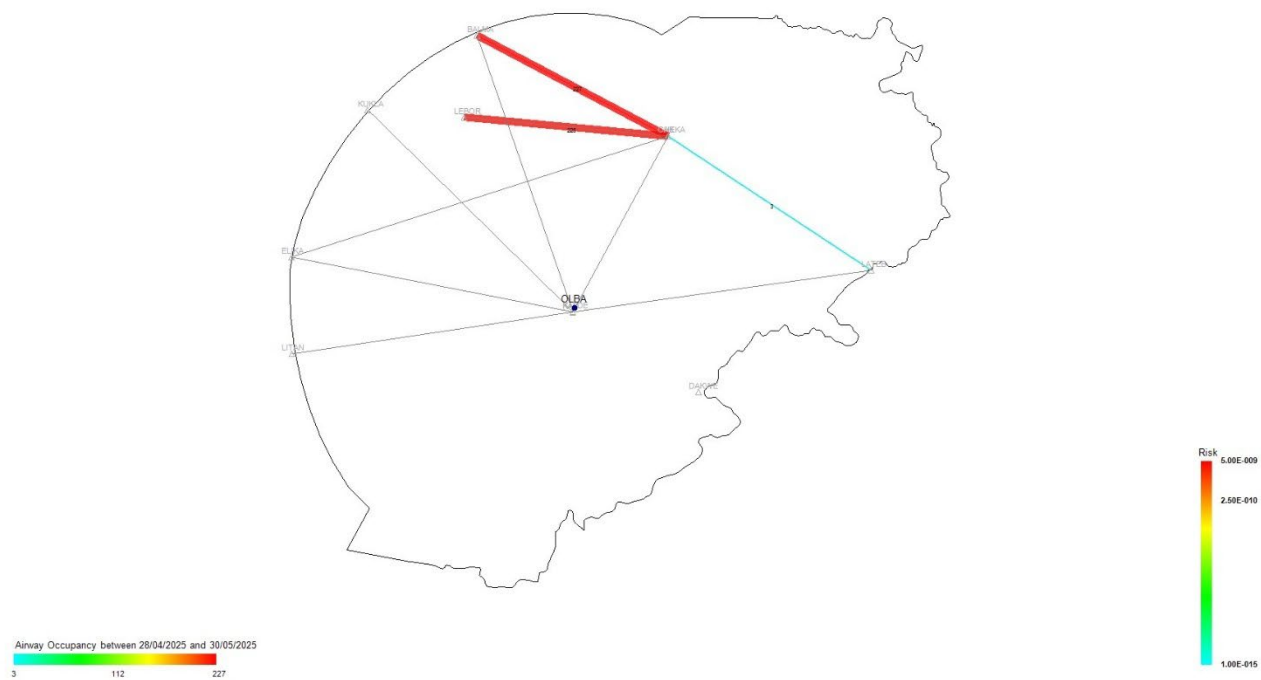


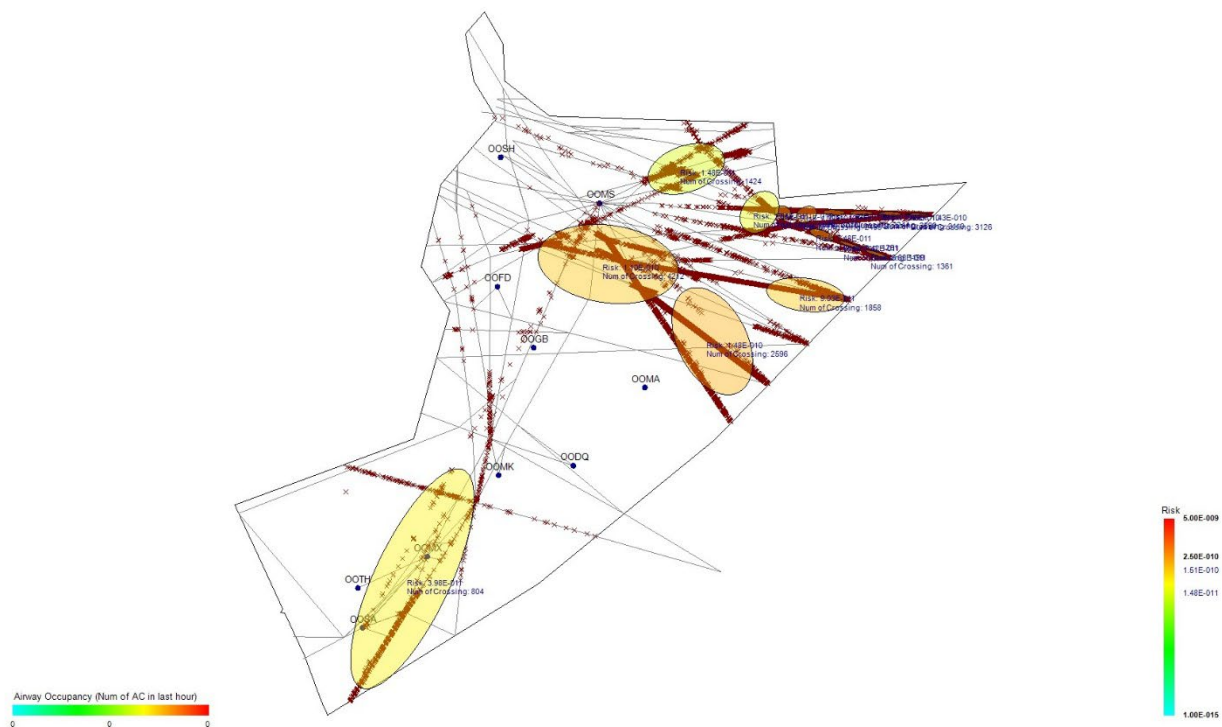
KUWAIT FIR



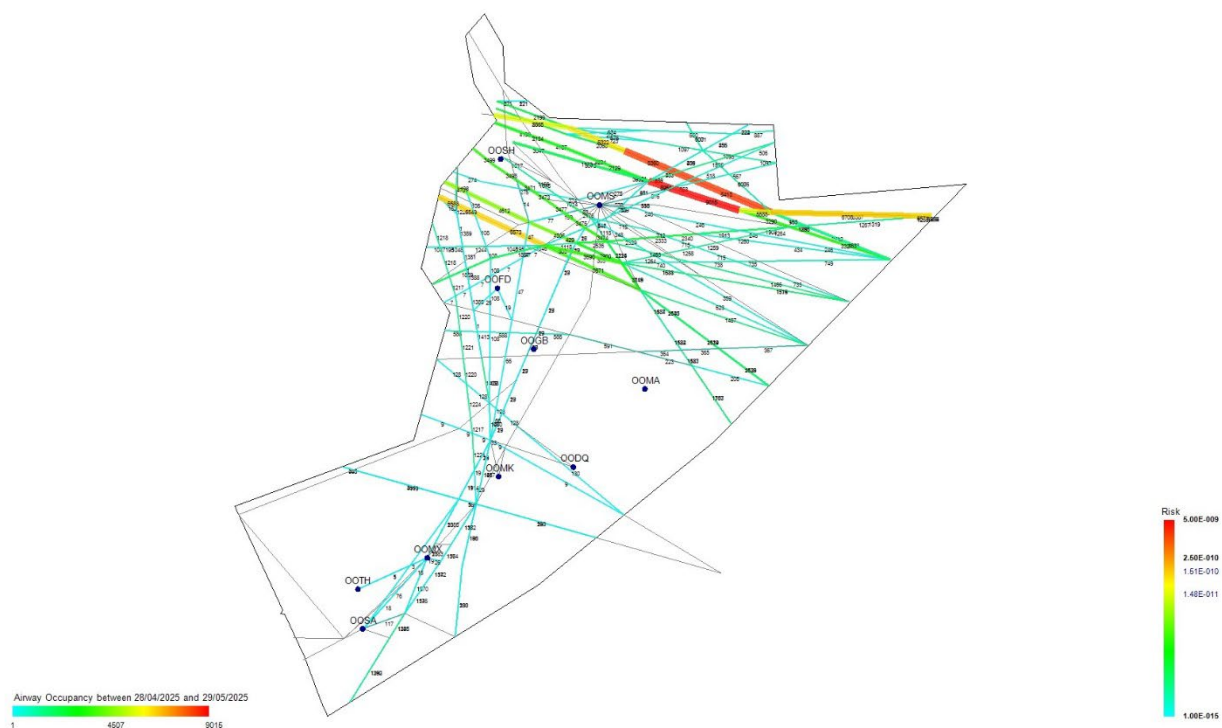


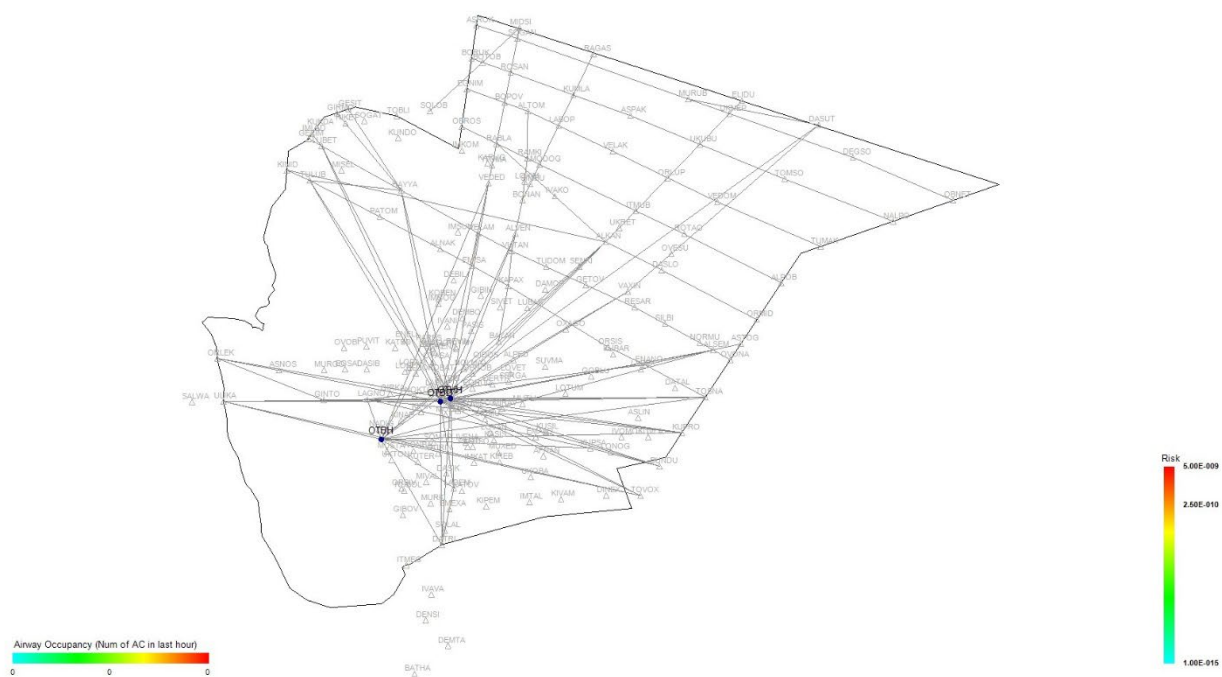
BEIRUT FIR



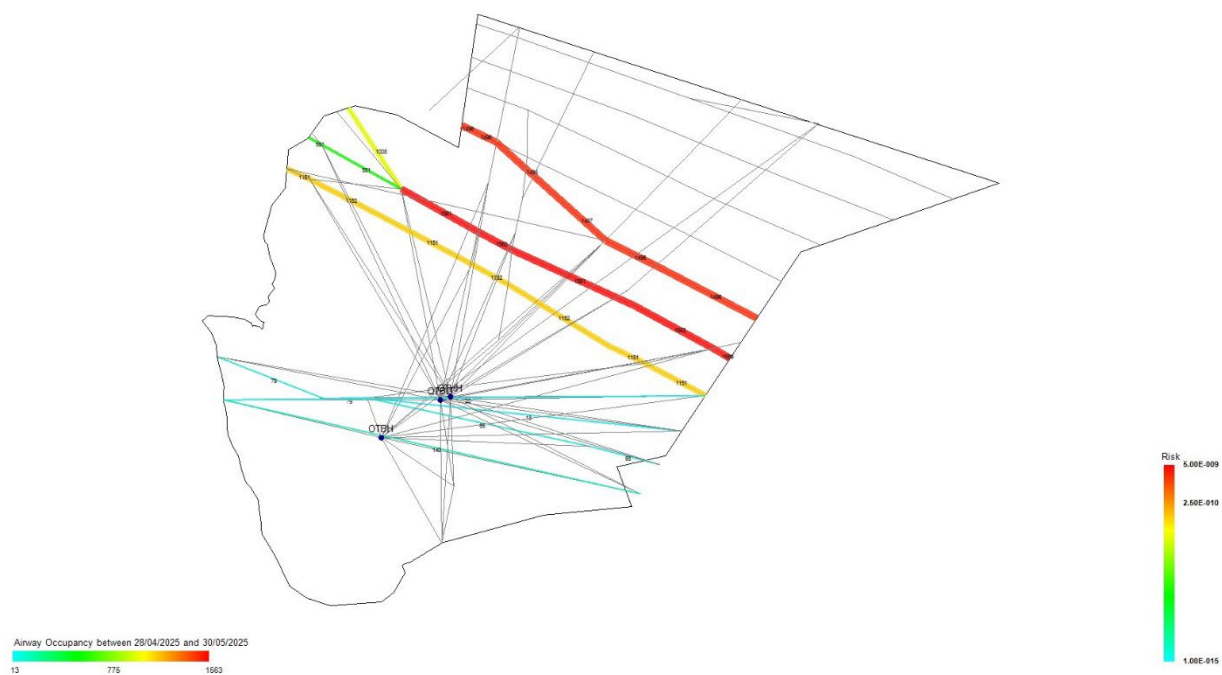


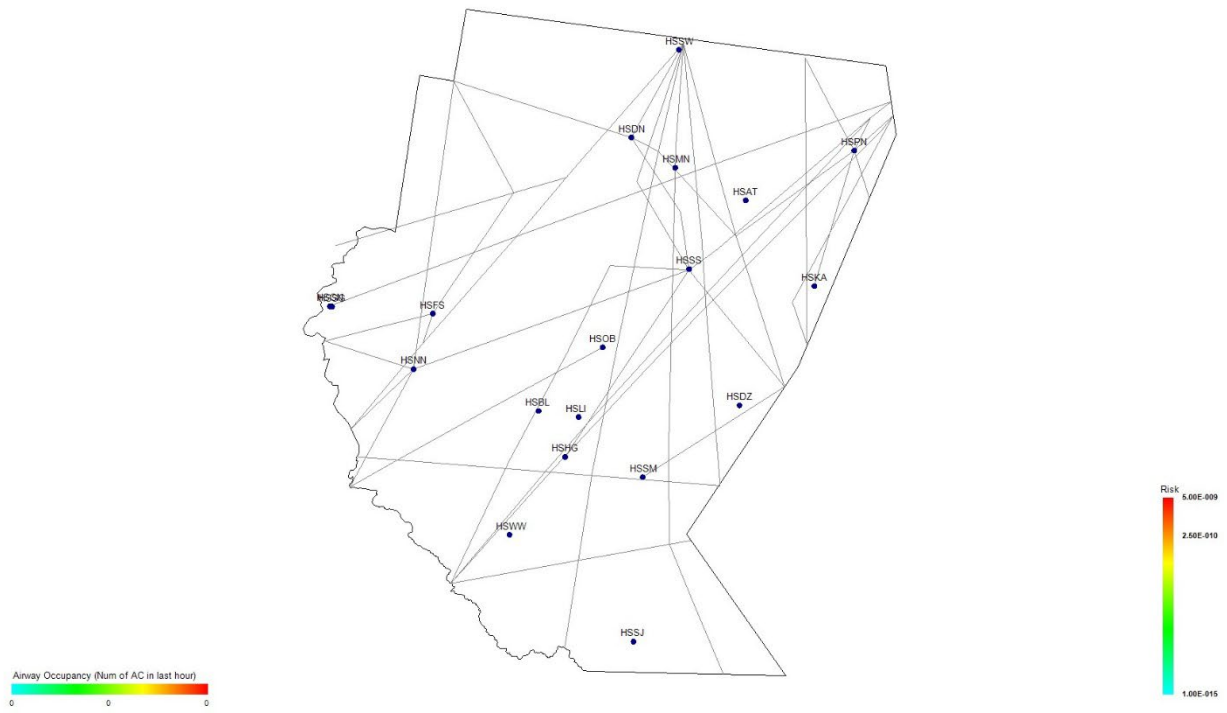
MUSCAT FIR



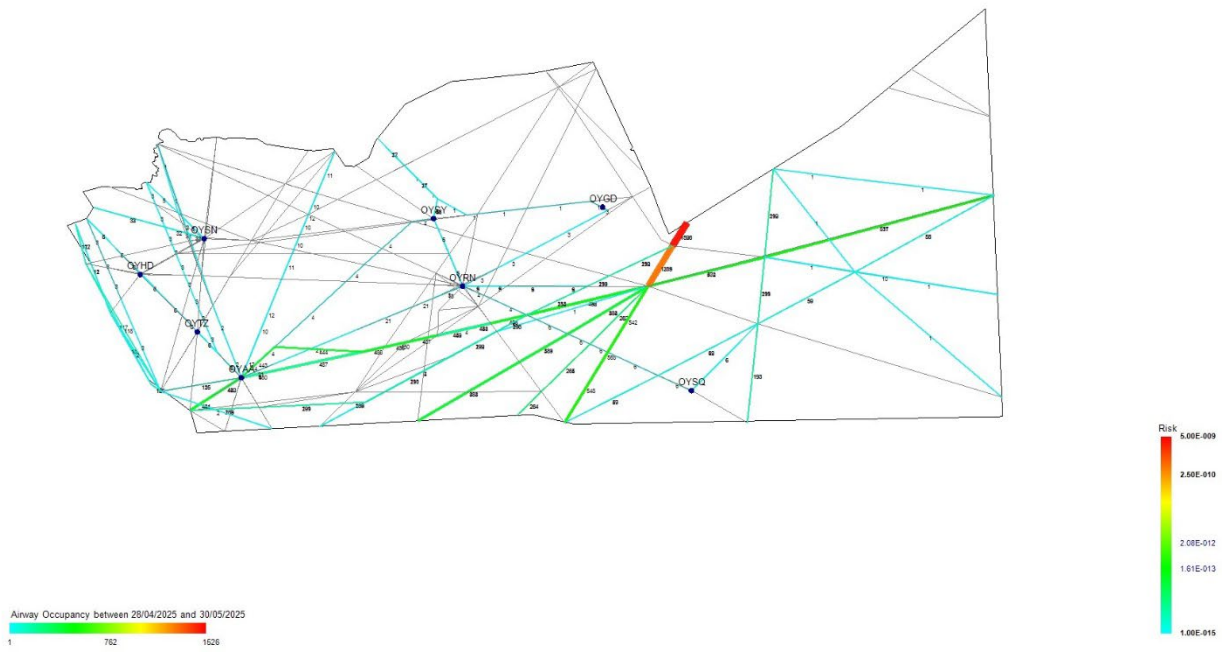


DOHA FIR

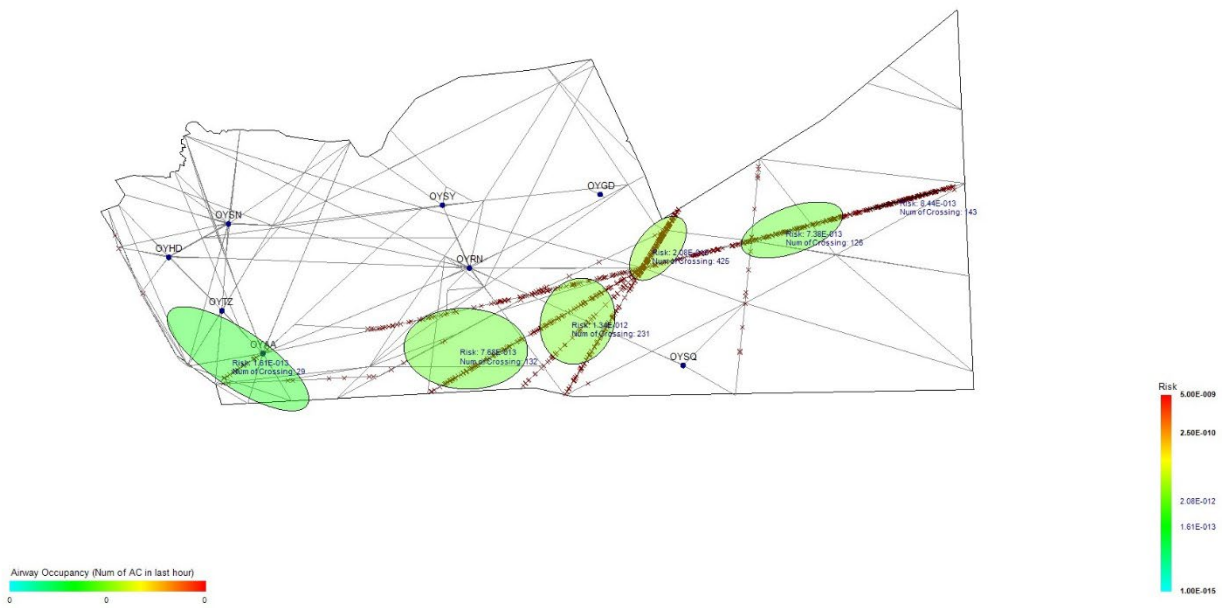




KHARTOUM FIR



SANA'A FIR



MID RVSM MINIMUM MONITORING REQUIREMENTS (MMRS)

Seq	MID States	RVSM APPROVED A/C	HAVE RESULTS OR COVERED	NOT COVERED	NOT COVERED IN %	A/C MMR
1	Bahrain	76	73	3	4%	2
2	Egypt	172	161	11	6%	10
3	Iran	240	228	12	5%	6
4	Iraq	56	49	7	13%	4
5	Jordan	51	49	2	4%	2
6	KSA	377	377	0	0%	0
7	Kuwait	71	68	3	4%	1
8	Lebanon	29	29	0	0%	0
9	Libya	48	39	9	19%	9
10	Oman	62	61	1	2%	1
11	Qatar	329	328	1	0%	1
12	Sudan	16	2	14	88%	10
13	Syria	18	13	5	28%	4
14	UAE	645	622	23	4%	13
15	Yemen	8	0	8	100%	4
Total		2198	2099	98	4%	67

APPENDIX 5.6B

Project 30/10 Roadmap

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	Completed Appendix A
	1.2	Follow up with States to submit required data and share with MID office		State Letter to MID States	ICAO MID		Completed
	1.3	Consolidate States input and conduct Gap analysis		Draft Gap Analysis	MID States and ICAO MID		Completed
	1.4	Prepare and present Gap analysis report to ATM SG for decision		Gap Analysis report	ICAO MID		Ongoing
Prioritization of the project	2.1	Develop draft priority criteria		Draft list of priority criteria	ICAO MID	MIDANPIRG Conclusion 22/10	Completed Appendix B
	2.2	Review and approve priority criteria		list of priority criteria	ATM SG		Ongoing
	2.3	Prioritize common FIR boundary points based on approved criteria in two phases		list of priority common FIR boundary points in two phases	ATM SG		Ongoing Appendix C
Development of Action plan	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	Guideline Appendix D

Main action	Sub action		Target date	Deliverable	Champion	Reference	Status / RMK
	No.	Description					
	3.2	Consolidate actions provided by States in coordinated manner to develop Draft Action Plan		Draft Action Plan	States and ICAO MID	MIDANPIRG Conclusion 22/10	
	3.3	Review Draft Action Plan by ATM SG		Mature Draft Action plan	ATM SG	MIDANPIRG Conclusion 22/10	
	3.4	Present Mature Draft Action Plan to MIDANPIRG for review and endorsement		Approved Project Action Plan	MIDANPIRG	MIDANPIRG Conclusion 22/10	
Implementation of Phase One	4.1	Based on Action Plan, 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	Action Plan	
	4.2	Based on the feedback and request from States, provide required technical assistance and support.		ICAO Implementation Support initiative(s)	ICAO MID	Action Plan	
	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	Action Plan	
Implementation of Phase Two	5.1	Based on action plan , 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	Action Plan	
	5.2	Based on the feedback and request from States, provide required technical assistance and support.		ICAO Implementation Support initiative(s)	ICAO MID	Action Plan	

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Main action	Sub action		Target date	Deliverable	Champion	Reference	Status / RMK
	No.	Description					
	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	Action Plan	

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Appendix A

Data collection

[illegible][illegible]

	Oman	India					Iran					Pakistan			Saudi Arabia					UAE										Yemen																
	RASKI	PARAR	TOTOT	REKOD	LOTAT	KITAL	DENDA	IMLOT	NESPO	ULDUN	IVIVA	APELO	TAPDO	ALPOR	MIDGU	TOKRA	DAPOL	SITOL	IMDAM	GOBRO	LALDO	GOMTA	TONVO	MENSA	PASOV	SOLID	TAPRA	TARDI	MUSAP	ITRAX	LABRI	RETAS	SODEX	MEMTU	LUDID	K'IVEL	IKMAD	KAPET	PUTRA	SABEL	KUTVI	BOVOS				
Separation	20	50	50	50	50	50	50	50	50	20	20	40	40	40	20	20	20	20	20	20	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	
Direction	2	2	2	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	
From											OMN	OMN	PAK	OMN	KSA	OMN	KSA	OMN	KSA		OMN	OMN	OMN	PASOV	OMN	OMN	OMN	OMN	OMN	OMN	OMN	OMN	OMN	OMN	OMN	OMN	OMN	OMN	OMN	OMN	OMN	OMN	OMN	OMN	OMN	OMN
No Traffic per day	299	175	146	94		97	61	16	10	43	1	1	234	62	54	46	3	20	5	2	12	81	105	72	138	118	10	90	44	47	11	152	186	6	41	42	11	46	8	1	1	5	11			

	UAE	Iran					Oman															Qatar										Saudi Arabia				Bahrain						
		GABO	PATAT	ORSAR	SIR	DAPER	LALDO	GOMTA	TONVO	MENSA	PASOV	SOLLUD	TAPRA	TARDI	MJUSAP	ITRAX	LABRI	RETAS	SODEX	MEMTU	LUDID	BUNDU	KUPRO	TOSNA	OVONA	TOVOX	ALPOB	TUMAK	ORMID	ASTOG	NALPO	OBNET	MUXIT	TANSU	RIBOT	PEKEM	TUMAK	ALPOB	NALPO	OBNET		
	Separation	20	20	10	20	20	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	5	8	8	8	8	8	8	8	8	8	8	8	8	20	20	20	20	8	8	8	8
	Direction	1	1	2	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	2	2	2	2	2	1	1	1	1
	From	IRAN	IRN		IRN		IRN	IRN	OMN	OMN	OMN	OMN	OMN	IRN	IRN	IRN	IRN	OMN	OMN	QTR	QTR		IRN	IRN	IRN	IRN	IRN	IRN	IRN	IRN	QTR	QTR		IRN	IRN	IRN	IRN	IRN	IRN	IRN	IRN	IRN
	No Traffic per day	214	166	172	3	1	81	105	72	138	118	10	30	44	47	11	152	186	6	41	42	3	3	40	54	6	192	30	51	1	180	200	200	1	8	5	18	250	192	180	200	

	Yemen	India			Entrea		Ethiopia		Oman							Saudi Arabia										Somalia													
		GIDAS	NABIL	ANGAL	SALEH	FARES	TORBA	PARIM	KIVEL	IMKAD	KAPET	PUTRA	SABEL	KUTVI	BOVOS	DUDRI	SILPA	ALNES	PADUR	ALSIR	NADKI	ULBON	NETAS	NOBSU	NABAN	NISMI	LAKNA	RIBOK	APDOS	OKTAB	ZIZAN	TIMAD	DEMGO	BOIMX	VEDET	SUHLI			
Separation		80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80		
Direction		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2		
From																																							
No Traffic per day		1	1	21	1	1	28	5	11	48	8	1	1	5	11	1	1	1	2	2	3	1	1	1	1	1	1	1	1	1	1	11	15	10	22	8			

Sudan	Congo	Chad							Egypt					Eritrea			Ethiopia						Libya	Kenya	Uganda			Saudi Arabia				
	ASKON	IPONO	GNA	ILBIB	KISAL	KURAM	MONAN	KAFIA	ALEBA	ENABU	ATMUL	NUBAR	SISID	TOKAR	FEREB	KSL	ALRAP	TIKAT	AVONO	DASTU	AXOTI	DAGAP	ORNAT	EPLAS	ATUGA	OVELA	KABLA	MIPOL	KAROX	GIBAP		
Separation	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80		
Direction	2	2	2	2	2	2	2	2	2	2	2	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1	1	2		
From	SUD													SUD																KSA		
No Traffic per day	20	1	1	1	1	1	1	1	30	14	1	1	1	1	1	1	15	1	1	1	1	1	1	1	5	1	1	3	2	1		

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Bahrain	Iran							Kuwait					Qatar				Saudi Arabia							UAE			
	ROTOX	OBTAR	KUVER	ALSER	DASUT	MIDSI	RAGAS	KUMBO	DAVUS	LONOS	RABAP	AMBIK	TULUB	LUBET	GIRMO	GESIT	DAROR	METLA	ULADA	ROTEL	LADNA	NARMI	DEMTA	TUMAK	ALPOB	NALPO	OBNET
Separation	20	20	20	20	20	20	20	10	20	10	10	10	8	8	8	8	10	10	10	10	10	10	10	8	8	8	8
Direction	1	1	2	1	1	1	1	1	1	1	1	1	1	2	1	1	1	2	1	1	2	2	2	1	1	1	1
From	BAH	BAH		IRN	BAH	IRN	BAH	BAH	BAH	KWT	KWT	KWT	BAH		BAH	BAH	KSA		BAH	KSA				UAE	UAE	BAH	BAH
No Traffic per day	1	1	1	7	18	13	5	49	267	124	180	1	7	64	86	34	188	1	178	17	44	1	1	280	192	180	200

Qatar	Bahrain				Iran				Saudi Arabia				UAE											
	TULUB	LUBET	GIRMO	GESIT	DASUT	MIDSI	RAGAS	ELIDU	ULIKA	ORLEK	LAEEB	DATRI	BUNDU	KUPRO	TOSNA	OVONA	TOVOX	ALPOB	TUMAK	ORMID	ASTOG	NALPO	OBNET	
Separation	8	8	8	8	20	10	20	20	10	10	10	10	8	8	8	8	8	8	8	8	8	8	8	
Direction	1	2	1	1	1	1	1	1	1	1	1	2	1	1	2	1	1	1	1	1	1	1	1	
From	BAH		BAH	BAH	QTR	IRN	QTR	IRN	QTR	KSA	KSA		QTR	QTR		UAE	UAE	UAE	UAE	UAE	QTR	QTR	QTR	
No Traffic per day	7	64	86	34	18	50	36	8	8	4	1	1	3	3	40	54	6	192	280	51	1	180	200	

Egypt	Cyprus			Greece						Jordan	Libya		Saudi Arabia						Sudan				
	RASDA	LAKTO	PASOS	SALUN	METRU	TANSA	PAXIS	ANTAR	KUMBI	ULINA	LOSUL	DITAR	KITOT	PASAM	IMRAD	GIBAL	DEDLI	SILKA	ALEBA	ENABU	ATMUL	NUBAR	SISID
Separation	20	20	20	20	20	20	20	20	20	15	80	80	20	15	15	80	40	40	80	80	80	80	80
Direction	2	2	2	1	1	1	1	1	1	2	2	2	2	2	2	1	1	1	2	2	2	2	1
From				GRE	EGP	EGP	GRE	EGP	GRE							KSA	EGP	EGP					SUD
No Traffic per day	174	73	12	73	124	122	60	166	52	172	15	24	127	120	34	36	60	126	14	1	1	1	1

Libya	Algeria	Chad				Egypt		Malta										Sudan	Tunis			
	IMN	DEKTU	TUMMO	GARIN	TONBA	LOSUL	DITAR	ABRAM	SARKI	VARIG	LUMED	LOTIN	ELIMO	INDOT	OLMAX	BONAR	EKLIS	RASNO	ORNAT	GASRI	TANLI	FARES
Separation	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80
Direction	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2
From								MAL	LIB	MAL	LIB	MAL	MAL	LIB	LIB	MAL						
No Traffic per day	2	2	1	1	1	15	24	2	2	3	2	2	2	2	1	2	5	2	1	11	3	1

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Jordan	Egypt	Iraq	Israel		Saudi Arabia							Syria				
	ULINA	PASIP	OSAMA	MOUAB	TRF	DEESA	GIBET	TULEP	GENEX	OTILA	SODAR	BUSRA	ZELAF	SOKAN	NAMBO	KAMEL
Separation	15	80	10	10	10	10	10	10	10	10	10	80	80	80	80	80
Direction	2	2	1	1	2	2	2	1	1	1	2	2	2	1	2	2
From			ISR	JRD				JRD	KSA	KSA				JRD		
No Traffic per day	172	15	52	6	23	157	18	62	17	17	4	5	23	22	2	1

Kuwait	Bahrain					Iran			Iraq		Saudi Arabia					
	KUMBO	DAVUS	LONOS	RABAP	AMBIK	TULAX	NANPI	PATIR	SIDAD	TASMI	BOSID	GOVAL	DERKO	COPPI	RAS	IVOBA
Separation	10	20	10	10	10	20	20	20	10	20	20	20	20	20	20	20
Direction	1	1	1	1	1	2	2	1	1	1	2	1	1	1	2	1
From	BAH	BAH	KWT	KWT	KWT				KWT	IRQ	KWT		KWT	KSA	KWT	KSA
No Traffic per day	49	267	124	180	1	20	16	1	316	374	4	13	18	9	4	11

Syria	Cyprus	Iraq			Jordan					Lebanon		Türkiye			
	NIKAS	MODIK	SIDNA	ELEXI	BUSRA	ZELAF	SOKAN	NAMBO	KAMEL	LEBOR	LATEB	TUSYR	TUNLA	NISAP	LESRI
Separation	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80
Direction	2	2	1	1	2	2	1	2	2	2	2	2	1	1	2
From			SYR	IRQ				JRD					TUR	SYR	
No Traffic per day	1	21	1	1	5	23	22	2	1	11	1	1	1	1	1

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Iraq	Iran			Jordan	Kuwait		Saudi Arabia	Syria			Türkiye		
	PAXAT	RAGET	BOXIX	PASIP	SIDAD	TASMI	MURIB	MODIK	SIDNA	ELEXI	NINVA	KABAN	RATOV
Separation	20	20	20	80	10	20	10	80	80	80	20	20	20
Direction	1	1	2	2	1	1	2	2	1	1	1	1	1
From	IRQ	IRN			IRQ	KWT			SUR	IRQ	IRQ	IRQ	TUR
No Traffic per day	36	43	2	15	316	374	14	21	1	1	198	129	294

Lebanon	Cyprus					Syria	
	LITAN	ELIKA	DIRRE	KUKLA	BALMA	LEBOR	LATEB
Separation	30	30	30	30	30	80	80
Direction	2	2	1	2	2	2	2
From			CYP				
No Traffic per day	1	1	1	1	9	11	1

Appendix B

Action Plan - Priority criteria

The implementation of this Action Plan is structured into two phases. Accordingly, specific criteria have been established for each phase as follows:

Phase I:

- a) If a common FIR boundary point is located within a surveillance environment on both sides, and the applied separation **15 NM** or more; or*
- b) If the common FIR boundary point is not located within a surveillance environment, at least from one side, and the applied separation is **10 minutes** (equivalent to **80 NM**) or more, provided that traffic at that point reaches at least **40 flights per day**, based on TDS data reported to MIDRMA; or*
- c) If the extended longitudinal separation at a common FIR boundary point results in increased workload for ATCOs and flight crews, potentially affecting operational safety, as evidenced by safety reports; or*
- d) If the common FIR boundary point accommodates major traffic flows within the MID region and/or at interfaces with adjacent regions, as indicated in MIDRMA reports; or*
- e) If there is a significant increase in traffic movements at the common FIR boundary point during contingency situations, based on historical data; or*
- f) If mutually agreed upon by the concerned States.*

Phase II:

- a) If a common FIR boundary point is located within a surveillance environment on both sides, and the applied separation exceeds **10 NM** but less than 15 NM; or*
- b) If the common FIR boundary point is not located within a surveillance environment, at least from one side, and the applied separation is **10 minutes** (equivalent to 80 NM) or more, provided that traffic is **less than 40 flights per day**, based on TDS data reported to MIDRMA; or*
- c) If the common FIR boundary point is not located within a surveillance environment, at least from one side, and the applied separation is **5 minutes** (equivalent to 40 NM) or more, provided that traffic at that point reaches at least **40 flights per day**, based on TDS data reported to MIDRMA; or*

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Appendix C

FIR boundary point priority

Row	FIR point	States concerned	Factor to be considered							
			Environment	Separation	Major flow	No. movement	Safety	Contingency	States request	Priority/Phase
Phase I										
1.	TASMI	IRQ-KWT	Radar	20NM	Yes	374	-	Yes	-	1
2.	RATOV	IRQ-TUK	Radar	20NM	Yes	294	-	Yes	-	1
3.	RASKI	OMN-IND	Radar	20NM	Yes	286	Yes	Yes	OMN	1
4.	DAVUS	BAH-KWT	Radar	20NM	Yes	267	-	Yes	-	1
5.	APELO	OMN-PAK	Radar	40NM	Yes	234	-	-	OMN	1
6.	GABKO	UAE-IRN	Radar	20NM	Yes	214	-	Yes	-	1
7.	NINVA	IRQ-TUK	Radar	20NM	Yes	198	-	Yes	-	1
8.	PATAT	UAE-IRN	Radar	20NM	Yes	186	-	Yes	-	1
9.	PARAR	OMN-IND	Radar	50NM	Yes	175	-	Yes	OMN	1
10.	RASDA	EGP-CYP	Radar	20NM	Yes	174	-	Yes	-	1
11.	ULINA	EGP-JRD	Radar	15NM	Yes	172	-	Yes	-	1
12.	ANTAR	EGP-GRE	Radar	20NM	Yes	166	-	Yes	-	1
13.	TOTOX	OMN-IND	Radar	50NM	Yes	146	-	Yes	OMN	1
14.	RASKA	KSA-ERT	Non-radar	80NM	Yes	136	Yes	Yes	KSA	1
15.	KABAN	IRQ-TUK	Radar	20NM	Yes	129	-	Yes	-	1
16.	KITIT	EGP-KSA	Radar	15NM	Yes	127	-	Yes	-	1
17.	SIKNO	EGP-KSA	Radar	15NM	Yes	126	-	Yes	-	1
18.	METRU	EGP-GRE	Radar	20NM	Yes	124	-	Yes	-	1
19.	TANSA	EGP-GRE	Radar	20NM	Yes	122	-	Yes	-	1
20.	BONAM	IRN-TUK	Radar	20NM	Yes	122	-	Yes	-	1
21.	PASUM	EGP-KSA	Radar	15NM	Yes	120	-	Yes	-	1
22.	DASIS	IRN-TUK	Radar	20NM	Yes	112	-	Yes	-	1
23.	ASVIB	IRN-PAK	Radar	50NM	Yes	105	-	Yes	IRN	1
24.	LOTAV	OMN-IND	Radar	50NM	Yes	97	-	Yes	OMN	1
25.	REXOD	OMN-IND	Radar	50NM	Yes	94	-	Yes	OMN	1
26.	ULDUS	IRN-AZR	Radar	20NM	Yes	74	-	Yes	-	1

27.	LAKTO	EGP-CYP	Radar	20NM	Yes	73	-	Yes	-	1
28.	SALUN	EGP-GRE	Radar	20NM	Yes	73	-	Yes	-	1
29.	TAPDO	OMN-PAK	Radar	40NM	Yes	62	-	Yes	OMN	1
30.	KITAL	OMN-IND	Radar	50NM	Yes	61	-	Yes	OMN	1
31.	PAXIS	EGP-GRE	Radar	20NM	Yes	60	-	Yes	-	1
32.	DEDLU	EGP-KSA	Radar	15NM	Yes	60	-	Yes	-	1
33.	ALPOR	OMN-PAK	Radar	40NM	Yes	54	-	Yes	OMN	1
34.	KUMBI	EGP-GRE	Radar	20NM	Yes	52	-	Yes	-	1
35.	IMKAD	OMN-YMN	Non-radar	80NM	Yes	48	-	Yes	OMN	1
36.	MIDGU	OMN-KSA	Radar	20NM	Yes	46	-	Yes	-	1
37.	AGINA	IRN-TUK	Radar	20NM	Yes	45	-	Yes	-	1
38.	NAZAR	IRN-TKM	Radar	50NM	Yes	44	-	No	-	1
39.	BATEV	IRN-AZR	Radar	20NM	Yes	43	-	Yes	-	1
40.	RAGET	IRN-IRQ	Radar	20NM	Yes	43	-	No	-	1
41.	MESPO	IRN-OMN	Radar	50NM	Yes	43	-	Yes	-	1
Phase II										
42.	SIDAD	IRQ-KWT	Radar	10NM	Yes	316	-	Yes	-	2
43.	TUMAK	UAE/QTR/BAH	Radar	8NM	Yes	280	-	Yes	-	2
44.	OBNET	UAE/QTR/BAH	Radar	8NM	Yes	200	-	Yes	-	2
45.	ALPOB	UAE/QTR/BAH	Radar	8NM	Yes	192	-	Yes	-	2
46.	DAROR	BAH-KSA	Radar	10NM	Yes	188	-	Yes	-	2
47.	RETAS	UAE-OMN	Radar	8NM	Yes	186	-	Yes	-	2
48.	RABAP	BAH-KWT	Radar	10NM	Yes	180	-	Yes	-	2
49.	NALPO	UAE/QTR/BAH	Radar	8NM	Yes	180	-	Yes	-	2
50.	ULADA	BAH-KSA	Radar	10NM	Yes	178	-	Yes	-	2
51.	ORSAR	UAE-IRAN	Radar	10NM	Yes	172	-	Yes	-	2
52.	KINID	BAH-QTR	Radar	8NM	Yes	167	-	Yes	-	2
53.	DEESA	JRD-KSA	Radar	10NM	Yes	157	-	Yes	-	2
54.	LABRI	UAE-OMN	Radar	8NM	Yes	152	-	Yes	-	2
55.	LUBET	BAH-QTR	Radar	8NM	Yes	141	-	Yes	-	2
56.	MENSA	UAE-OMN	Radar	8NM	Yes	138	-	Yes	-	2
57.	LONOS	BAH-KWT	Radar	10NM	Yes	124	-	Yes	-	2
58.	PASOV	UAE-OMN	Radar	8NM	Yes	118	-	Yes	-	2
59.	GOMTA	UAE-OMN	Radar	8NM	Yes	105	-	Yes	-	2
60.	GEXIM	BAH-QTR	Radar	8NM	Yes	99	-	Yes	-	2
61.	GIRMO	BAH-QTR	Radar	8NM	Yes	92	-	Yes	-	2

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62.	LALDO	OMN-UAE	Radar	8NM	Yes	81	-	Yes	-	2
63.	TONVO	OMN-UAE	Radar	8NM	Yes	72	-	Yes	-	2
64.	TULEP	JRD-KSA	Radar	10NM	Yes	62	-	Yes	-	2
65.	OVONA	QTR-UAE	Radar	8NM	Yes	54	-	Yes	-	2
66.	OSAMA	JRD-ISR	Radar	10NM	Yes	52	-	Yes	-	2
67.	ORMID	QTR-UAE	Radar	8NM	Yes	51	-	Yes	-	2
68.	MIDSI	BAH/QTR/IRN	Radar	10NM	Yes	50	-	Yes	-	2
69.	KUMBO	BAH-KWT	Radar	10NM	Yes	49	-	Yes	-	2
70.	MUSAP	OMN-UAE	Radar	8NM	Yes	47	-	Yes	-	2
71.	LADNA	BAH-KSA	Radar	10NM	Yes	44	-	Yes	-	2
72.	TARDI	OMN-UAE	Radar	8NM	Yes	44	-	Yes	-	2
73.	MEMTU	OMN-UAE	Radar	8NM	Yes	41	-	Yes	-	2
74.	TOSNA	QTR-UAE	Radar	8NM	Yes	40	-	Yes	-	2

Appendix D

Guideline for Development of Action Plan

Based on the FIR boundary points listed in phase I (Appendix C), the states concerned are requested to develop a comprehensive and structured action plan. This action plan should then be submitted to ICAO MID for consolidation into a unified document, which will serve as the basis for further coordination, discussion, and agreement within the ATM Sub-Group.

The action plan should clearly outline all relevant elements required to support implementation. This includes but is not limited to: identification of applicable performance improvement areas, definition of specific targets, establishment of realistic timelines, and preparation of safety assessments. In addition, States should address training requirements for personnel, identify any necessary amendments to existing Letters of Agreement (LoAs), and propose an effective implementation date for the planned measures.

In developing this action plan, States are encouraged to focus on practical and achievable “quick win” solutions that can be implemented in the short to medium term. For example, the application of alternative longitudinal separation minima, as described in ICAO Doc 4444 (Chapter 5), may offer immediate operational benefits depending on local conditions and requirements. In contrast, more complex solutions—such as the procurement and installation of new surveillance systems—require significant investment, longer timelines, and more extensive coordination, and should therefore be considered as part of longer-term planning.

Furthermore, States are strongly encouraged to enhance coordination and communication with adjacent FIRs. By doing so, they can maximize the use of existing capabilities, such as improving surveillance coverage through the sharing of surveillance data. This collaborative approach can reduce overall financial costs and accelerate the implementation of necessary improvements. Additionally, through updated or new Letters of Agreement, States may establish operational procedures—such as redefining transfer of control points—to take advantage of stronger surveillance coverage in neighboring FIRs. These interim measures can help mitigate gaps in coverage until permanent solutions are implemented and full operational capability in the affected areas is restored.

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Appendix E

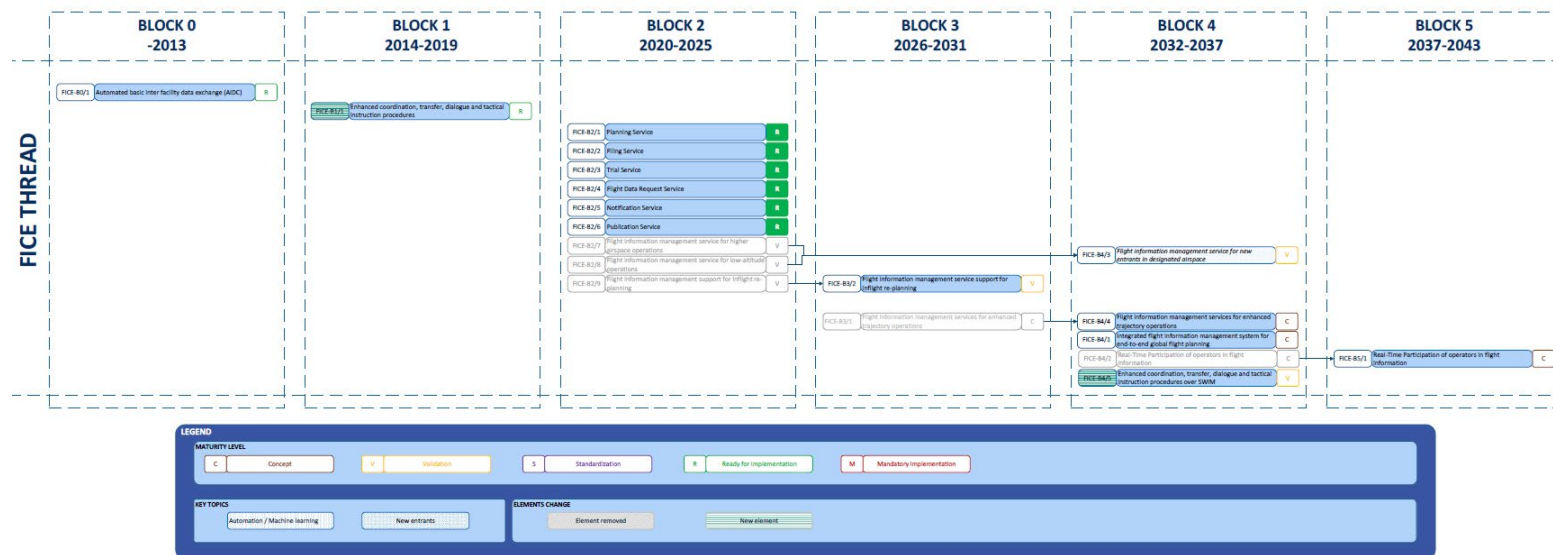
Longitudinal Separation Minima and requirements in non-surveillance environments

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	

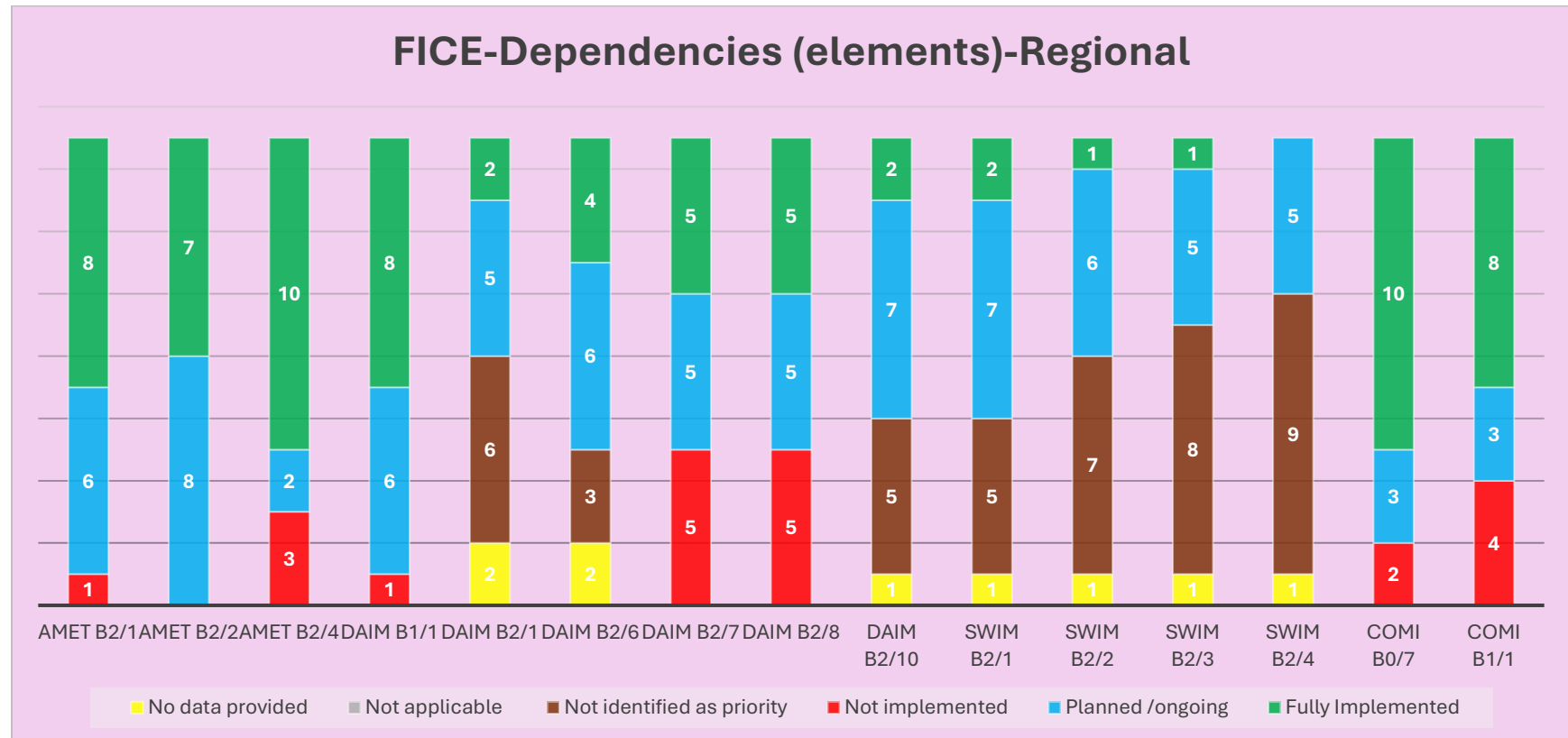
APPENDIX 5.6C

Status of MID States for implementation of FFICE - Preliminary Air Navigation Report-2025

- 1- ICAO Global Air Navigation Plan (GANP) 8th edition updated ASBU blocks, threads and elements. In this update, the FICE thread includes two new elements, one in Block 1 and another one in Block 4. This update includes delay to some elements, changes to the maturity level of some elements and the update of some enablers.
- 2- The following diagram reflects the changes related to new elements, the delay of some elements to later Blocks (due to availability delays for enablers) and changes to the maturity level of some elements.

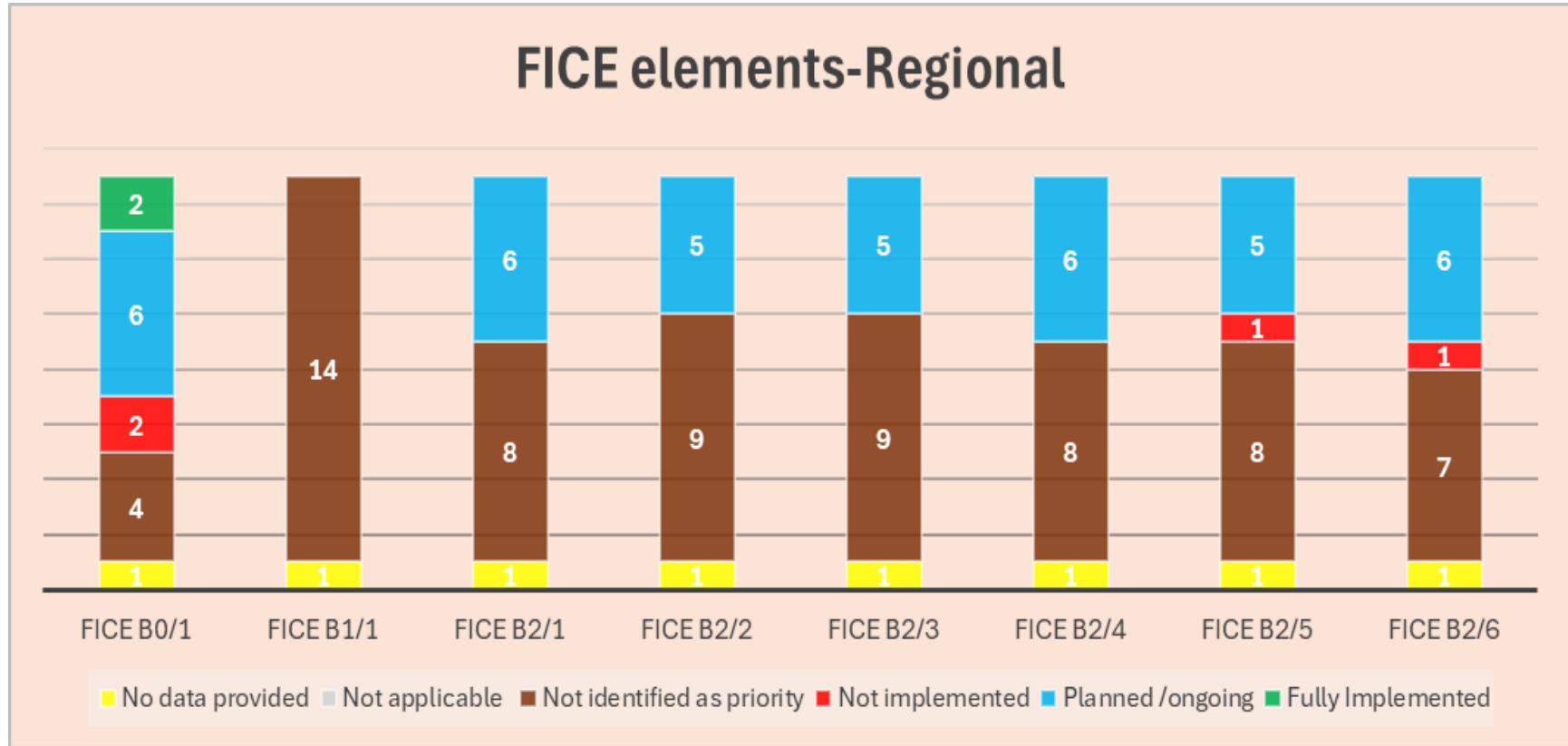


- 3- Based on this report, FF-ICE services—including planning, filing, trajectory, flight data request, notification, and publication—are in the “Ready for Implementation” phase under Block 2 (2025–2030). Meanwhile, other services remain in the “Validity” phase and are therefore deferred to Blocks 3 and 4.
- 4- In light of the above, and based on the Draft Air Navigation Report 2025 developed in accordance with the ICAO GANP (8th Edition), the status of FICE elements and their interdependencies—including SWIM (B2/1, B2/2, B2/3, and B2/4), AMET (B2/1, B2/2, and B2/4), DAIM (B1/1, B2/1, B2/6, B2/7, B2/8, and B2/10), and COMI (B0/7 and B1/1)—is summarized as follows:



As illustrated in the chart above, the implementation progress of DAIM and COMI elements falls within an acceptable range. In contrast, the implementation status of SWIM elements related to FICE is predominantly reported as “Planned/Ongoing” or “Not Identified as a Priority”.

5.6C-3



As illustrated in the chart above, with the exception of FICE B0/1—which is a regional requirement—the implementation of the remaining FICE elements in Blocks 1 and 2 is predominantly reported as either “Not Identified as a Priority” or “Planned/Ongoing”.

MID Regional OPMET Center (ROC) Plan

<i>AMHS Plan for ROC in Jeddah and Bahrain</i>					
	Task	Timeframe	Assigned to	Champion	Status
<i>AMHS Intra-regional Trunk Connections</i>					
1	Establish Jeddah – Beirut IP Network.	Jul 2015	Saudi Lebanon	IM MS	Completed
2	Establish Bahrain – Beirut IP Network.	Feb 2016	Bahrain Lebanon	YH MS	Completed
3	Establish Cairo – Beirut IP Network.	July 2016	Egypt Lebanon	AF//MR MS	Completed
4	Establish Bahrain – Jeddah IP Network.	Mar 2016	Bahrain Saudi	IM YH	Completed
5	Perform the Interoperability test between Jeddah and Beirut COM Centers.	July 2015	Saudi Lebanon	IB MS	Completed
6	Perform the Interoperability test between Bahrain and Beirut COM Centers.	July 2016	Bahrain Lebanon	MS YH	Completed
7	Perform the Interoperability test between Cairo and Beirut COM Centers	July 2016	Egypt Lebanon	AF/TZ/MR MS/EK	Completed
8	Perform the Interoperability test between Bahrain and Jeddah COM Centers.	15 October 2020	Bahrain Saudi	YM AA	Completed
9	Perform the Pre-operational test between Jeddah and Beirut COM Centers.	July 2015	Saudi Lebanon	IM MS	Completed
10	Perform the Pre-operational test between Bahrain and Beirut COM Centers.	July 2016	Bahrain Lebanon	YH MS	Completed
11	Perform the Pre-operational test between Cairo and Beirut COM Centers.	March 2017	Egypt Lebanon	AF/ /MR MS/EK	Completed
12	Perform the Pre-operational test between Bahrain and Saudi COM Centers.	25 October 2020	Bahrain Saudi	YM IM	Completed
13	Place the AMHS link into operation between Jeddah and Beirut COM centers, and updating the Routing tables.	July 2015	Saudi Lebanon MID AMC	IM MS/EK MN	Completed
14	Place the AMHS link into operation between Bahrain and Beirut COM centers, and updating the Routing tables.	July 2016	Bahrain Lebanon MID AMC	YH MS/EK MN	Completed
15	Place the AMHS link into operation between Cairo and Beirut COM centers, and updating the Routing tables.	April 2017	Egypt Lebanon MID AMC	AF/TZ/MR MS/EK MN	completed

<i>AMHS Plan for ROC in Jeddah and Bahrain</i>					
	Task	Timeframe	Assigned to	Champion	Status
<i>AMHS Intra-regional Trunk Connections</i>					
16	Evaluate the Trunks connections bandwidth and increase it if required between (Bahrain, Beirut, Cairo and Jeddah).	Q4 2021	Bahrain Beirut Cairo Jeddah	YH MS/EK AF/TZ IM	
<i>The AMHS Interconnection with EUR Region Depends on Nicosia and Athens</i>					
17	Establish Cairo – Tunis IP Network.	<i>March 2016 July 2016</i>		AF/TZ/MR IB/MA	Completed
18	Establish Nicosia – Beirut IP Network.	Q3 2021		MS/EK	Completed
19	Establish Nicosia – Jeddah IP Network.			IM	Completed
20	Establish Bahrain – Nicosia IP Network.	Q3 2021		AD	Ongoing
21	Establish Cairo – Athens IP Network.	Dec 2016		AF/TZ/MR	Completed
22	Perform the Interoperability test between Cairo and Tunis COM Centers.	<i>April 2016 August 2016</i>		AF/ /MR IB/MA	Completed
23	Perform the pre operational test between Cairo and Tunis COM Centers.	<i>Q3 2016</i>		AF/ /MR IB/MA	Completed
24	Place the AMHS link into operation between Cairo and Tunis COM Centers, and updating the Routing tables.	<i>Aug 2016</i>		AF/ /MR IB/MA	Completed
25	Perform the Interoperability test between Athens and Cairo COM Centers.	Mar 2017		AF/TZ/MR IB/MA	Completed
26	Perform the Interoperability test between Bahrain and Nicosia COM Centers.	Q4 2025		AD	Completed
27	Perform the Interoperability test between Nicosia and Jeddah COM Centers.	Q3 2021		IM	Completed
28	Perform the Interoperability test between Nicosia and Beirut COM Centers.	Q3 2021		MS/EK	Completed
29	Perform the Pre-operational test between Athens and Cairo COM Centers.	Mar 2017		AF/TZ/MR	Completed
30	Perform the Pre-operational test between Bahrain and Nicosia COM Centers.	Q3 2021		YH	Completed
31	Perform the Pre-operational test between Nicosia and Beirut COM Centers.	Q3 2021		MS/EK	Ongoing

<i>AMHS Plan for ROC in Jeddah and Bahrain</i>					
	Task	Timeframe	Assigned to	Champion	Status
<i>AMHS Intra-regional Trunk Connections</i>					
32	Perform the Pre-operational test between Nicosia and Jeddah COM Centers.	Q3 2021		IM	Completed
33	Place the AMHS link into operation between Athens and Cairo COM Centers, and updating the Routing tables.	Q1 2017		MIDAMC AF/ /MR	Completed
34	Place the AMHS link into operation between Bahrain and Nicosia COM Centers, and updating the Routing tables.	Q3 2021		MID AMC YH	Ongoing
35	Place the AMHS link into operation between Nicosia and Jeddah COM Centers, and updating the Routing tables.	Q3 2021		MID AMC IM	Completed
36	Place the AMHS link into operation between Nicosia and Beirut COM Centers, and updating the Routing tables.	Q3 2021		MS/EK	
37	Evaluate the inter-region connections bandwidth and increase it if required.	Q3 2021		MID AMC	Ongoing
38	Transition of all regional AFTN/CIDIN Connections to AMHS.	Q3 2021	Bahrain UAE		Completed One inter-regional connection is still in place.

**MIDAMC Steering Group (MIDAMC STG)
Terms of Reference**

1. TERMS OF REFERENCE (TOR)

1.1 The Terms of Reference of the MIDAMC Steering are:

- a) to promote the efficiency and safety of aeronautical fixed services in the MID Region through the operation and management, the ATS Messaging Management Center (AMC);
- b) foster the implementation of the Air traffic service Message handling service (AMHS) in the MID Region through provision of the guidance materials and running facilitation tools, utilizing the AMC functions and tools;
- c) MIDAMC Steering Group will consist of a focal point from each Participating MID State who would represent the State and acts as the Steering Group Member;
- d) MIDAMC Steering Group will be responsible for overall operation and management of the AMC in the MID Region ~~project~~ operation and will review/update the MIDAMC work plan whenever required;
- e) the MID Region is considering the establishment of a Regional MID IP Network; the MIDAMC STG will drive the project, until the Operation Group is established;
- f) contribute to the development of a regional plan for the transition from AFS to SWIM services; and
- g) provide regular progress reports to the CNS SG, and MIDANPIRG concerning its work programme.

1.2 In order to meet the Terms of Reference, the MIDAMC Steering Group shall:

- a) update the accreditation procedure for all MID users on the AMC;
- b) develop and maintain guidance materials for AMC users in the MID Region;
- c) discuss and identify solution for operational problems that may be arising;
- d) provide support/guidance to States for AMHS Implementation, and monitor the AMHS activities;
- e) assist and encourage States to conduct trial on the Implementation of the ATS extended services, and identify operational requirements;
- f) provide guidance/support to States on implementation of XML-based data models (IWXXM, FIXM, AIXM, etc.) over AMHS; including developing regional plans as required
- g) monitor States' readiness to implement XML based data models over extended AMHS;
- h) identify the need for any enhancement for the MIDAMC and prepare functional and technical specifications, and define its financial implications;

- i) follow-up on ICAO standards and recommendations on the ATS messaging management and SWIM;
- j) follow-up and review the work of similar groups in other ICAO Regions including successful implementations of SWIM infrastructures to identify and adopt best practices;
- k) Identify SWIM prerequisites in terms of infrastructure, including IP-based network; and monitor the status of implementation of those elements in the MID Region;
- l) follow-up the implementation of IP Network in the MID Region supporting SWIM services, through joining relevant projects, and act as project manager;
- m) develop and amend the relevant ICAO MID Regional documentation considering the progress made in SWIM implementation and considering the need for harmonization with the adjacent Regions in compliance with the GANP;
- n) coordinate with the relevant ICAO MID Regional Groups to ensure a gradual transition of AFS services to SWIM in the MID Region ensuring operational continuity and develop guidance material accordingly; and
- o) provide guidance and training to MID States and stakeholders involved in AMHS implementation.

2. COMPOSITION

- a) ICAO MID Regional Office;
- b) Members appointed by the MIDANPIRG member States; and
- c) Other representatives, who could contribute to the activity of the Steering Group, could be invited to participate as observers, when required.

3. WORKING ARRANGEMENTS

- 3.1 The Chairperson, in close co-operation with the Secretary, shall make all necessary arrangements for the most efficient working of the Study Group. The Study 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 Study Group to advance the work
- 3.2 Virtual meetings will be conducted when it is necessary to do so.

APPENDIX 5.7C

SUBMISSION OF FREQUENCY REQUIREMENTS FOR THE PERIOD 2026 – 2034

1.1 The primary purpose of this simulation is to determine if a congestion in the use of frequencies can be foreseen that would require the implementation of 8.33 kHz channel spacing in any parts of the MID Region.

1.2 With the view to determine the medium-term spectrum requirements for VHF communication services, States are invited to submit these requirements to the MID Regional Office by **Q4 2026**. On the basis of these requirements, ICAO will undertake an analysis that is aimed at determining whether these requirements can be assigned a frequency within the available 25 kHz channels.

1.3 In this case, States can introduce the requirements in the local version of Frequency Finder and generate with the button “Export Submissions” an Excel file that can be submitted to the Regional Office.

1.4 States are able to download the Frequency Finder tool from Frequency Spectrum Management Panel (FSMP) webpage at: <https://www.icao.int/safety/FSMP/Pages/Documents.aspx>, and ICAO will provide assistance for any difficulties in installation and use of this ICAO tool.

1.5 Precise details not available.

1.5.1 When precise details are not available for future frequency requirements, States can submit such requirements in any format.

1.5.2 Example 1: For a new airport, States can submit the (approximate) coordinates and specify the need for:

- x TWR frequencies
- x Aerodrome surface frequencies
- x APP-U frequencies
- x APP-L frequencies
- x ACC-U frequencies
- ATM.- 2
- x ACC-L frequencies
- x VOLMET frequencies
- x ATIS frequencies
- x VDL frequencies

Effective Spectrum Regulatory Measures and Enforcement to Mitigate the Interference

No.	Action	Reference	Status (Completed/Ongoing/ not yet started)	Completion date	Remarks
1.	Enhance collaboration with national radio regulator Existence of a coordination mechanism for detecting, geo-locating, and mitigating interference sources.	ICAO/ITU/IMU Joint declaration, action (d)			
2.	Collaborate with the Radio Regulator to strengthen enforcement measures addressing the commercialization, purchase, possession, and use of illegal transmitters, including jammers and signal spoofers. Actions may include, inter alia: <i>Establish and enforce the necessary legal and regulatory frameworks to prevent, detect and regulate the sale of such devices, both online and offline, and effectively confiscate them</i>	A42-8/C Resolution ICAO Electronic Bulletin 25/20			

5.7D-2

3.	Ensure proper resolution for incidents of GNSS RFI with cross-border impact that cannot be solved nationally or internationally through routine procedures -Existence of procedure to utilize the ITU Radio Regulations (RR) escalation procedure (RR Article 15) to report of interference incidents that could be resolved through routine procedure; - Established procedure exists for reporting harmful interference and for the subsequent escalation to relevant authorities through ICAO Regional Office and ITU SIRRS	ICAO/ITU/IMU Joint declaration, action (e) ITU Resolution 676 ICAO Electronic Bulletin 25/20			
4.	<i>enhance the capacity of technical staff to effectively detect, identify, investigate, and report harmful interference</i>	FM WG/5 Report			
5.	improve coordination with the military by facilitating the sharing of information on GNSS RFI testing and any relevant activities such as Counter-UAS operations	ICAO Electronic Bulletin 25/20			

APPENDIX 5.8A

Table – Status of IWXXM Implementation in the MID Region

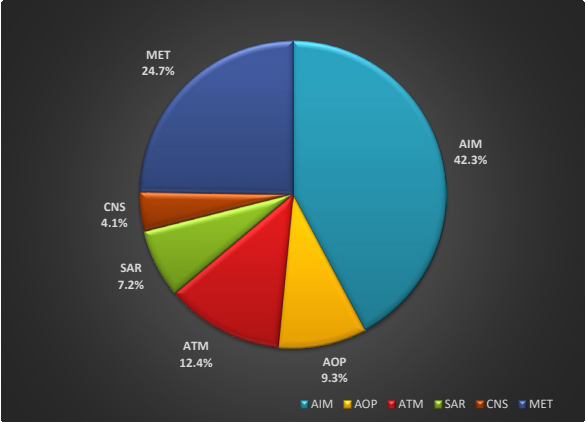
State	Expected implementation date	Comment
Bahrain	Completed	IWXXM v3.0
Egypt		In Progress
Iraq		
Iran		Support planned until end of 2022
Jordan	Completed	IWXXM v3.0
Kuwait	2024	
Lebanon	End 2023	
Libya		
Oman	Q1 2024	To be officially submitted by State
Qatar	Completed	IWXXM v2.1 Testing IWXXM v3.0 between MET and COM Centres Need to exchange with ROC Jeddah
Saudi Arabia	Completed	IWXXM v3.0
Sudan		
Syria		
United Arab Emirates	Completed	IWXXM v3.0
Yemen		

AIR NAVIGATION DEFICIENCIES IN THE THE MID REGION

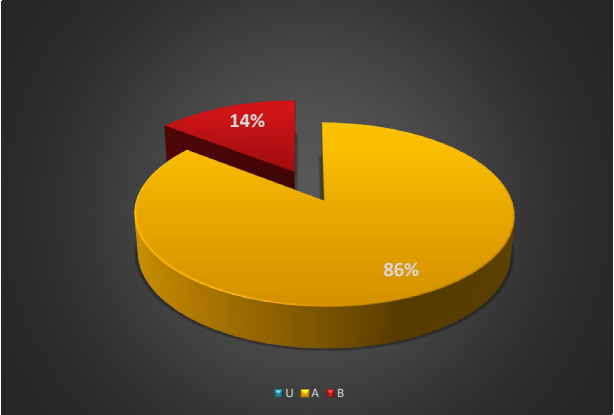
STATE	AIM							Total AIM	AOP							Total AOP	ATM							Total ATM	SAR							Total SAR	CNS							Total CNS	MET							Total MET
	Priority			Rational					Priority			Rational					Priority			Rational					Priority			Rational					Priority			Rational					Priority			Rational				
	U	A	B	F	H	S	O		U	A	B	F	H	S	O		U	A	B	F	H	S	O		U	A	B	F	H	S	O		U	A	B	F	H	S	O		U	A	B	F	H	S	O	
Bahrain							0							0								0						0																	0			
Egypt		2					2							0								0						0																	1			
Iran		3					3		1		1	1		1			1			1	1	1					0																		1			
Iraq		4	1	3	3	1	4		1		1	1		1			1	2			3	0	3		1		1		0																2			
Jordan		0	1	1	1		1							0								0						0																	3			
Kuwait							0							0								0						0																	1			
Lebanon		3	1		2		4		1		1	1		1		1				1		1		1		1	0	1																	1			
Libya		4	1				5		1		1	1	1	1		1				1	1	1		1		1	1	0	1																3			
Oman		2					2							0								0					0																		1			
Qatar							0							0		0				0		0					0																			0		
Saudi Arabia		0					0							0		1				1		1		1			0																			0		
Sudan		2					2		1		1	1		1		1		1		1	1	1		0			0																			1		
Syria		8	1	6	7	1	2		3		3	3		3		1	2			1	2	1	3		2		0	0																		4		
UAE		0					0							0		0	1				1	0	1				0																			0		
Yemen		7	1	4	2		4		1		1	1		1									0		2			1																		4		
Total	0	35	6	14	15	2	26	41	0	9	0	9	9	1	1	9	0	6	6	0	2	11	7	12	0	7	0	0	1	1	7	7	0	2	2	0	0	0	4	4	0	24	0	12	1	3	18	24

TOTAL DEFICIENCIES:97

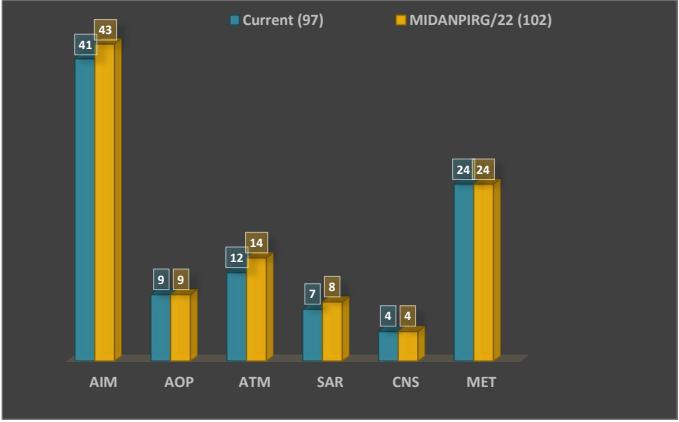
Distribution of Air Navigation deficiencies by field in %

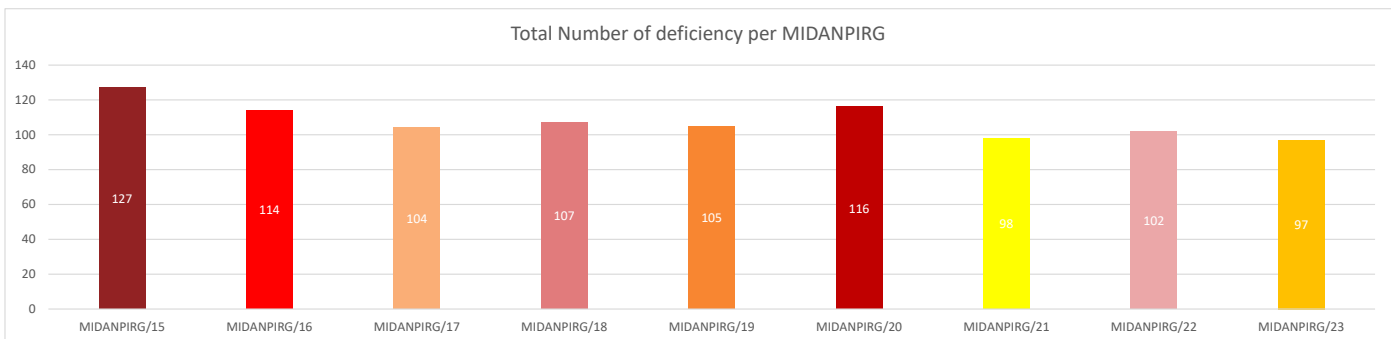
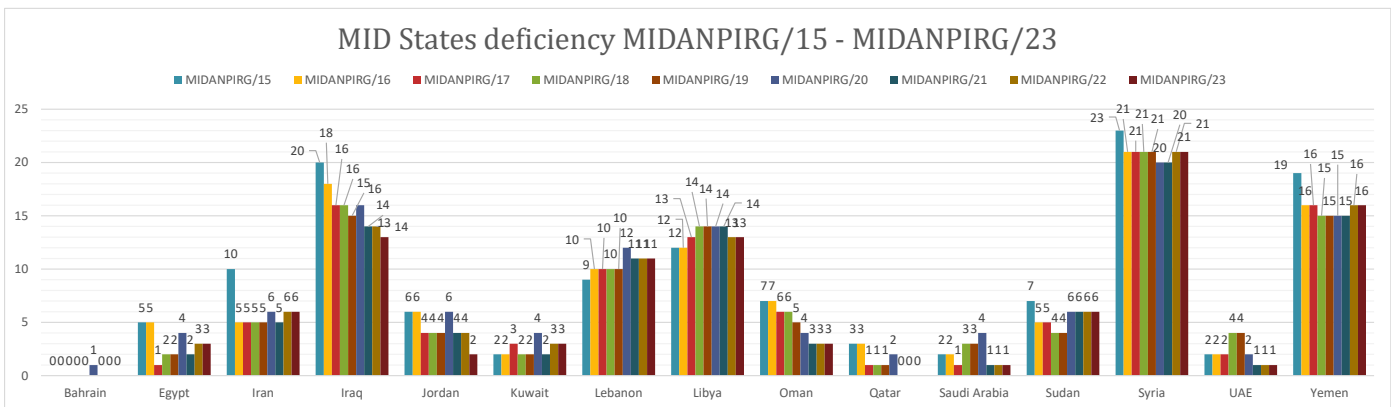
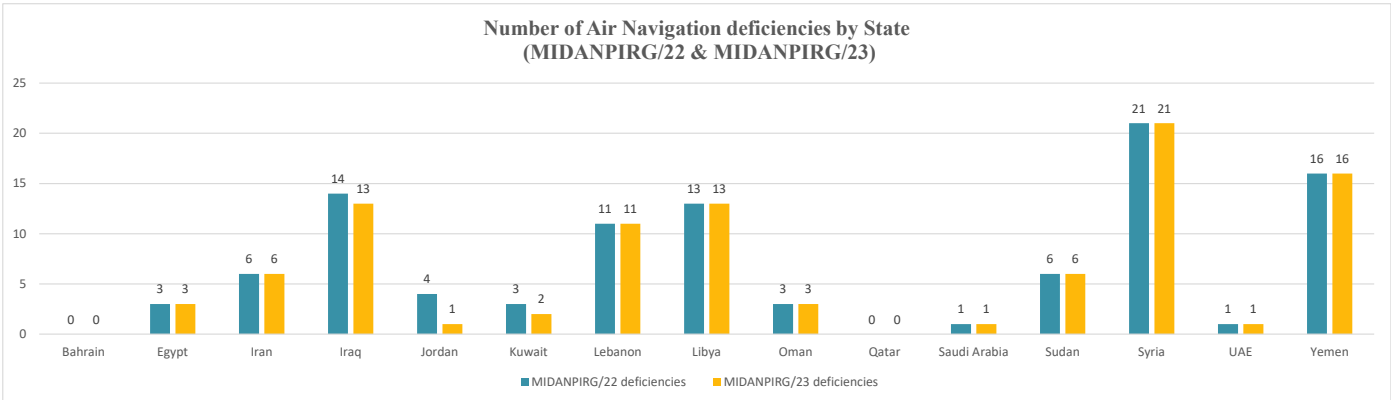
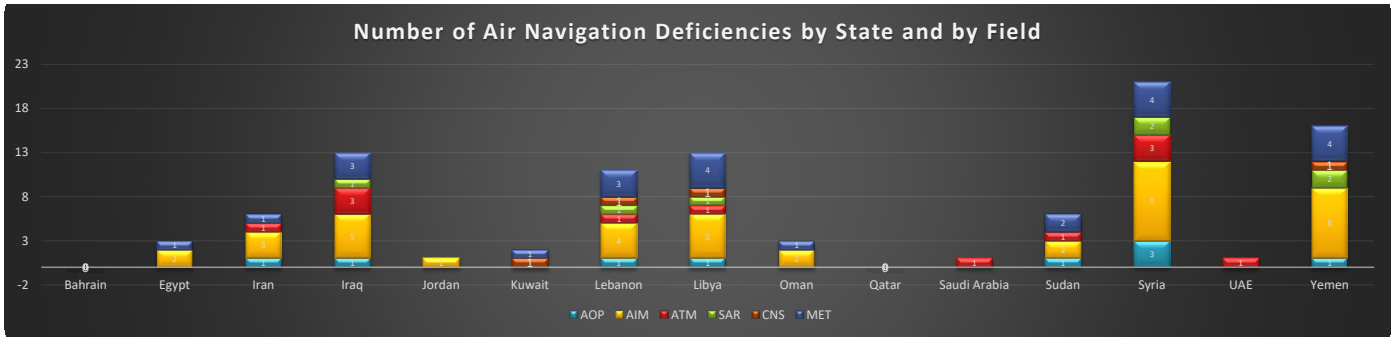


Distribution of Air navigation deficiencies by priority in %



Reported Deficiencies by field (MIDANPIRG/23 & MIDANPIRG/22)





ATTACHMENT A

MIDANPIRG/23 & RASG-MID/13 Meetings

(Cairo, Egypt, 14 - 18 June 2026)

List of Participants

ID	State/Organizat Name2	Title
1	Bahrain Ahmed Yousif AlMalki	Director Aviation Safety and Security
2	Bahrain Noora Ahmed Janahi	A/ CATM
3	Bahrain DFS Cesar Lluch	Operations manager
4	Egypt Ahmed Abdel-Fattah sokkar	Vice Chairman of the Egyptian Civil Aviation Authority for Airports and Air Navigation
5	Egypt Hossam mohamed omran	Head of air navigation ecaa
6	Egypt Mohamed Mohamed Mostafa	General manager og ACC
7	Egypt Ahmed Nasr Shady	Air Traffic Controller
8	Egypt Waheed Sulaiman	Director of Cairo navigation Aids Systems
9	Egypt Amir Aly Mohamed Eid	Survellience Engineer
10	Egypt Mohamed Farghaly Mohamed	General Mnager of R&D Directorate
11	Egypt Khaled ELSayed Ali ELsharkawy	Manager of Safety Directorate
12	Egypt Ahmed Mohamed Safwat Ahmed	Air Traffic Controller
13	Egypt Mohamed Abd ELMoneim	General Manager of Tower&Approach
14	Egypt Ahmed Abdelazim Ahmed Ammar	Air Traffic Controller
15	Egypt Hatem Farrag Hassan Mohamed	Air Traffic Controller
16	Egypt Tamer Mohamed Ismail Mohamed	Air Traffic Controller
17	Egypt Ehab George Wanna Abdelmalak	Air Traffic Controller
18	Egypt Hussein Farouk Morsy Sadek	General Manager of Training Dirctorate
19	Egypt Essam Mahmoud Abdelmoteleb	Tower & Approach training Manager
20	Egypt Ashraf Saad Farrag	Director of for Regional Monitoring (Training Department)
21	Egypt Maha Mahmoud Elshanabary	Director of aeronotical publication
22	Egypt Mahmoud Elbealy Amin	Director of GIS
23	Egypt Mohamed Mohamed Fathy EL-TOBG	Leas Safety Investigator
24	Egypt Mona Ahmed Arafa	Aircraft Accident Investigation General Manager
25	Egypt Nermin Atteya Abdel-Kawy	Flight Operations Specialist
26	Egypt Aya Ali Hassan Assran	Aircraft Accident Investigator
27	Egypt Hala Galal EIDin Askar	Aircraft Accident Investigator
28	Egypt Amr Salah Mohamed El Said	Aircraft Accident Investigator
29	Egypt Noha Badawy Mohamed	Aircraft Accident Investigator
30	Egypt Mina Gamal Mikhail Fahmy	AIS Officer
31	Egypt Eslam Elsayed Abdelfatah Ali	AIM Officer
32	Egypt Mostafa Ahmed Nabih	Director of NOTAM
33	Egypt Ahmed Samy Nazir	General Director of charting and procedur design
34	Egypt Abdelaziz mahmoud abouelmal	Airspace affairs and AIS GD
35	Egypt Sherif Abdelrazek Aql badr	Senior ANS Inspector
36	Egypt Sameh Samir Mohamed Ahmed	Senior ANS Inspector
37	Egypt Waleed Sayed Abelrahman	Senior CNS Inspector
38	Egypt Taha Mohamed Taha	ANS Inspector
39	Egypt Dalia abd elgafar rabee	Aerodrome Inspector
40	Egypt Riham Ayman Mohamed Reffat	AVIATION INSPECTOR
41	Egypt John William Armia Gabra	Aviation inspector
42	Egypt Riham Ayman Mohamed Refaat	Aviation inspector
43	Egypt Eman Khattab	Safeguarding inspector
44	Egypt Sahar Mostafa Mohamed Hassan	Head of central administration of Airports safety and standard
45	Egypt Khaled Ibrahim Mostafa Mohamed	General Manager of CNS
46	Egypt Abeer Fathy Hamed Ibrahim	CNS INSPECTOR
47	Egypt Reem Hammad Mohamed Medany	ATC /ANS Inspector
48	Egypt Rana Mohammad Abd El-Raheem Mr	ANS/ATM Inspector
49	Egypt Mohamed Essam Ahmed Elnayeb	ANS inspector\regulator
50	Egypt Muhammed Abd El-Nasser Elsayed	ATM-SAR Inspection & Oversight
51	Egypt Ahmed arafa abdelaziz	Airport standard GM
52	Egypt Mohamed Ali Mohamed Ali	General Director of Air traffic management Standards
53	Egypt Ahmed Hani Eltony	Safety management system manager

54	Egypt	Ahmed Gamal Sabry	Safety Management System General Manager
55	Egypt	Ahmed Mostafa Mohamed Arman	Senior ANS/CNS Inspector
56	Egypt	Haytham Mohamed Sedik	AIM Inspector
57	Egypt	Jakleen younan aziz	safety inspector
58	Egypt	Wael EZZAT AMMAR	Vice CEO
59	Egypt	Mohamed Ali Abdelsadek	ATFM Expert
60	Egypt	Ahmed Rasslan	Airspace Management Expert
61	Egypt	Ashraf Abozaid	Airspace Management Expert
62	Egypt	Mostafa Fawzy Sherif	Airspace Planning Expert
63	Egypt	Silvia Fayek Forez Hafez	AIS Officer(Cartographer)
64	Egypt	Fouad Elsayed Abdelaty	Chief of NOTAM unit
65	Egypt	Ahmed Galal	Head of Libyan AIS Division
66	Egypt	Shehabeldin Khaled Hussien azmy	Safety Recommendations follow up
67	Iraq	Thaer Hasan Salim	Chief Engineer / CNS Inspector
68	Iraq	Laith Jabbar Hassan	AIS inspector
69	Iraq	Maithem Umran Hassan	Senior Chief Engineer
70	Iraq	Tamarah Sabah Khalaf	Assistant Chief Engineer
71	Iraq	Mudher Thamer Hasan Alsaffar	ATS Director
72	Iraq	Ali safaa mohammed salih	Approach procedures manager
73	Iraq	Fatimah Hasan Mohammed	Head of ANS
74	Kuwait	Mustafa Abdullah Altarrah	Head of air navigation services inspector
75	Kuwait	Dawood Ahmad Aljarrah	Air Navigation Director
76	Libya	Mohamed M. ELBsheni	Head of Aeronautical MET Div. Forecasting Dept
77	Libya	Emad Miftah Elqaddafi	
78	Libya	Alhasan Salem Hareweda	
79	Lebanon	Ali El Chaar	Director of Flight Safety Directorate
80	Oman	Rawya Nasser Al Adawi	Director General of Civil Aviation Regulation (DGCAR)
81	Oman	Mustafa Abdullah Altarrah	ADT
82	Oman	Moosa Abdul Azizi Al-Bulushi	Director of Air Navigation Safety Department
83	Oman	Hilal Ali AlMaqbali	ATM Director
84	Oman	Hilal Said AL Hatmi	Director Flight Safety
85	Oman	Saleh Al Harthy	DG Air Navigation
86	Oman	Nasser Salim Al Mazroui	Airspace Project Manager
87	Oman	Capt Khalifa Mohammed Salim Al-Ab	Air Accident Investigators Team Leader
88	Oman	Victor Aguado	Air Navigation Strategy Expert.
89	Oman	Ahmed Salim Said Ghawas	Director of Meteorological Department
90	Oman	Hanaa Sultan Al-Maskari	Change& Stakeholder Engagement MG
91	Oman	Rashid Hamood Saif Al Badi	Aviation Meteorologist
92	Oman	Abdullah Abdulrahman A. Al-Farsi	CNS Director
93	Oman	Hamed Almayahi	ATC Controller
94	Qatar	Maryam Rashid Al-Naimi	Air Traffic Controller Expert
95	Qatar	Nayif Nasser AlJaber	Director of Air Safety Department
96	Qatar	Eissa Almeabid	Head of ATC/Assistant Director of Air Navigation
97	Qatar	Saif AlKuwari	Director General Aviation Operation & Services
98	Saudi Arabia	Ibrahim B. Aljabri	GM of Air Navigation Safety
99	Saudi Arabia	Abdullah Mohammed Albathi	Director, Safety of Air navigation Systems
100	Saudi Arabia	Alaa Mohammed Alturki	Engineering Services Executive Director
101	Saudi Arabia	Mazen M Alshhri	Airspace Management Director
102	Saudi Arabia	Thamer Alkhaldi	Riyadh Area & Approach Control Center Manger
103	Saudi Arabia	Nedal Essam Raboey	Senior Engineer - Research, Development, and Aircraft Design
104	Saudi Arabia	Nasser Akdemees Alotaibi	Airspace Planning Manager
105	Saudi Arabia	Omar Alshahrani	Safety Strategy and Planning Section Head
106	Saudi Arabia	Khalid Bukhari	
107	Saudi Arabia	Khalid Alharbi	
108	Sudan	Mohamed El Tayeb	Director of Air Navigation Regulatory Directorate
109	Sudan	Mohammed Abdulrahman Ahmed M	Sudan NCMC
110	Sudan	Yasir Rabih Hassan	ANS Director
111	Sudan	Yasir Mohammed Ahmed Ali Abdalla	Air Space Management Director

112	Sudan	Mohamed hassan yousef mokhtar n	Air Traffic Control
113	Sudan	Mohammed Sameer Ali Hassan	Air Traffic Controller
114	Sudan	Mohammed Emad Altom	Air traffic control
115	Sudan	Mona AbdElhameed Mustafa Edrees	Air Traffic Controller
116	UAE	Ahmed Ibrahim Al Jallaf	Assistant Director General ANS
117	UAE	Saqr Almarashda	Senior Manager Airspace Management
118	UAE	Mubarak Al Gheilani	Senior Expert Policy, Regulations & Planning
119	UAE	Fatma Al Ali	Officer - Policies & Regulations
120	UAE	Ahmed Saleh Al Shehhi	Senior Manager Airspace
121	UAE	Rashed AlShehhi	Senior Manager ANS Engineering
122	UAE	Rovshan Sultanov	Manager of Airspace Design and Development
123	UAE	Mohammed Alameri	Head of Airspace Management
124	UAE	Emilie Coureau	Safety & Governance Specialist
125	UAE	Aysha Al Hamili	Assistant Director General - Air Accident Investigations
126	UAE	Khalifa Yousif Aljazi	Acting Senior Manager – Air Accident Investigation
127	UAE	Ali Hassan AlAli	Senior Manager ANS Assurance
128	UAE Dubai	Janine Hendriette Pretorius	Team Leader Safety and Governance
129	USA FAA	Biruk Abraham	Air Traffic Organization Sr. International Representative
130	USA FAA	David Buczek	Senior Representative - Middle East and North Africa
131	USA FAA	Sarbhpreet Sawhney	Deputy Executive Director (A)
132	Yemen	Younis Saeed Ahmed Alkhader	Director general of air navigation
133	Yemen	Abdulmalik Saeed Ahmed Gizan	Director of Aden ACC project
134	Yemen	Saeed Ahmed	
135	ACAO	Hicahm Bennani	SAFETY & AIR NAVIGATION EXPERT
136	ACI	Badriyah Binti Noordin	Senior Manager Safety
137	CANSO	Saad Alkahtani	Director Middle East Affairs
138	CANSO	Eduardo Garcia	Senior Manager Future Skies
139	IATA	Jehad FAQIR	Head Regional Safety Africa & Middle East
140	IATA	Lindi-Lee KIRKMAN	Regional Head ATM & CNS Africa & Middle East
141	IATA-Saudia	Capt. Ashraf Aljahdali	Manager Flight Operations & Standards
142	IFAIMA	Sumit Khinvasara	
143	IFAIMA	Reda Elmadbouly	
144	IFALPA	Yousef Wahby	Captain
145	IFATCA	Mohamed Hassan Saad	EGATCA Board member
146	IFATSEA	KHALED NSIRI	IFATSEA Chief Of MENA COM Office - Former Africa Regional Director
147	MIDRMA	Fareed AlAlawi	MIDRMA Manager
148	MIDRMA	Fathi Althawadi	MIDRMA IT Manager
149	ICAO MID	Mohamed Khalifa Rahma	Regional Director
150	ICAO MID	Mohamed Smaoui	Deputy Regional Director
151	ICAO MID	Mashhor Alblowi	RO/FLS
152	ICAO MID	Mohamed Chakib	RO/SAF/IMP
153	ICAO MID	Mohamed Iheb Hamdi	RO/AGA
154	ICAO MID	Radhouan Aissaoui	RO/IM
155	ICAO MID	Ahmad Amireh	RO/ATM/SAR
156	ICAO MID	Ahmad Kaveh	RO/ATM
157	ICAO MID	Manal Wissa	Programme Analysis Associate
158	ICAO MID	Ahmed Shaker	Technical Assistant
159	ICAO MID	Hisham Samir	System Administrator - Network and Security
160	ICAO MID	Ayman Ramadan	IT
161	ICAO MID	Christina Labib	Marketing Assistant
162	ICAO HQ	Pascal Luciani	DD/ANS
163	ICAO HQ	Muna AlNadaf	TO/CNS
164	ICAO EUR/NAT	Nino Gelovani	Regional Officer Meteorology EUR/NAT & MID
165	ICAO HQ	Mazen Ghattas	Field Operations Officer

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