ICAO

SAFETY

# MID Region Annual Safety Report



**15th Edition** **2026**

Reference Period (2021 - 2025)

## Disclaimer

This report is produced and disseminated by the Regional Aviation Safety Group- Middle East (RASG-MID). It makes use of information, which is provided to the International Civil Aviation Organization (ICAO) by third parties. All third-party content was obtained from sources believed to be reliable and was accurately reproduced in the report at the time of printing. However, ICAO specifically does not make any warranties or representations as to the accuracy, completeness, or timeliness of such information and accepts no liability or responsibility arising from reliance upon or use of the same.

The confidentiality/de-identification of data contained in this report is ensured.

The views expressed in this report do not necessarily reflect individual or collective opinions or official positions of ICAO Member States.



# Contents


**Disclaimer** ..... - 1 -

**Foreword** ..... - 4 -

**Executive Summary** ..... - 5 -

*A. Regional Operational Safety Risks* ..... - 5 -

*B. Organizational issues* ..... - 6 -

*C. Emerging Issues* ..... - 8 -

**1. Traffic Volumes** ..... - 9 -

*1.1 Global Traffic* ..... - 9 -

*1.2 MID Traffic* ..... - 9 -

**2. Reactive Safety Information** ..... - 10 -

*2.1 Safety Risk Assessment Methodology* ..... - 10 -

*2.2 ICAO Data* ..... - 11 -

*2.2.1 MID State of Occurrence* ..... - 12 -

*2.2.2 MID State of Registry and Operator* ..... - 16 -

*2.2.3 ICAO In-depth Analysis of Accident* ..... - 17 -

*2.2.4 Commercial helicopters operations Data Analysis* ..... - 19 -

*2.3 MID Region Safety Performance - Safety Indicators-Reactive* ..... - 20 -

*2.3.1 Goal 1: Achieve a Continuous Reduction of Operational Safety Risks* ..... - 20 -

**3. Proactive Safety Information** ..... - 21 -

*3.1 ICAO USOAP-CMA* ..... - 21 -

*3.1.1 USOAP-CMA Review* ..... - 21 -

*3.1.2 ICAO USOAP CMA Activities — MID States Status for 2026* ..... - 23 -

*3.2 MID Region State Safety Programme (SSP)* ..... - 23 -

*3.3 Human Factors and Human Perforamnce* ..... - 25 -

*3.4 Competence of Personnel* ..... - 25 -

*3.5 Manage Risk Interdependencies* ..... - 25 -

*3.5.1 Cybersecurity Risks* ..... - 26 -

*3.5.2 GNSS Interefence and spoofingRisks* ..... - 26 -

*3.5.4 Security Risks with an Impact on Aviation Safety* ..... - 26 -

*3.5.5 Risks Arising from Conflict Zones* ..... - 26 -

*3.5.6 Aviation Health Safety (AHS) Risks* ..... - 26 -

*3.6 Incidents Data ..... - 27 -*
*3.6.1 Incident Data shared by States for the Period 2021-2025 ..... - 27 -*
*3.6.2 IATA Data (Global Accidents) ..... - 27 -*
*3.6.3 IATA Data (Operational Safety Audit) ..... - 29 -*
*3.7 Region Safety Performance - Safety Indicators-Proactive ..... - 31 -*
*3.7.1 Goal 2: Strengthen States' Safety Oversight Capabilities ..... - 31 -*
*3.7.2 Goal 3: Establish & manage effective State safety Programmes (SSP) ..... - 31 -*
*3.7.3 Goal 4: Strengthen collaboration at the regional and national levels to address safety issues ..... - 32 -*
*3.7.4 Goal 5: Strengthen aviation safety planning (RASP & NASP) ..... - 32 -*
*3.7.5 Goal 6: Expand the use of industry Programmes and safety information sharing networks ..... **Error! Bookmark not defined.***
**4 Safety Priorities for MID Region ..... - 34 -**
*4.1 Regional Operational Safety Risks ..... - 34 -*
*4.2 Organizational Issues ..... - 37 -*
*4.2.1 Enhance States' Safety Oversight Capabilities ..... - 37 -*
*4.2.2 Improve Safety Management ..... - 37 -*
*4.2.3 Human Factors and Human Performance ..... - 38 -*
*4.2.4 Competence of Personnel ..... - 38 -*
*4.2.5 Manage Risk Interdependencies ..... - 38 -*
*4.3 Emerging Issues ..... - 39 -*
**5. MID-RASP SEIs Implementation Status ..... - 40 -**
**6. Final Conclusions ..... - 41 -**
*Appendix A: CICTT Occurrence Categories ..... - 41 -*
*Appendix B: Safety Actions- Consolidated List of SEIs with their respective Actions ..... - 43 -*

# Foreword

The Regional Aviation Safety Group-Middle East (RASG-MID) was established in September 2011 to develop an integrated, data-driven strategy and implement a work program that supports a Regional performance framework for the management of Safety.

RASG-MID supports the implementation of the ICAO Global Aviation Safety Plan (GASP) and the achievement of the Safety Targets in the MID Region Safety Strategy. The RASG-MID membership includes representatives from ICAO, MID States, and international organizations.

RASG-MID consists of four main teams: The Annual Safety Report Group (ASRG), the Aerodrome Safety planning and Implementation Group (ASPIG), the Safety Enhancement Implementation Group (SEIG), the Accident and Incident Investigation Group (AIIG). The Annual Safety Report Group (ASRG) is in charge of collecting and analysing safety information. The Group is also responsible for the identification of the main safety risks, MID Region safety priorities and the production of the RASG-MID Annual Safety Report (ASR).

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.

# Executive Summary

Global scheduled commercial international operations reached approximately 38.08 million departures in 2025, compared with 37.08 million departures in 2024, reflecting continued growth and a strong recovery from the COVID-19 pandemic. The MID Region continued its positive traffic growth trend in 2025, with scheduled commercial departures increasing to approximately 1.49 million, up from 1.39 million in 2024 (an increase of approximately 7.2%). In terms of accidents, the MID Region experienced two accidents in 2024 and no accidents in 2025. Over the five-year period (2021–2025), the Region achieved an average accident rate of 0.62 accidents per million departures, substantially below the global average accident rate of 2.12, indicating a strong level of aviation safety performance in the Region.

The MID Region experienced one fatal accident in 2024 and no fatal accidents during 2021, 2022, 2023, or 2025. Consequently, the Region achieved a five-year average fatal accident rate (2021–2025) of 0.14 fatal accidents per million departures, slightly below the global average of 0.15. The 2024 fatal accident resulted in a single fatality.

**MID Region Safety Priorities**

The Middle East Regional Aviation Safety Plan (MID-RASP) 2026-2028 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 NASPs.

The MID-RASP 2026-2028 Edition identifies MID Region Safety Performance Measurement and Monitoring (SPMM) with specific safety targets in line with GASP and the RASG-MID would continuously monitor the implementation of the Safety Enhancement Initiatives (SEIs) and measure safety performance of regional civil aviation, to ensure the intended targets are achieved using the MID Region SPMM.

The MID-RASP provides strategy for improving safety within a specified timeframe, through defined SEIs in a coordinated, cooperative and collaborative approach among States, international organizations, and industry to achieve Safety Targets.
Fostering effective risk management capabilities in the MID Region, State and industry level to cope with the systemic and operational safety risks and wide-ranging effects of the crisis and constitute an important enabler for building back a more resilient aviation system

The tenth meeting of the Regional Aviation Safety Group – Middle East (RASG-MID/10) meeting was held in Muscat, Oman, 14-17 May 2023; endorsed the MID-RASP 2023-2025 including 24 Safety Enhancement Initiatives (SEIs) and 63 safety actions through RASG-MID Conclusion 10/7. In addition, the RASG-MID/13 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.

A. Regional Operational Safety Risks

Operational safety risks arise during the delivery of a service or the conduct of an activity (e.g., operation of an aircraft, airports, or air traffic control). Based on the analyses of reactive and proactive safety information, it is concluded that the Regional operational safety risks for the MID Region are:

1. Loss of Control-In Flight (LOC-I);

2. RE and ARC during landing;
3. Mid-Air Collision (MAC);
4. Controlled Flight into Terrain (CFIT); and
5. Runway incursion (RI)

In line with GASP 2026-2028 Edition, other considered regional occurrence categories: SCF-NP and TURB.
In addition to this, safety issues have been identified and mapped to their respective potential accident outcomes.

B. Organizational issues

Organizational issues are systemic issues which take into consideration the impact of organizational culture, and policies and procedures on the effectiveness of safety risk controls.

***1. Strengthen States' Safety Oversight Capabilities***

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. 64 % which is above the world EI 70.46% (as of 24 August 2026). Three (3) States are currently below EI 60%. No SSC in the MID Region.

AIG, ANS, & AGA areas and CE4, CE7, and CE8 still need more improvement. Moreover, the effective implementation in training, surveillance, and resolution of Safety concerns need to be improved.

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

**2. Improve Safety Management**

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.

In addition, the development of National Aviation Safety plan (NASP) is one of the MID region safety priorities and 9 States had developed their NASPs.

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. It also provides a framework in which regional and national aviation safety plans (RASPs and NASPs) are developed and implemented.

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).

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.

### *3. Human Factors and Human 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.

### *4. Competence of Personnel*

Availability of well-trained and competent aviation personnel is paramount to the safety and resilience of the aviation industry. Some of States in MID Region has 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 artificial intelligence are revolutionizing pilot training altogether

### *5. 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 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.

#### *5.1 Cybersecurity Risks*

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 of the need to manage the 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.

#### *5.2 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.

### *5.3 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 CAAs, 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.

### *5.4 Aviation Health Safety (AHS) Risks*

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.

COVID-19 is unlikely to be the last pandemic we will be faced with. It is crucial to continue supporting the Middle East 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.

### *5.5 GNSS Interference & spoofing Risks*

GNSS interference has been identified as a safety concern and remains the main challenge hindering the implementation and use of Performance-based Navigation (PBN) in the Region. IATA continues to monitor the situation closely.
IATA AME is working closely with all relevant stakeholders to ensure effective reporting of GNSS interferences and to develop mitigation measures that reduce its impact. GPS signal loss events increased dramatically in the first half of 2025 compared to 2024.

## C. Emerging Issues

Emerging safety 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. Therefore, it is important that the international aviation community remain vigilant to identify emerging safety issues and develop mitigations to address them. Failure to address emerging safety issues can affect a State, Region or industry's ability to mitigate the safety risks.

### *1. AAM and new Entrants*

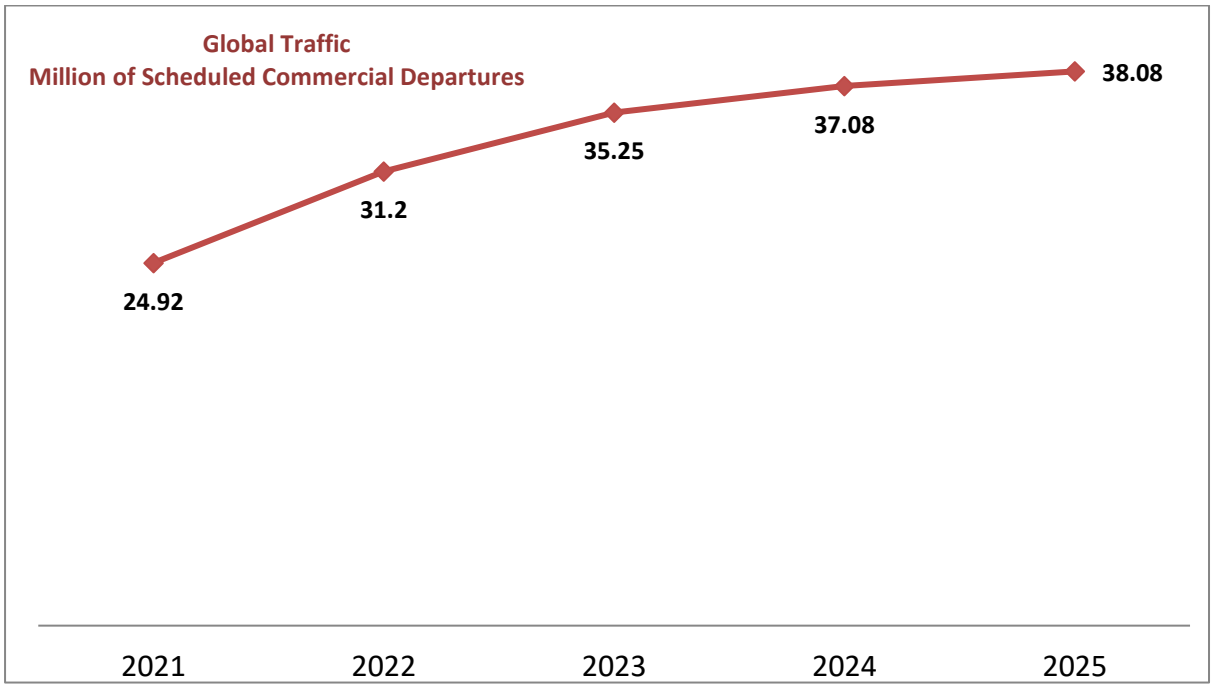
The number of drones at the global level has increased. Available evidence demonstrates an increase of drones coming into close proximity with manned aviation (both aeroplanes and helicopters) and the need to mitigate the associated risk. The civil aviation authority is responsible for, inter alia, ensuring 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.

Vertiports: VTOL-capable aircraft will use aerodromes, heliports and the so-called vertiports. 'Vertiport' means an area of land, water or structure used or intended to be used for the landing and take-off of VTOL-capable aircraft. Vertiports are classified as aerodromes for the purpose of aerodrome and vertiport regulations.

# 1. Traffic Volumes

## *1.1 Global Traffic*

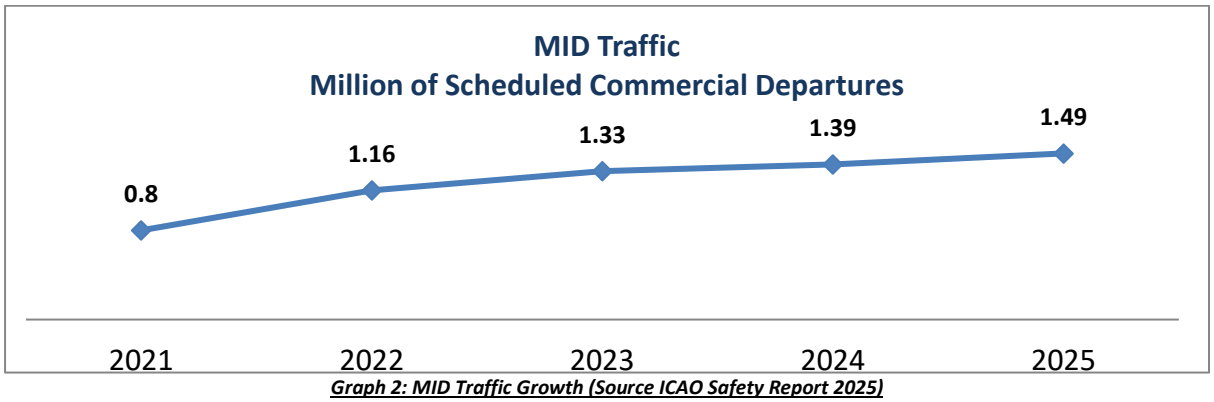
Global scheduled commercial international operations reached approximately 38.08 million departures in 2025, compared with 37.08 million departures in 2024, reflecting continued growth and a strong recovery from the COVID-19 pandemic.




***Graph 1: Global Traffic Volume (Source ICAO Safety Report 2025)***

## *1.2 MID Traffic*

The MID Region continued its positive traffic growth trend in 2025, with scheduled commercial departures increasing to approximately 1.49 million, up from 1.39 million in 2024 (an increase of approximately 7.2%).




***Graph 2: MID Traffic Growth (Source ICAO Safety Report 2025)***

# 2. Reactive Safety Information

## 2.1 Safety Risk Assessment Methodology

To facilitate the identification and prioritization of the main Regional Safety Operational Risks, accidents are categorized in terms of frequency and severity and the serious incidents in terms of frequency. The severity assessment is based on fatalities, injuries, and damage to aircraft, property, and equipment. (For Frequency rating: 1 is the most frequent, and six is the least frequent. For Severity: 1 is the most severe and four is the least severe)

The MID ASRT/2 meeting (Cairo, Egypt, 4-5 February 2018) agreed to the following improvements to the methodology used for risk assessment:

***a) improvement of the current risk matrix used for the identification of Regional operational risks (four (4) levels of severity instead of three (3)), as follows:***

***improvement of the current risk matrix used for the identification of focus areas (four (4) levels of severity instead of three (3)),*** The level of severity is categorized as follows:

1) Catastrophic: multiple deaths; serious damage to aircraft/equipment (destroyed)
2) Major: serious injury/fatalities; major aircraft/equipment damage
3) Minor: little consequences (minor injuries, minor damage to aircraft);
4) No potential damage or injury

| Frequency / Severity | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| 1 | 1 | 2 | 3 | 4 | 5 | 6 |
| 2 | 2 | 4 | 6 | 8 | 10 | 12 |
| 3 | 3 | 6 | 9 | 12 | 15 | 18 |
| 4 | 4 | 8 | 12 | 16 | 20 | 24 |

***Table 1: Risk matrix***

***b) Adoption of the "feared consequences" of the risk portfolio of DGAC France:***

Table 2 below shows that each identified Undesirable event/safety issue is linked to the potential accident outcome.

| NB | Identification of Undesirable Event | Potential Accident outcome | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | CFIT | LOC-I | MAC | Ground Collision | RE | Damage to aircraft or injury inflight | Damage to aircraft or /injury on ground |
| UE.1 | Unstabilised or non-compliant approach | X | X | | | X | | X |
| UE.2 | Abnormal airplane attitude (Roll, pitch, speed…) | | X | | | | X | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **UE.3** | Events relating to aerodrome conditions (Runway surface condition and aerological parameters) | | X | | | X | X | X |
| **UE.4** | En-route encounter of dangerous weather phenomena (Thunderstorm, turbulence, Icing) | | X | # | | | X | X |
| **UE.5** | Misuse of aircraft system (Weight and Balance, speed track, aircraft config) | X | X | X | X | X | X | X |
| **UE.6** | Event pertaining to works/maintenance operations on or close to a runway | | # | | X | X | | X |
| **UE.7** | Bad coordination/execution of ground operations (deicing, loading, stowing, line maintenance, etc) | X | X | | X | | X | X |
| **UE.8** | Runway/taxiway incursion | | | | X | X | | X |
| **UE.9** | Loss of separation in flight/ and/or airspace infringement /level bust | | X | | | X | X | X |
| **UE.10** | Wildlife hazard, including bird strike | | X | | X | X | X | |
| **UE.11** | Ground-onboard interface failure (Misunderstanding, unsuitability of transmitted information,etc) | X | X | X | X | X | X | X |
| **UE.12** | Aircraft maintenance event | X | X | | # | X | X | X |
| **UE-13** | Fire/Smoke inflight | # | X | | | | X | X |
| **UE-14** | Aircraft system failure resulting in flight management disturbance | X | X | | | X | X | X |
| **UE-15** | Loss of cabin pressure | | X | # | | | X | |
| **UE-16** | Aircraft damage due to FOD | | X | | | X | X | X |

***Table 2: identified Undesirable event/safety issue***

## *2.2 ICAO Data*

ICAO's primary indicator of Safety in the global air transport sector is the accident rate based on scheduled commercial operations involving aircraft having a Maximum Take-off Weight (MTOW) above 5700 kg. Exposure data is comprised of scheduled commercial operations that involve the transportation of passengers, cargo, and mail for remuneration or hire and is a preliminary estimate solely for the calculation of the accident rates.

ICAO iSTARS applications used for the development of the ICAO Safety Reports. In addition, Occurrence Validation Study Group (OVSG) final validation accidents data is also used as source of the data analysis.

***Note:*** *The accident data presented here is the official ICAO accident statistics, used for the development of the ICAO safety reports. The data is based on scheduled commercial operations involving aircraft having a Maximum Take-off Weight (MTOW) above 5700 kg (validated or under validation by ICAO). Serious incidents presented here are safety information shared by the MID States.*

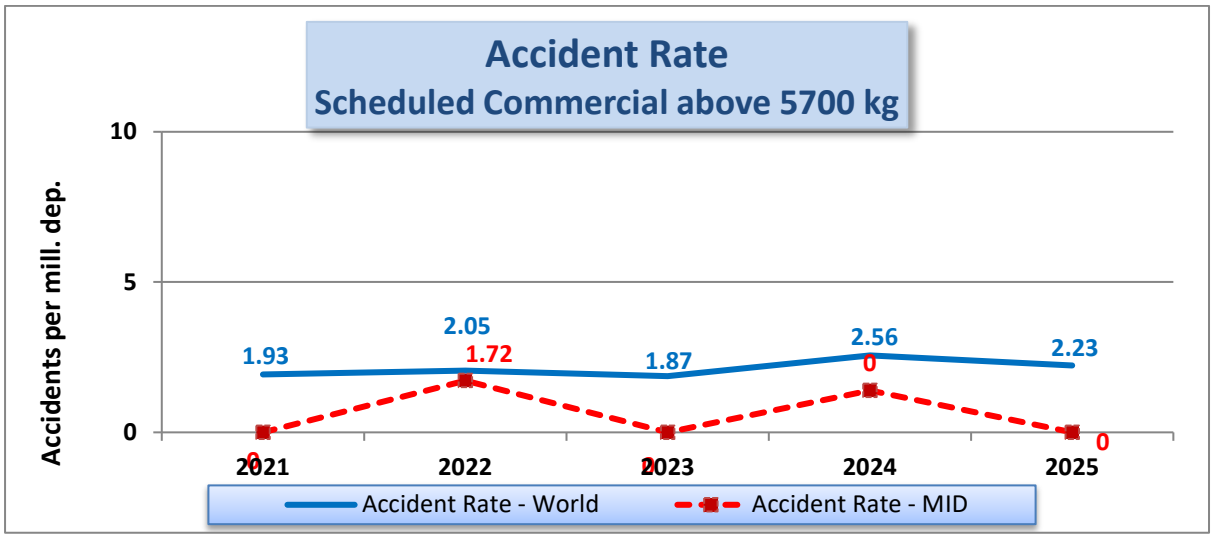
The main part of this section provides an analysis of the accidents that occurred in the MID Region (State of Occurrence) for the period (2021-2025), which is used for monitoring the progress of achieving the Safety Targets in the MID-RASP 2026-2028 Edition (MID Region Safety performance measurement and monitoring).

Besides, it provides data analysis regarding accidents aircraft registered in the MID Region (State of Registry) as well as for the MID - Air operators (State of the Operator) using the same criteria mentioned above. It is to be highlighted that the State of registry and State of the operator Section focuses mainly on counts and percent distribution (no rates).

### 2.2.1 MID State of Occurrence

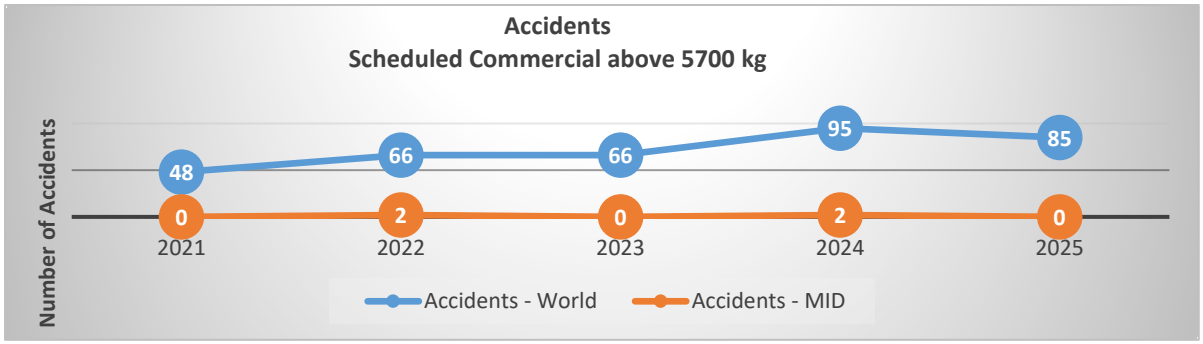
#### 2.2.1.1 Accidents Rates and Fatalities

Graph 3 illustrates that the MID Region experienced two accidents in 2024 and no accidents in 2025. Over the five-year period (2021–2025), the Region achieved an average accident rate of 0.62 accidents per million departures, substantially below the global average accident rate of 2.12, indicating a strong level of aviation safety performance in the Region.



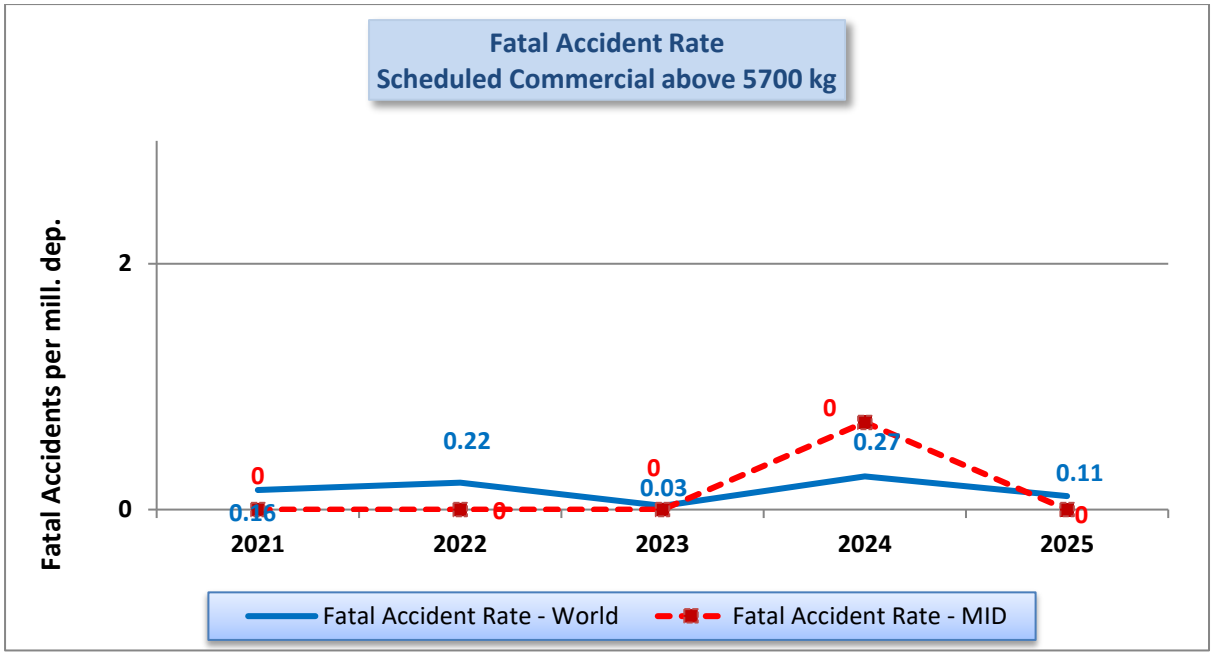

*Graph 3: Global Accident Rate Vs. MID Accident Rate (Source OVSG Data& ICAO ASR 2026)*

Graph 4 shows that 3 accidents and one fatal accident occurred in the MID Region during the period (2021-2025).




*Graph 4: Number of MID Accidents Vs. Number of Global Accidents Per Year (Source OVSG Data& ICAO ASR 2026)*

The MID Region experienced one fatal accident in 2024 and no fatal accidents during 2021, 2022, 2023, or 2025. Consequently, the Region achieved a five-year average fatal accident rate (2021–2025) of 0.14 fatal accidents per million departures, slightly below the global average of 0.15. The 2024 fatal accident resulted in a single fatality, as shown in Graph 6.

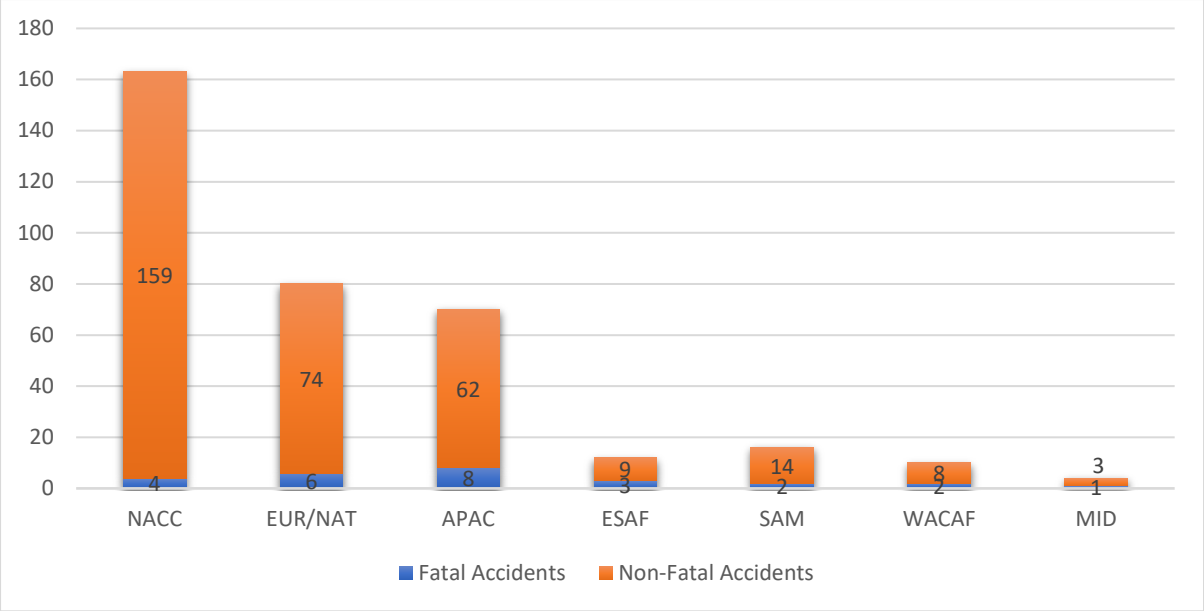



*Graph 5: Global Fatal Accident Rate Vs. MID Fatal Accident Rate (Source OVSG Data& ICAO ASR 2026)*



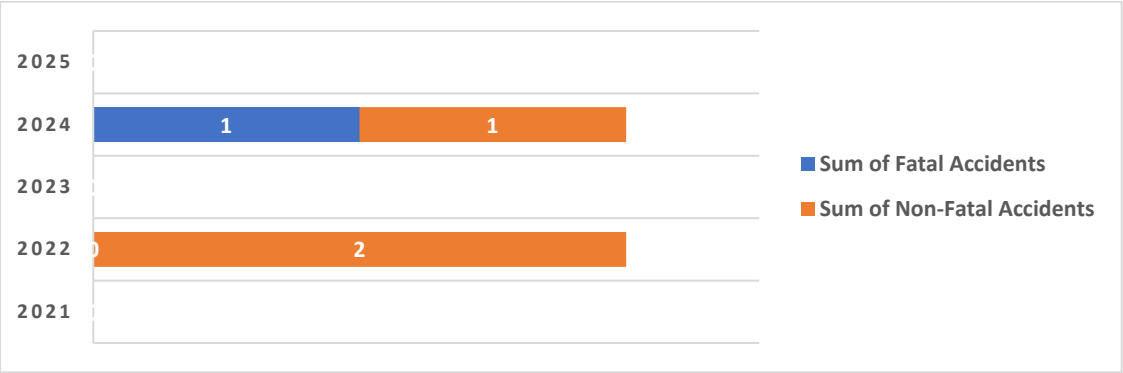

*Graph 6: Number of MID Fatalities Vs. Global Fatalities (Source OVSG Data& ICAO ASR 2026)*

**Accidents by Regional Office Scheduled Commercial flights on airplanes for the period 2021- 2025.** Graph 7 shows that 355 accidents occurred worldwide during the period 2021–2025, of which 26 were fatal accidents.




***Graph 7: Accidents by Regional Office Scheduled Commercial flights on airplanes above 5.7t only from 2021 to 2025***

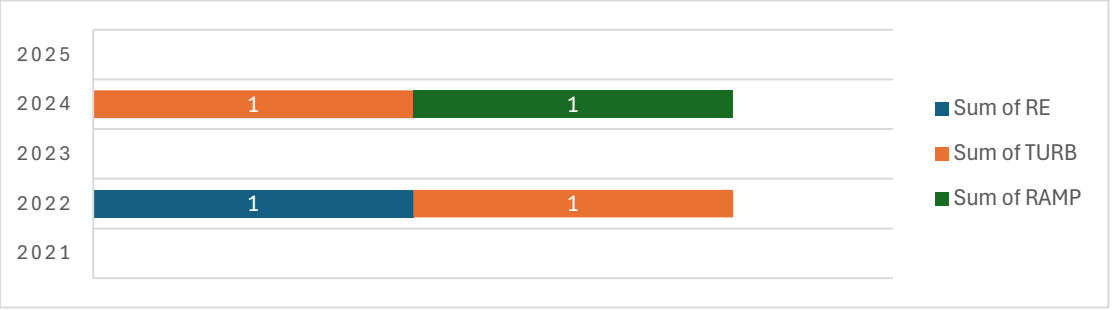
Graph 8 shows that four accidents occurred in the MID Region during the period 2021–2025, including one fatal accident recorded during the five-year period.




***Graph 8: MID Number of Fatal Accidents Vs. Non-Fatal Accidents Per Year (2021-2025) (Source OVSG Data& ICAO ASR 2026)***

### 2.2.1.2 Occurrence Category

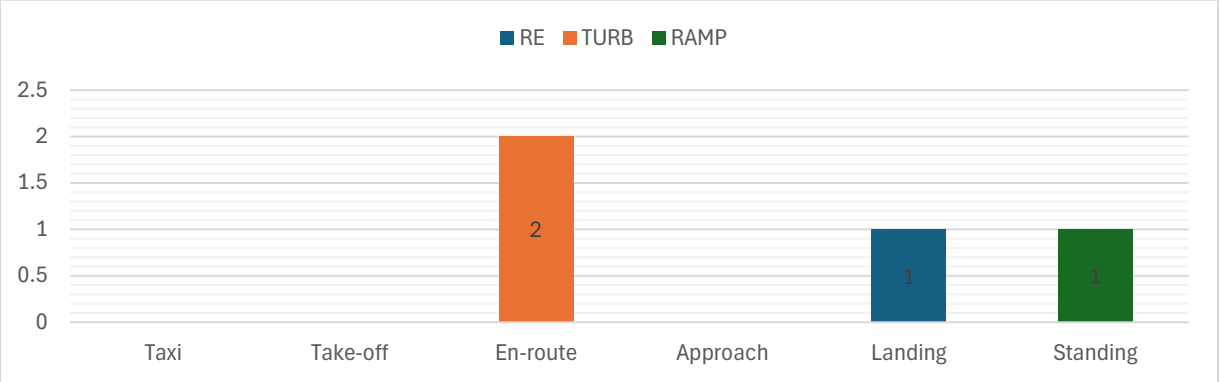
Graph 9 indicates that no Controlled Flight into Terrain (CFIT), Loss of Control In-flight (LOC-I), or Mid-Air Collision (MAC) accidents were recorded in the MID Region during the period 2021–2025. However, accidents were reported in the Runway Excursion (RE) and Turbulence (TURB) occurrence categories. It is also noteworthy that one Ramp (RAMP) occurrence during the reporting period resulted in a single fatality.




***Graph 09: Distribution of Occurrence Category Year (2021-2025) (Source OVSG Data& ICAO ASR 2026)***

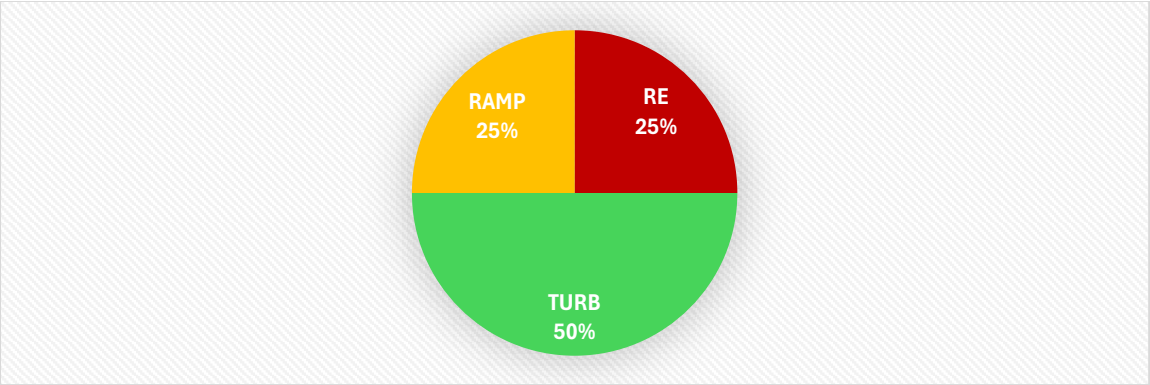
### 2.2.1.3 Phase of Flight

Graph 10 shows that the Runway Excursion (RE) events occurred during the landing phase, while Turbulence (TURB) occurrences were recorded during the en-route phase.




***Graph 10: Distribution of Occurrence Category Per Phase of Flight (2021-2025) (Source OVSG Data& ICAO ASR 2026)***

Graph 11 shows that, during the period 2021–2025, the majority of accidents associated with the MID Region's Regional High-Risk Categories (R-HRCs) were related to Runway Excursions (RE), with additional occurrences recorded in the Ramp (RAMP) and Turbulence (TURB) categories. It is also noteworthy that the only fatality recorded during the reporting period resulted from a RAMP occurrence.




***Graph 11: Occurrence Category Distribution as Percentage Per Accident (Source OVSG Data& ICAO ASR 2026)***

Taking a more in-depth look at the fatal accidents and accidents for the MID Region (State of occurrence) for the period 2021-2025, the following observations are made:

A. In terms of fatality, the top three fatal accidents categories in the MID Region are:
   1. Ramp

B. In terms of frequency, the most frequent accidents categories in the MID Region (State of occurrence) are:
   1. Turbulence (TURB); and
   2. Runway Excursion (RE).

**Identification of the Key Risk Areas based on the analysis of accident data related to the State of Occurrence (2021-2025)**

To facilitate the identification of the safety priority areas; the safety risk assessment methodology is applied.

| Main Risk Area | Frequency | Severity | Risk Level |
|---|---|---|---|
| Runway Excursion (RE)) | 1 | 3 | 3 |
| TURB | 4 | 3 | 12 |

***Table 3: Key Risk Area***

Therefore, the key risk areas according to the State of occurrence's accidents data are

1. Runway Excursion (RE) during landing; and
2. Turbulence (TURB) during enroute

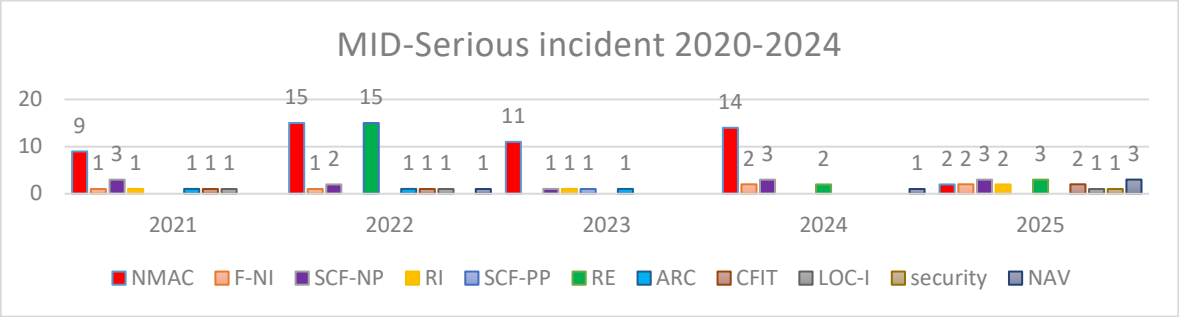
### 2.2.2 MID State of Registry and Operator

The accident occurred in a MID State and involved an aircraft registered and operated by the same MID State. As the State of Occurrence, State of Registry and State of the Operator are within the MID Region, a separate analysis would result in duplication; therefore, the occurrence should be captured and analyzed only once.

#### 2.2.2.1 Serious Incidents Data Analysis

##### 2.2.2.4.1 Occurrence Category

Graph 12 shows the total number of serious incidents provided by the MID States for the period 2021-2025




***Graph 12: Number of Serious Incidents Distribution Per Year (2021-2025)***

The data shows that there was a significant decrease on the number of NMAC Occurrences. The number of serious incidents data shared by the MID States have been considered and included in the analysis to shed light and identify the potential safety concerns in the MID Region. However further data analysis should be provided by the MID States for an in-depth analysis.
Taking a more in-depth look at the serious incidents reported by the MID Region for the period 2021-2025, the following is to be highlighted:

A. In terms of frequency, the most frequent serious incidents categories in the MID Region are:
   1. Near Mid Air Collision (NMAC);
   2. Runway Excursion (RE)
   3. System Component Failure-power Plant (SCF-PP); and
   4. System Component Failure- Non-Power Plant (SCF-NP).

With respect to the Mid-Air collision (MAC)/NMAC: The most common root causes for MAC occurrences are Human performance errors and Ineffective training for ATCs. 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 in Gulf area over the high seas which are not subject to any coordination with related FIRs for airborne operation.

For the System Component Failure-Non-Power Plant (SCF-NP): Unexpected technical failure, lack of maintenance, not complying with the ICAO standards for Air Operator Certificates (AOC) & Operations Specifications, flying with Minimum equipment limitations
The main safety issues identified and shared by the States as follows:

- Regulatory oversight including SSP development and implementation
- SMS
- Human factors and Human Performance
- competence of personnel
- EGPWS warning (GPS Jamming)
- TCAS/RA
- GPS Jamming/Spoofing
- Runway Incursion
- Low level wind shear
- System Component Failure-Power Plant (SCF-PP)
- Technical failures
- Birdstrike
- Navigation Errors (NAV)
- Dangerous Goods
- Wake Turbulence

### 2.2.3 ICAO In-depth Analysis of Accident

#### 2.2.3.1 Runway Excursions and Abnormal Runway Contact:

During 2021-2025, Runway Excursion and serious incidents mainly occurred in the landing phase of flight. This focus area covers the risk of runway excursions, including direct precursors such as hard landings, high speed landing, landings following an un-stabilized approach. The MID Region continued improvement in runway safety, which is one of the industry's principal risk areas. Table 4 indicated the root cause.

| **Root Cause Analysis** | | |
|---|---|---|
| **Latent Conditions** | **1** | Ineffective safety management system |
| | **2** | Incomplete/inefficient operator SOP |
| | **3** | Deficient flight crew training |
| | **4** | Regulatory oversight |
| **Threat** | **1** | Decision to make a landing on short runway with tailwind |
| | **2** | Poor judgment and continued landing after an un-stabilized approach |
| | **3** | Improper calculating of landing speed without focusing on the tailwind component |
| | **4** | Technical failures Pilot information |
| | **5** | Ineffective reporting of runway surface condition/Contaminated runways |
| | **6** | Airport facilities including poor runway paintings/markings/signage lighting |
| | **7** | Meteorology |

| | | |
|---|---|---|
| **Errors** | **1** | Timely crew decisions (very low-level go-arounds) |
| | **2** | Failed to go around after un-stabilized approach |
| | **3** | SOP Manual not updated and maximum tailwind not mentioned |
| | **4** | Manual handling/flight controls |
| | **5** | Contaminated runways |
| **Contributing factors** | **1** | High Airspeed and Low Engine Thrust. Anti-skid failures of landing gear causing prolong landing distance. |
| | **2** | Instantaneous variable wind condition on aerodrome traffic pattern. |
| | **3** | Late activation of airbrakes and spoilers (especially airbrakes) with tailwind cause to increase the landing roll distance. |

***Table 4: RE and ARC Root Cause***

Some of the Precursors, which could Lead to Runway Excursion:

A. Precursors for aircraft overrunning the end of the runway on landing (landing overrun) could include:
   1. Long landing / high across threshold / extended flare / floating,
   2. incorrect performance calculation,
   3. ineffective use of stopping devices / time to apply reverse thrust or braking / inappropriate use of auto brake setting,
   4. weather related / runway condition / aquaplaning, unsterilized approach, tailwind landing.

B. Precursors for aircraft veering off the side of the runway during landing (landing veer-off) could include:
   1. Crosswind and wet /contaminated runway,
   2. hard landing / inappropriate use of stopping devices / asymmetric braking or reverse thrust,
   3. inappropriate use of nose wheel steering.

#### 2.2.3.2 Loss of Control-Inflight

During 2021-2025 there was no Aircraft upset or Loss of control. Table 5 below the root-cause analysis is based mainly on industry's analysis of the LOC-I accidents:

| **Root Cause Analysis** | | |
|---|---|---|
| **Latent Conditions** | **1** | Inadequate safety management system including the use of the FDM data |
| | **2** | Incomplete/Inefficient Flight operations |
| | **3** | Regulatory oversight |
| **Threat** | **1** | Inappropriate Flight Crew Automation training |
| | **2** | Type-rating related issues on complex and highly automated aircraft |
| | **3** | Contained engine/power plant malfunction |

| | | |
|---|---|---|
| | **4** | Severe turbulence, Thunderstorms, wind shear/Gusty wind |
| | **5** | Poor visibility/IMC conditions |
| | **6** | Spatial disorientation/Somatogravic illusion |
| | **7** | Flt Crew misdiagnose the problem leading to the application of an incorrect recovery procedure |
| | **8** | Lack of exposure to the required maneuvers during normal line flying operations |
| | **9** | Limitations in simulator fidelity could lead to pilots not having the manual flying skills required to recover from some loss of control scenarios. |
| **Errors** | **1** | Inappropriate/Incorrect use of Automation by flight crew |
| | **2** | Inadequate flight crew monitoring skills/awareness or communication |
| | **3** | Flt Crew mishandling of manual flight path and/or speed control |
| | **4** | Abnormal checklist |
| | **5** | Incorrect recovery technique by flight crew when their aircraft has become fully stalled |
| **Contributing factors** | **1** | Unnecessary weather penetration |
| | **2** | Operation outside aircraft limitations |
| | **3** | Unstable approach |
| | **4** | Vertical/lateral speed deviation |

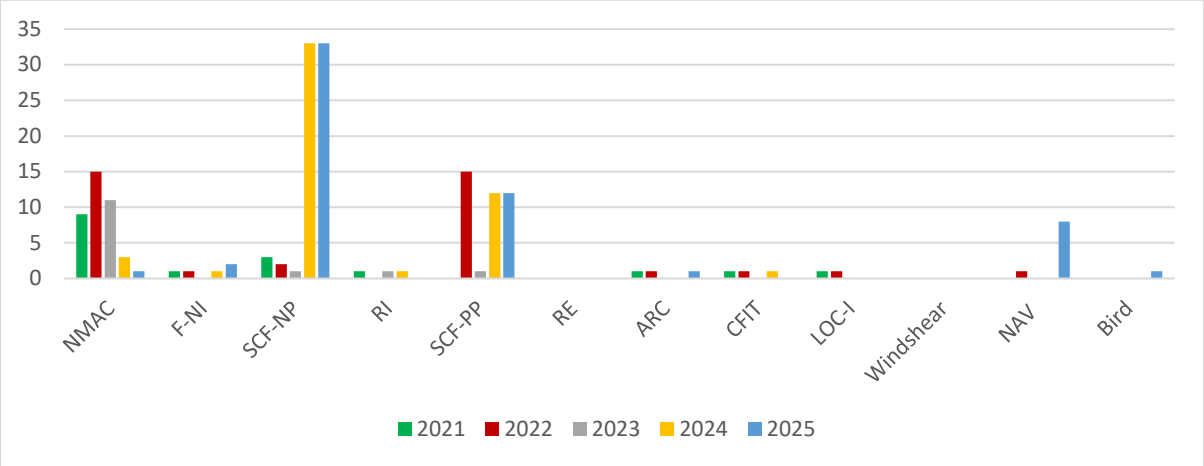
***Table 5: LOC-I Root Cause***

**A. Direct Precursors to a Loss of Control Event:**

1. Deviation from flight path
2. Abnormal air speed or triggering of stall protections

### 2.2.4 Commercial helicopters operations Data Analysis

Only four (4) States shared the number of occurrences, and some data analysis related to commercial helicopter operation.




***Graph 13. Commercial Hel operations incidents 2021-2025 reported by States***

The data shows that there was a significant increase on the number of SCF-NP incidents. The number of incidents data shared by the MID States have been considered and included in the analysis to shed light and identify the potential safety concerns in the MID Region. However further data analysis should be provided by the MID States for an in-depth analysis and provide more visibility on the high-risk categories and safety issues at the regional level. Therefore, MID States are strongly encouraged to share data analysis related to commercial helicopter operation to conduct appropriate analysis.
Identified top occurrence categories:
LOC-I, CFIT, SCF-PP, NAV, SCF-NP, MAC, and GNSS jamming and spoofing.

## *2.3 MID Region Safety Performance - Safety Indicators-Reactive*

### 2.3.1 Goal 1: Achieve a Continuous Reduction of Operational Safety Risks

| | | Average 2021-2025 | | 2025 | |
|---|---|---|---|---|---|
| **Safety Indicator** | **Safety Target** | **MID** | **Global** | **MID** | **Global** |
| Number of accidents per million departures | Reduce/Maintain the Regional average rate of accidents to be in line with the global | 0.62 | 2.12 | 0 | 2.23 |
| Number of fatal accidents per million departures | Reduce/Maintain the Regional average rate of fatal accidents to be in line with the global | 0.14 | 0.15 | 0 | 0.11 |
| Number of Runway Excursion related accidents per million departures | Reduce/Maintain the Regional average rate of Runway Excursion related accidents to be below the global | 0.17 | 0.12 | 0 | 0.07 |
| Number of Runway Incursion accidents per million departures | Regional average rate of Runway Incursion accidents to be below the global | 0 | 0.02 | 0 | 0 |
| Number of LOC-I related accidents per million departures | Reduce/Maintain the Regional average rate of LOC-I related accidents to be below the global average | 0 | 0.05 | **0** | 0.02 |
| Number of CFIT related accidents per million departures | Reduce/Maintain the Regional average rate of CFIT related accidents to be below the global rate | 0 | 0.03 | 0 | 0.02 |
| Number of Mid Air Collision (accidents) | Zero Mid Air Collision accident | 0 | 0.01 | 0 | 0.07 |

***Table 6: Goal 1-Safety Indicators-Reactive***

# 3. Proactive Safety Information

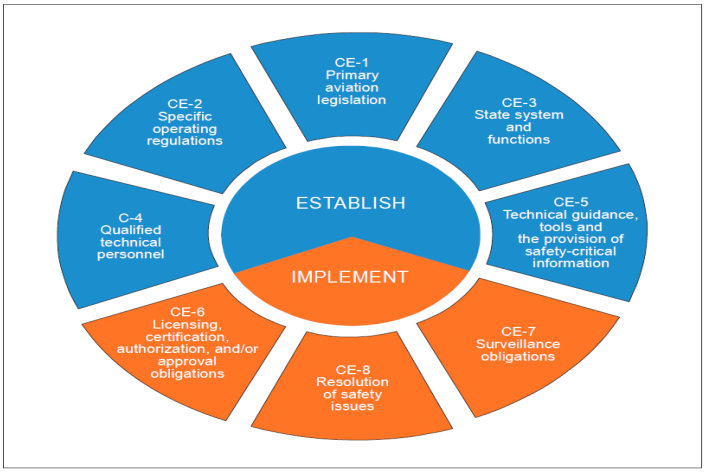
This section of the Annual Safety Report focuses on proactive safety data analysis to identify organizational issues that form the basis for the development of SEIs.

## *3.1 ICAO USOAP-CMA*

### 3.1.1 USOAP-CMA Review

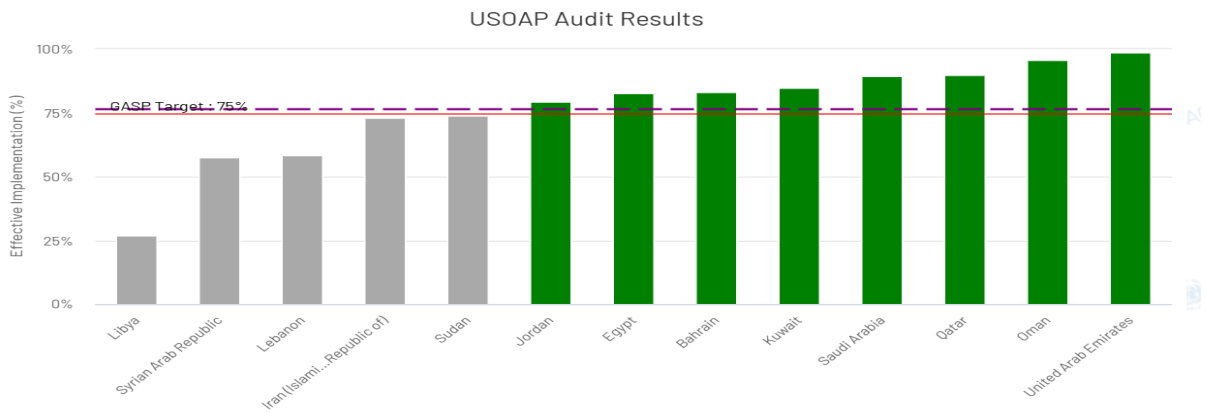
Each ICAO Member State is expected to establish and maintain an effective safety oversight system that addresses all safety-related areas of aviation activities. The Universal Safety Oversight Audit Programme Continuous Monitoring Approach (USOAP-CMA) measures the effective implementation (EI) of a State's safety oversight system.

In order to standardise the audits conducted under the USOAP CMA, ICAO established protocol questions (PQs) based on safety-related ICAO Standards and Recommended Practices (SARPs) established in the Annexes to the Chicago Convention, the Procedures for Air Navigation Services (PANS), and supporting ICAO guidance material. The PQs contribute to assessing the eight critical elements (CEs) of a State's safety oversight system.



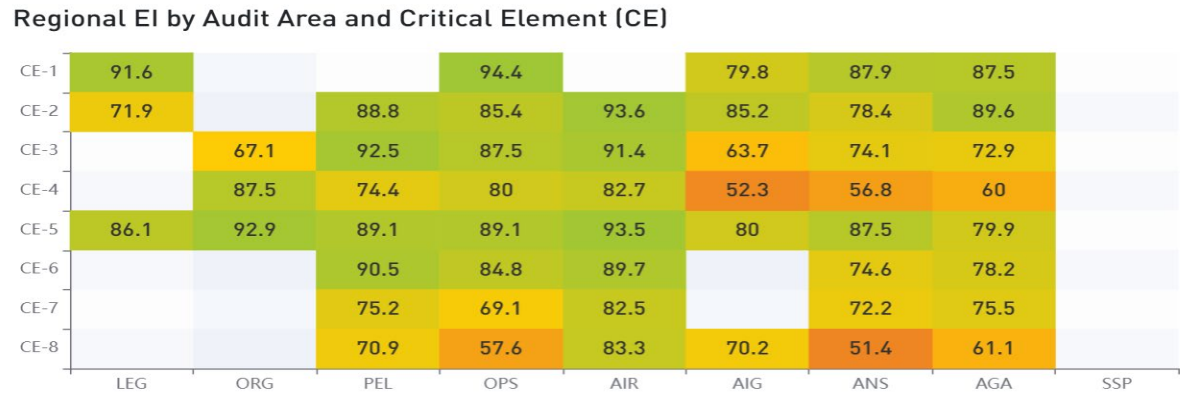

***Graph 14. Critical elements of a State's safety oversight system***

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. 64 % which is above the world EI 70.46% (as of 24 August 2026). Three (3) States are currently below EI 60%. No SSC in the MID Region.




***Graph 15: Source: ICAO iSTARS, as of 24 August 2026***

**Regional EI by Audit Area and Critical Element (CE):**




***Graph 16: Regional EI by Audit Area and Critical Element (CE): Source: ICAO USOAP CMA Online Framework (OLF), as of 24 August 2026***

AIG, ANS, & AGA areas and CE4, CE7, and CE8 still need more improvement. Moreover, the effective implementation in training, surveillance, and resolution of Safety concerns need to be improved.




***Graph 17: Top 3 lowest PQ EI by Audit Area Source: ICAO USOAP CMA Online Framework (OLF), as of 24 August 2026***

**Regional PPQ EI by Audit Area and Critical Element (CE)**: the lowest CEs below 60% by area are CE3, CE4, CE5, and CE8




***Graph 18: Regional PPQ EI by Audit Area and Critical Element (CE): Source: ICAO USOAP CMA Online Framework (OLF), as of 24 August 2026***

### 3.1.2 ICAO USOAP CMA Activities — MID States Status for 2026

The main activities under USOAP-CMA are:

- **Audit:** This activity is performed on-site to conduct a systematic and objective assessment of State's safety oversight system. It can be full or limited.
- **ICAO Coordinated Validated Mission (ICVM)**: This activity is performed to assess a State's effective corrective actions addressing previously identified findings related to PQs requiring an on-site activity.
- **Off-site Validation activity**: This activity is performed to assess a State's effective corrective actions addressing previously identified findings related to PQs not requiring an on-site activity.
- **State Safety Programme Implementation Assessment (SSPIA):** This activity is to perform a qualitative (non-quantitative) assessment of the progress made by State in implementing SSP. Broken down into 8 areas: , PEL, OPS, AIR (AMO aspects only), ANS (ATS aspects only), AGA, AIG, and SSP.

| State/organization | Type of activity | Date | Status |
|---|---|---|---|
| Kuwait | Audit | 4 to 16 Nov 2025 | conducted |
| Bahrain | Audit | 30 Jun to 13 Jul 2026 | Postponed |
| Egypt | Audit | 5 to 17 May 2026 | Postponed |
| Iran (Islamic Republic of) | ICVM | 11 to 18 May 2026 | Postponed |

***Table 7: ICAO USOAP CMA Activities — MID States Status for 2026***

## *3.2 MID Region State Safety Programme (SSP)*

### 3.2.1 MID Region State Safety Programme (SSP) Implementation challenges

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 priorities. Common challenges have been identified based on the States' feedback, as follows:

- Legislation amendments;
- Capacity building and training;
- Limited qualified personnel;
- Limited guidance to establish and develop a 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

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.

### 3.2.2 National Aviation Safety Plan (NASP)

In line with the ICAO Safety Strategic Objective, the 2026-2028 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.

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).

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 in order to support States with NASP development.

The main 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 of new technologies;
- Limited collaboration, coordination, and communication amongst stakeholders;
- Limited guidance to develop a robust safety risk management framework and processes; and
- Geopolitical situation in the region.

### 3.2.3 6th MID Region Safety Summit

The United Arab Emirates (UAE) has graciously volunteered to host the 6th MID Region Safety Summit in 2026. This reflects the UAE's dedication to promoting aviation, safety and fostering regional collaboration.

### 3.3 Human Factors and Human Performance

As the aviation system changes, it is imperative to ensure that human factors and the impact on human performance are taken into account, both at service provider and regulatory levels. Human factors and human performance are terms that are sometimes used interchangeably.
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.
ICAO emphasized the importance of addressing human factors and human performance issues by publishing ICAO Doc 10151 'Manual on Human Performance (HP) for Regulators (first edition 2021).
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. In addition, Team Resource Management (TRM) was introduced into ATC following the success achieved with CRM in the airline community enhancing teamwork practices. The practice is applied within virtually every airline with training given to pilots and other operational staff.

Within the last decade in ATM there have been numerous advances in widespread acceptance of SMS under the guidance of ICAO. ICAO has now mandated the use of SMS Manual Doc 9859 to standardize the approach to safety. TRM as defined by ICAO is an integral component of SMS under human factor.

### 3.4 Competence of Personnel

Availability of well-trained and competent aviation personnel is paramount to the safety and resilience of the aviation industry. Some of States in MID Region has 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.

### 3.5 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 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.

Some initial integration steps have already been taken in the safety and security domains-in accordance with ICAO Annex 17 and Annex 19 Standards and Recommended Practices (SARPs), the Contracting States are required to establish reporting systems for the analysis of security and safety information. States have been advised by ICAO to consider aligning their security reporting mechanisms with existing aviation safety reporting systems, to allow for an integrated approach to the management of risks. This should also enable the use of existing safety tools and concepts especially in relation to the appropriate protection of data and of those reporting for the benefit of aviation security, as well as foster the implementation of a safety and security culture amongst States and stakeholders.

### 3.5.1 *Cybersecurity Risks*

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 of the need to manage the 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.

### 3.5.2 *GNSS Interference & Spoofing Risks*

GNSS interference has been identified as a safety concern and remains the main challenge hindering the implementation and use of Performance-based Navigation (PBN) in the Region. IATA continues to monitor the situation closely.

IATA AME is working closely with all relevant stakeholders to ensure effective reporting of GNSS interferences and to develop mitigation measures that reduce its impact. GPS signal loss events increased dramatically in the first half of 2025 compared to 2024.

### 3.5.3 *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.

### 3.5.4 *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 CAAs, 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 the 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.

### 3.5.5 *Aviation Health Safety (AHS) Risks*

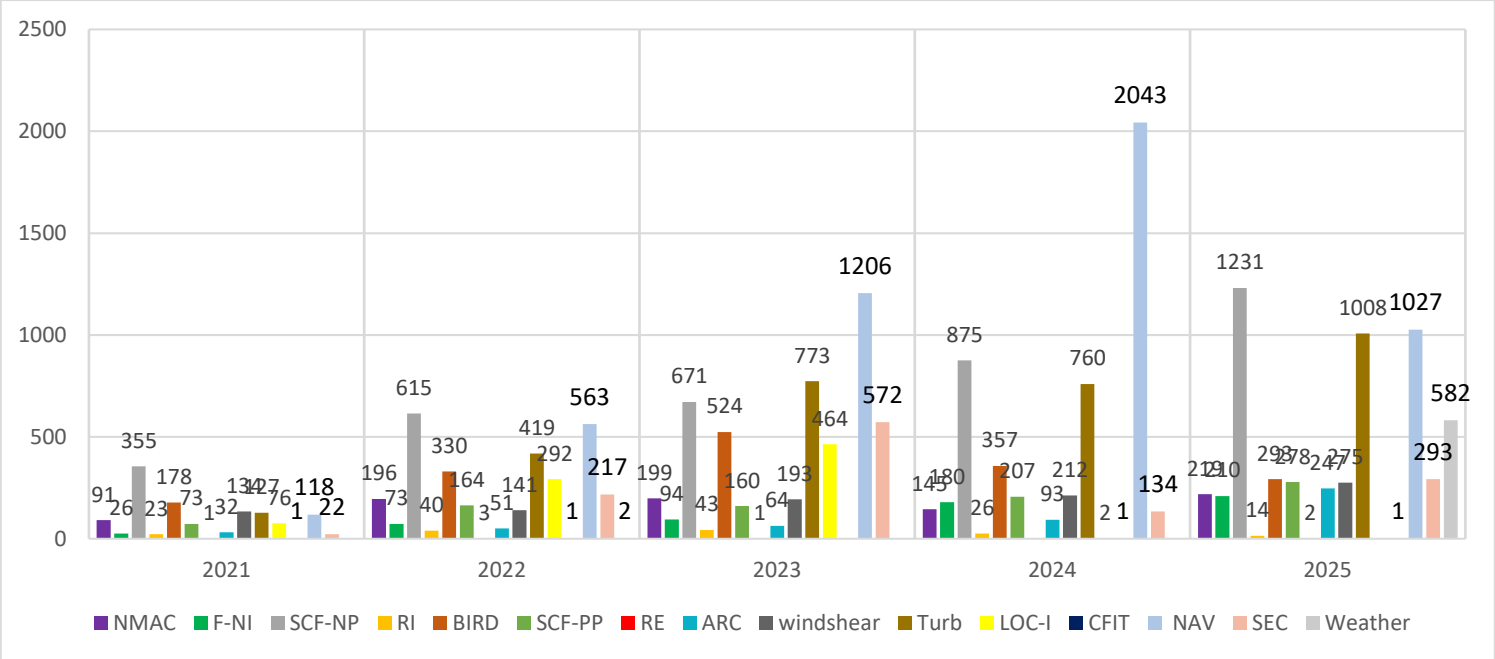
The COVID-19 pandemic has shown that the harmonization of health policies affecting aviation, and in particular in the CAT domain, has become an important topic to help overcome the pandemic. The objective is to minimize the impact of health safety threats in CAT. Health safety threats should be included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

COVID-19 is unlikely to be the last pandemic we will be faced with. It is crucial to continue supporting the 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.

## 3.6 Incidents Data

### 3.6.1 Incident Data shared by States for the Period 2021-2025

Graph 19 below shows that the number of Navigation (NAV) incident reported is the highest one followed by the system component failure-non-power plant (SCF-NP), Wake Turbulence, airborne conflict incidents (near mid-air collision) and birds. For an in-depth analysis and to identify the underlying safety issues, MID States should provide further safety information and safety analysis to come out with strategic initiatives and mitigations.




***Graph 19: Total number of incidents provided by the MID States for the period 2021-2025***

### 3.6.2 IATA Data

#### 3.6.2.1 Global Accidents

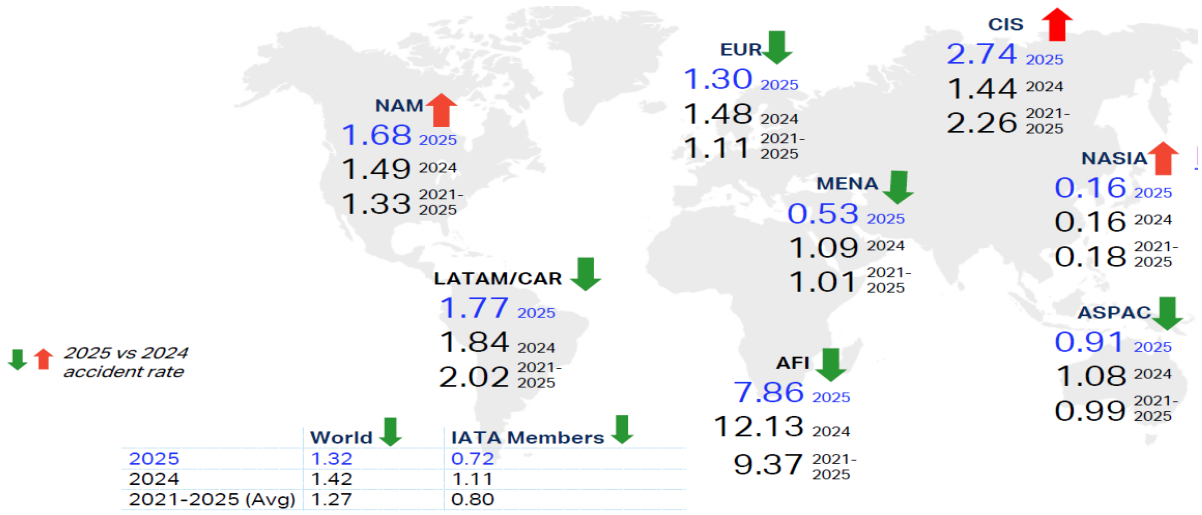
***IATA 2025 MID Safety Report***

In 2025, the global aviation industry transported under 5 billion passengers across 38.7 million flights. Commercial aviation continues to be one of the safest modes of public transportation. This is demonstrated by a sustained long-term reduction in accident rates, declining from 3.72 accidents per million sectors in 2005 to 1.32 accidents per million sectors in 2025. This improvement reflects the industry's enduring commitment to safety, supported by safety management systems, technology, training, and the promotion of a strong safety culture aimed at mitigating future risk.

For the second consecutive year, tail strikes, runway excursions, and landing gear events remained the most frequent accident categories. These trends reinforce the importance of vigilance, data-driven interventions, and targeted training to further reduce operational risk and sustain safety improvements.

Despite the Region continues face challenges due to disruptions to aviation caused by geopolitical tensions. during the year, Middle East and North Africa (MENA) operators' accident rate per million

sectors decreased from 1.09 in 2024 to 0.53 per million sectors in 2025. The fatality risk rate has remained at zero since 2019




***Graph 20: Accident Rate by Region of Operator***

The MID RMA transition regional plan for Automatic Dependent Surveillance – Broadcast (ADS-B) based aircraft height monitoring, initiated in 2024, has achieved major progress in 2025. Bahrain and Oman CAAs have provided data supporting height monitoring for approximately 5000 aircraft. However, implementation challenges remain, particularly regarding national regulators' approvals for ADS-B data submission.

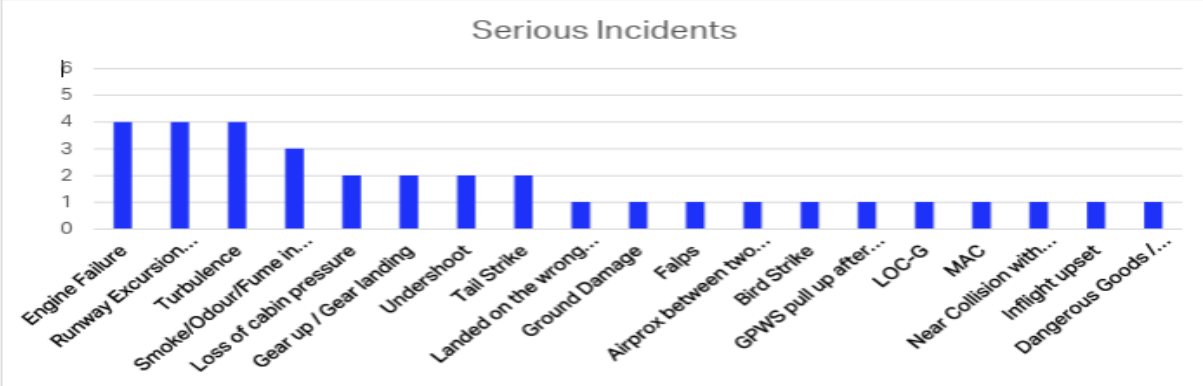
Large Height Deviations (LHD) events persist in MID Region. Inconsistent LHD reporting from several states, particularly those with high traffic volumes, undermines confidence in Safety Monitoring Report (SMR) results. Conversely, a significant increase in LHD reports has been observed at the Eastern Boundaries of Muscat FIR in the Arabian Sea and in Sana'a FIR.

GNSS interference has been identified as a safety concern and remains the main challenge hindering the implementation and use of Performance-based Navigation (PBN) in the Region. IATA continues to monitor the situation closely.

IATA AME is working closely with all relevant stakeholders to ensure effective reporting of GNSS interferences and to develop mitigation measures that reduce its impact. GPS signal loss events increased dramatically in the first half of 2025 compared to 2024.

## Serious incidents

Building on the occurrence reporting platform, IATA expanded its safety performance monitoring in 2025 by formally capturing serious incidents and their corresponding final investigation reports. Incidents or occurrences, including serious incidents, serve as leading indicators and often provide early warning signals prior to the occurrence of accidents. Although the number of recorded serious incidents is limited at this stage, the observed trends, as seen in the chart below, are consistent with patterns identified in other internal databases The serious incident database together with the occurrence database will continue to evolve and mature in 2026, enabling more robust analysis and stronger predictive capability to support proactive risk management and incident prevention efforts.




***Graph 21: IATA serious incidents***

## *3.6.3* IATA Data

### 3.6.3.1 IATA Operational Safety Audit (IOSA) – Risk-Based Approach

In 2025, the IATA Operational Safety Audit (IOSA) Program reached a key milestone with the full transition of IOSA registration renewal audits to a risk-based audit methodology, performed exclusively by IATA-trained and qualified auditors. This evolution marked a significant step forward for the program, with IOSA-registered operators experiencing more comprehensive audits that assess not only compliance with standards, but also the maturity of their SMS and the robustness of safety-critical operational areas. As a result, the IOSA Program has further strengthened its ability to evaluate safety barriers and to identify meaningful opportunities.

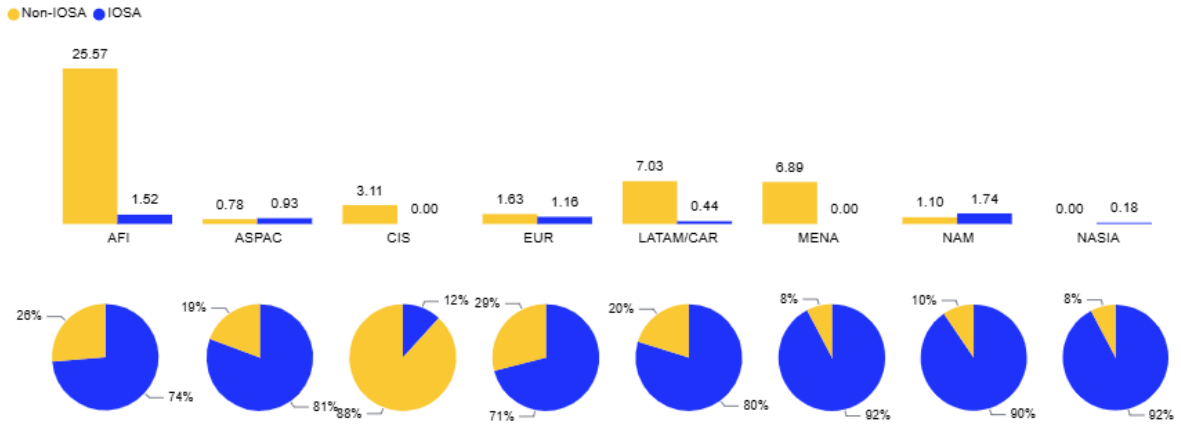
With an initial focus on IOSA, IATA Connect provides a secure platform for information exchange and collaboration to support continuous improvements in aviation safety.

Throughout 2025, IATA Connect platform continued to support the IOSA community through enhanced functionalities, including expanded access to IOSA Standards Manual (ISM) content for IOSA-registered airlines, improved capabilities to download and analyse IOSA audit reports, and enhanced tracking of airline profile information.

By the end of the year, the IATA Connect community included approximately 5,700 aviation safety professionals, with 1,023 designated IOSA airline administrators. During the year, more than 4,000 requests for airline profile access were processed, along with approximately 6,000 access requests for IOSA audit reports.

To increase efficiency in regulatory oversight and reduce duplication of oversight activities for regulators and airlines, IATA continued to collaborate with civil aviation authorities (CAAs) worldwide in 2025. During the year, two new Memoranda of Understanding (MoUs) were signed, bringing the total number of civil aviation authorities using IOSA to complement their regulatory oversight to 40.

The IOSA Registry continued to grow in 2025, reflecting sustained industry confidence in the IOSA Program. During the year, 18 airlines were added to the IOSA Registry, bringing the total number of airlines on the Registry to 449 by year-end.




***Graph 22: 2025 Accident rate (per Million Sector) and sector count (percentage) by Region of Operator. (IOSA vs non-IOSA)***

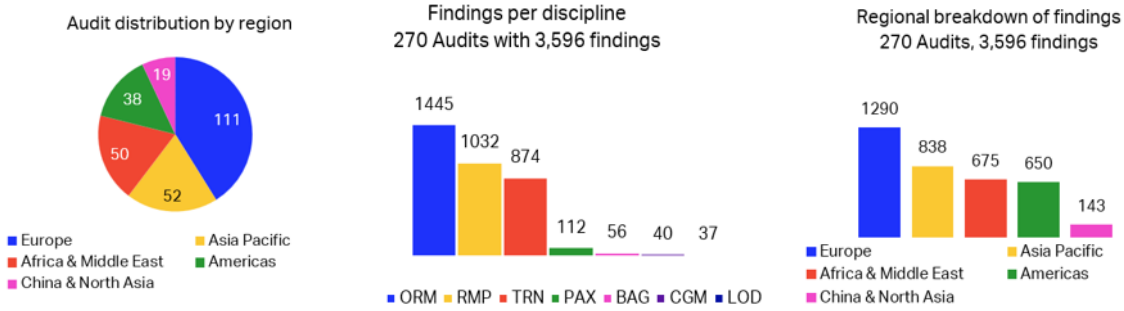
### 3.6.3.2 IATA Safety Audit for Ground Operations (ISAGO)

IATA Safety Audit for Ground Operations (ISAGO) is the industry program for the global oversight of ground handling service providers (GHSPs). In June 2025, a new audit methodology was introduced to address industry demands for stronger implementation assessments, alignment of audit standards with industry standards as published in IGOM, AHM and ICHM, with focus on reduction of operational variations and improvement of safety performance.

The new approach has contributed to a rise in accredited stations and increased engagement from nearly 200 ISAGO airline members. Currently, there are 231 GHSPs listed in the ISAGO Registry, delivering services at 433 accredited stations across 239 airports worldwide.

Throughout 2025, 388 audits have been conducted - 120 more than in 2024. Of these, 299 audits were performed under the new methodology, providing valuable operational data on procedural variations and findings

The following audit results analysis is based only on the 270 ISAGO audits were conducted under the new ISAGO model audit methodology between June and October 2025, resulting in 3,596 findings. The average number of findings per report is 13. Top Findings and variations are fully detailed in the following infographics.




#### Top ISAGO findings for 2024

**ORM top findings –** organization faces significant challenges in **safety culture** and **operational governance**, poor promotion of safety culture, ineffective communication and lack of change management. There is no proper delegation of duties, coupled with deficiencies in GSE maintenance

and oversight of outsourced providers. Training, documentation, and performance monitoring for third parties are inadequate, and record retention is weak. Within the Safety Management System, critical gaps exist such as missing SPIs, ineffective hazard identification, absent risk registers, and inadequate safety reporting and data analysis. Monitoring

**Documentation finding analysis** – Findings data indicates that GHSPs may not fully understand how to correctly perform gap analysis and self-assess against the audit standards. This trend also highlights the need for GHSPs to implement strong **internal quality assurance systems** to review gap analyses before submission, ensuring accuracy and completeness.

**Training (TRN) top findings – lack** of evidence for trainer competence and unsupervised OJT. The train-the-trainer program is non-standardized, and practical training for load control, ramp, and passenger handling is not implemented. Records reveal expired or overdue training for SMS, Security, ERP, and GEN modules, while OJT modules for ramp and passenger handling are absent. There is no mechanism to track recurrent training,

**Ramp (RMP) top findings -** Ramp handling operations show safety lapses, including incomplete or missing walkaround checks before GSE positioning and failure to raise safety rails. Speeding, non-use of seat belts, and leaving GSE unattended with engines running were observed.

## *3.7 Region Safety Performance - Safety Indicators-Proactive*

### 3.7.1 Goal 2: Strengthen States' Safety Oversight Capabilities

| Safety Indicator | Safety Target | MID | Remark |
|---|---|---|---|
| A. Regional average EI | a. Increase the Regional average EI to be above 80 by 2028 | **76,64%** | |
| B. Number of MID States with an overall EI over 60%. | b. All MID audited States to be above 60% EI by 2028 | 10 States | |
| C. States to improve EI for CE-4 & CE-8 | c. Number of MID States average EI for CE-4 & CE-8. (AIG, AGA, ANS) to be above 60% by 2028 | 8 states | |
| E. Regional average EI of PPQs | e. Regional average EI PPQs above 75% by 2028 | 73.11% | |

***Table 8: Goal 2***

### 3.7.2 Goal 3: Establish & manage effective State safety Programmes (SSP)

| Safety Indicator | Safety Target | MID | Remark |
|---|---|---|---|
| Regional Average SSP EI | TBD by 2028 | TBD | |
| States to complete SSP self-assessment | All states by 2028 | TBD | |
| States to establish an SSP | All States by 2028 | TBD | |

***Table 9: Goal 3***

### 3.7.3 Goal 4: Strengthen collaboration at the regional and national levels to address safety issues

| Safety Indicator | Safety Target | MID | Remark |
|---|---|---|---|
| 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<br>All States as a second priority having EI below 80% BY 2028 | **10 states** | |
| Number of States in need of assistance to address safety issues and facilitate SSP & NASP implementation through NCLB MID Strategy/Technical assistance | All States by 2028 | 3 States | |
| Percentage of safety enhancement initiatives (SEIs)/Safety Actions completed | 80% by 2028 | 80% achieved for MID-RASP 2023-2025 SEIs | |
| Number of States sharing safety information to support the development of MID ASR | All States | 6 | |

***Table 10: Goal 4***

### 3.7.4 Goal 5: Strengthen aviation safety planning (RASP & NASP)

| Safety Indicator | Safety Target | MID | Remark |
|---|---|---|---|
| MID Region to publish an updated RASP in consultation with states and industry | 2026 | MID RASP 2026-2028 approved and published | |
| Number of States that have developed and published NASP | At least 10 States by 2026 | 9 | |

### 3.7.5 Goal 6: Expand the use of Industry Programmes and safety information sharing networks

| Safety Indicator | Safety Target | MID | Remark |
|---|---|---|---|
| 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.<br><br>b. All MID States with an EI of at least 60% use the IATA Operational Safety Audit (IOSA) to complement their safety oversight activities. | 6 states (40%) | |
| Use of the IATA Safety Audit for Ground Operations (ISAGO) certification, as a percentage of all Ground Handling service providers | The IATA Ground Handling Manual (IGOM) endorsed as a reference for ground handling safety standards by all MID States by 2025 | 6 States (40%) | |

***Table 11: Goal 5***

# 4 Safety Priorities for MID Region

One of the GASP goals is for States to improve their effective safety oversight capabilities and to progress in the implementation of SSPs. 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. In addition to addressing organizational/systemic safety issues, GASP addresses high-risk categories 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. Therefore, the Regional operational Safety risks, organizational issues, and the emerging safety risks will be defined and which would support and improve the development of the Safety Enhancement Initiatives (SEIs).

## *4.1 Regional Operational Safety Risks*

Operational safety risks arise during the delivery of a service or the conduct of an activity (e.g. operation of an aircraft, airport or of air traffic control). Operational interactions between people and technology, as well as the operational context in which aviation activities are carried out are taken into consideration to identify expected performance limitations and hazards.

The reactive and proactive safety information provided by ICAO, IATA, MID Region States and the safety risk portfolio were considered for identifying the Regional operational risks. Table12 shows that each identified safety issue is mapped to its respective potential accident outcome (s), and the safety risk Portfolio for the MID Region as follow:

| Potential Accident Outcome | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Safety Issues** | **CFIT** | **LOC-I** | **MAC** | **GCOL** | **RE/ARC** | **Injury Damage inflight** | **Injury Damage on Ground** |
| **Monitoring of flight paremeters 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 | | | | |

| Potential Accident Outcome | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Safety Issues** | **CFIT** | **LOC-I** | **MAC** | **GCOL** | **RE/ARC** | **Injury Damage inflight** | **Injury Damage on Ground** |
| **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/Winds hear** | | 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 | | | | | |
| **Risk related to Conflict zones** | x | x | x | x | x | | |

***Table 12: Safety Risk Portfolio***

First, Considering ICAO reactive safety information, the Regional operational safety risks identified was runway safety (RE). Considering both reactive and proactive safety information, the safety risk portfolio identified a number of safety issues that could potentially result in Loss of Control In-flight (LOC-I), Controlled Flight into Terrain (CFIT), Mid-Air Collision (MAC), and Runway Incursion (RI) accidents. Accordingly, LOC-I, CFIT, MAC, RE and RI, as well as other relevant occurrence categories such as Turbulence Encounter (TURB) and System/Component Failure or Malfunction – Non-Powerplant (SCF-NP), were retained as Regional High-Risk Categories (R-HRCs).

Except for Runway Excursion (RE), no accidents associated with these categories were recorded in the MID Region during the 2021–2025 period. Nevertheless, their retention as Regional High-Risk Categories (R-HRCs) reflects the potential severity of the associated accident outcomes, the continued presence of relevant precursors and safety issues, and the importance of proactive safety risk management rather than relying solely on historical accident data.Based on the analyses of reactive

and proactive safety information, it is concluded that the regional operational safety risks for the MID Region 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).

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

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

**1. Loss of control inflight (LOC-I)**

Loss of control usually occurs because the aircraft enters a flight regime that 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.

**2. Runway Excursions (RE):**

RE is a veer or overrun off the runway surface. RE events can happen during take-off or landing. During the period 2021-2025, Runway Excursion 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.

**3. 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 2025, no mid-air collision accident has been recorded. 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 in Gulf area 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.

**4. 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 safety data and safety information are needed for further analysis to identify the underlying safety issues.

**5. 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 safety data and safety information regarding runway incursion to identify the root causes and associated safety issues.

### *4.2 Organizational Issues*

Organizational issues are systemic issues which take into consideration the impact of organizational culture, and policies and procedures on the effectiveness of safety risk controls. Organizations include entities in a State, such as the civil aviation authority (CAA) and service providers, such as operators of aeroplanes, ATS providers, and operators of aerodromes. Organizations should identify hazards in systemic issues and mitigate the associated risks to manage Safety. A State's responsibilities for the management of Safety comprise both safety oversight and safety management, collectively implemented through an SSP.

#### 4.2.1 Enhance States' Safety Oversight Capabilities

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. 64 % which is above the world EI 70.46% (as of 24 August 2026). Three (3) States are currently below EI 60.

The areas of AIG, ANS, & AGA and CE4, CE7, and CE8 still need more improvement. Moreover, the effective implementation in training, surveillance, and resolution of Safety concerns need to be improved.

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

#### 4.2.2 Improve Safety Management

An SSP requires increased collaboration across operational domains to identify hazards and manage risks. Aviation authorities and organizations should anticipate new emerging issues 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 several activities focused on SSP implementation including Safety Risk Management (SRM), safety performance management, developing safety intelligence.

Additionally, the development of National Aviation Safety plan (NASP) is one of the MID region priorities and 9 States had developed their NASPs.

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. It also provides a framework in which regional and national aviation safety plans (RASPs and NASPs) are developed and implemented.
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).

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

### 4.2.3 Human Factors and Human 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.

### 4.2.4 Competence of Personnel

Availability of well-trained and competent aviation personnel is paramount to the safety and resilience of the aviation industry. Some of States in MID Region has 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

### 4.2.5 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 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.

#### 4.2.5.1 Cybersecurity Risks

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 of the need to manage the 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.

#### 4.2.5.2 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.

#### 4.2.5.3 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 CAAs, 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 the 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.

#### 4.2.5.4 aviation health safety (AHS) risks

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.
COVID-19 is unlikely to be the last pandemic we will be faced with. It is crucial to continue supporting the Middle East 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.

#### 4.2.5.5 GNSS Interference/Spoofing Risks

GNSS interference has been identified as a safety concern and remains the main challenge hindering the implementation and use of Performance-based Navigation (PBN) in the Region. IATA continues to monitor the situation closely.
IATA AME is working closely with all relevant stakeholders to ensure effective reporting of GNSS interferences and to develop mitigation measures that reduce its impact. GPS signal loss events increased dramatically in the first half of 2025 compared to 2024.

### *4.3 Emerging Issues*

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. Therefore, it is important that the international aviation community remain vigilant to identify emerging safety issues and develop mitigations to address them. Failure to address emerging safety issues can affect a State, Region or industry's ability to mitigate the safety risks.

#### 4.3.1 AAM and new Entrants

The number of drones at the global level has increased. 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.

Vertiports: VTOL-capable aircraft will use aerodromes, heliports and the so-called vertiports. 'Vertiport' means an area of land, water or structure used or intended to be used for the landing and take-off of VTOL-capable aircraft. Vertiports are classified as aerodromes for the purpose of aerodrome and vertiport regulations.

### Artificial intelligence (AI) in Aviation

The next generation of automation in aviation systems is enabled and accelerated by the use of AI technologies. Whilst the trend towards increasing automation has resulted overall in improved safety, the introduction of AI will likely be modifying the paradigm of interaction between the Human and the AI-based systems (reduced crew operations), and in parallel even open the path towards more autonomous types of operations AAM.

### Digitalization in the aviation field

Aviation is moving fast to digitalize all areas, as there are demonstrated tangible benefits in safety, economics, operations, traffic management and control, manufacturing, training and maintenance.

Automation, remote control, machine-to-machine communication, robotics: 3D printing, virtual and augmented reality, blockchain, AI/cognitive computing, and sensors are among the technologies that will increasingly be used in aviation and that will impact the activity of regulators and aviation authorities.

To exploit the full digitalization potential, the aviation sector needs to progress in the 'information management' dimension. Today, the fragmentation of data in terms of both taxonomy and storage does not allow significant progress for the analysis according to the latest methodologies. These developments are increasingly challenging traditional aviation regulations and calling for an evolution towards more performance based, technology-neutral requirements, which will enable the novel business models that emerge from the digital transformation, increasing at the same time safety and efficiency.

## 5. MID-RASP SEIs Implementation Status

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 NASPs.

The tenth meeting of the Regional Aviation Safety Group – Middle East (RASG-MID/10) meeting was held in Muscat, Oman, 14-17 May 2023; endorsed the MID-RASP 2023-2025 including 24 Safety Enhancement Initiatives (SEIs) and 63 safety actions through RASG-MID Conclusion 10/7. In addition, the RASG-MID/13 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 at **Appendix B.**

## 6. Final Conclusions

One of the GASP goals is for States to improve their effective safety oversight capabilities and to progress in the implementation of SSPs. In addition to addressing organizational issues, GASP addresses Global high-risk categories (G-HRCs) 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.

Following the analysis of the reactive and proactive safety information provided by ICAO, IATA, and MID States for the period 2021 - 2025, it was concluded that the safety priorities defined for the MID Region are:

**A. Regional operational Safety risks**

1. Loss of Control-Inflight (LOC-I);
2. RE and ARC during landing;
3. Mid-Air Collision (MAC)
4. Controlled Flight Into Terrain- (CFIT); and
5. Runway incursion (RI).

Other considered occurrence categories in line with GASP 2026-2028 Edition: SCF-NP and TURB

**B. Organizational issues:**

1. Strengthen States' Safety Oversight capabilities;
2. Improve Safety Management;
3. Human factors and human performance;
4. Competence of personnel; and
5. Manage Risk interdependencies.
    - Cybersecurity risks
    - GNSS Interference/Spoofing Risks
    - 5G interference with Radio Altimeter
    - aviation health safety (AHS) risks
    - Risks arising from conflict zones, and
    - Security risks with an impact on aviation safety.

**C. Emerging Issues**

1. AAM and new entrants including UAS and eVTOL.

## *Appendix A: CICTT Occurrence Categories*

| Code | Description |
|---|---|
| **ADRM** | Aerodrome |
| **AMAN** | Abrupt Maneuver |
| **ARC** | Abnormal runway contact |
| **BIRD** | Bird |
| **CABIN** | Cabin safety events |
| **CFIT** | Controlled flight into/towards terrain |
| **CTOL** | Collision with obstacles during take-off and landing |

| | |
|---|---|
| **EVAC** | Evacuation |
| **F-NI** | Fire/smoke (non-impact) |
| **F-POST** | Fire/smoke (post-impact) |
| **GCOL** | Ground collision |
| **ICE** | Icing |
| **LOC-I** | Loss of control in-flight |
| **LOC-G** | Loss of control-ground |
| **OTHR** | Other |
| **RAMP** | Ground handling |
| **RE** | Runway excursion |
| **SCF-NP** | System/component failure (non-power plant) |
| **SCF-PP** | System/component failure (power plant) |
| **TURB** | Turbulence encounter |
| **UNK** | Unknown or undetermined |
| **USOS** | Undershoot/overshoot |
| **WILD** | Wildlife |
| **WSTRW** | Wind shear or thunderstorm |

## *Appendix B: Safety Actions- Consolidated List of SEIs with their respective 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) | ICAO | **Completed for 2023/** continuous for 2024/2025 | 2023-2025 |

| SEI Code | SEI Name | Actions | Owner(s) | Status/Progress | Completion Date |
|---|---|---|---|---|---|
| | | Implementation. | | | |
| **G1-SEI-03:** | Runway Safety- Runway Incursion | **A1-** Conduct Capacity Building Activities on the Advanced Surface Movement Guidance and Control System (A-SMGCS) Implementation | ICAO To be supported by Euro-Control, FAA | **Completed**<br><br>Conducted February 2023 | 2023-2025 |
| **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**<br>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**<br><br>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 | 2023-2025 |

| SEI Code | SEI Name | Actions | Owner(s) | Status/Progress | Completion Date |
|---|---|---|---|---|---|
| | | | | agreed. **Completed** | |
| | | **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 |
| **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 ACAO | 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 ACAO supported by FAA and Boeing | ACAO 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 |

| SEI Code | SEI Name | Actions | Owner(s) | Status/Progress | Completion Date |
|---|---|---|---|---|---|
| | | **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 |
| **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.<br><br>ACAO and Singapore CAA: an AOC certification & Flight Inspectors course conducted in Amman the 29 -2 Jun 2023. **Completed**/continuous for 2024.<br><br>ICAO & GCAA Symposium: "The Future of Aviation safety and Aircraft Accident Investigation" in Dubai, during 3 to 4 May 2023.<br><br>"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.<br>Conference on "Assistance to Aircraft Accident Victims and their Families" (AAAVF 2024) | 2023-2025 |

| SEI Code | SEI Name | Actions | Owner(s) | Status/Progress | Completion Date |
|---|---|---|---|---|---|
| | | | | conducted 8-9 May 2024.<br><br>Aviation Safety and Aircraft Accident and Incident Investigation Symposium planned to be conducted this year in Abu Dhabi.<br><br>ACAO and Singapore CAA conducted a course on resolution of safety issues CE8 in Amman the 19 -23 Jan 2025 | |
| | | **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).<br><br>ANS Technical assistance to Kuwait, Sudan, Jordan and Lebanon conducted.<br>**Completed.**<br><br>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.<br>**Completed.** | 2023-2025 |

| SEI Code | SEI Name | Actions | Owner(s) | Status/Progress | Completion Date |
|---|---|---|---|---|---|
| | | **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, ACAO, 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 ACAO | **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 |
| **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 |

| SEI Code | SEI Name | Actions | Owner(s) | Status/Progress | Completion Date |
|---|---|---|---|---|---|
| | | **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 practices on assessing the risks and sharing of information related to the overflying of conflict zones in coordination with RASFG-MID and MIDANPIRG. | ICAO | Planned 2026 | 2023-2025 |
| | | **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<br><br>ACAO AFCAC ECAC | **Completed.**<br><br>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 |

| SEI Code | SEI Name | Actions | Owner(s) | Status/Progress | Completion Date |
|---|---|---|---|---|---|
| | | **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**<br>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<br><br>SMS & Flight Data analysis workshop for airlines.<br><br>ACAO, Airbus and ICAO.<br><br>ACAO, ICAO & MENA RSOO States | SSP training course and SSP workshop conducted. (Kuwait & Oman) 2023<br><br>SRM Workshop conducted 2024.<br><br>SMS & Flight Data analysis workshop for airlines Conducted Nov 2023.<br><br>**Completed**/Continuous for 2024.<br><br>SSP workshops provided for UAE & Jordan.<br><br>SRM workshop for Jordan<br><br>**Completed** | 2023-2025 |

| | | | | | |
|---|---|---|---|---|---|
| | | **A2-** Conduct SSP Technical Assistance missions | ICAO and States | Conducted to Egypt Jan2025<br>**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.<br>**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.<br>**Completed** | 2023-2025 |
| **Goal 4: Increase Collaboration at the Regional Level** | | | | | |
| **G4-SEI-01:** | Development and Implementation of MID-RASP | **A1-** Development and Implementation of MID-RASP 2023-2025 Edition | SEIG | Published May 2023. **Completed** | 2023-2025 |
| **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**<br>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.<br>**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<br>(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<br>**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.<br>**Completed.** | 2023-2025 |
| | | **A6 –** Conduct a Wildlife Hazard Management Control capacity building Activities | ICAO, ACAO, WBA | Symposium planned Dec 2025<br>**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.<br><br>**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 |

- END -

## CREDITS

The RASG-MID thanks all those who contributed to the elaboration of this Annual Safety Report and provided necessary support and information to the members of the Annual Safety Report Group (ASRG). Special thanks go to:

**Mr. Mohamed Chakib**
International Civil Aviation Organization (ICAO)

**Mr. Jehad Faqir**
International Air Transport Association (IATA)

-END-

CAO, Middle East Office

Egyptian Civil Aviation Complex, Cairo Airport Road, Cairo, Egypt

Mail: P.O. Box 85, Cairo Airport Post Office Terminal One, Cairo 11776,
Arab Republic of Egypt

Tel.: +20 2 22674841/42/45/46

+20 2 22692173

Fax: +20 2 22674843

E-mail: icaomid@icao.int

