



ICAO MID

SAFETY

# MID-RASP

MIDDLE EAST REGIONAL AVIATION SAFETY PLAN



Second Edition

2023-2025

# MIDDLE EAST REGIONAL AVIATION SAFETY PLAN (MID-RASP)



ICAO

## SECOND EDITION 2023–2025

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## Executive Summary

The Global Aviation Safety Plan (GASP) presents the global strategy for the continuous improvement of aviation safety. The purpose of the GASP is to continually reduce fatalities, and the risk of fatalities, by guiding the development of a harmonized aviation safety strategy.

The GASP promotes the effective implementation of a State safety Programme (SSP) including National Aviation Safety Plan (NASP), a State's safety oversight system, and a risk-based approach to managing safety as well as a coordinated approach to collaboration between States, international organizations, and industry.

The vision of the GASP is to achieve and maintain the aspirational safety goal of zero fatalities in commercial operations by 2030 and beyond, which is consistent with the United Nations' *2030 Agenda for Sustainable Development*. The plan's mission is to continually enhance international aviation safety performance and resilience by providing a collaborative framework for States, regions and industry.

The Middle East Regional Aviation Safety Plan (MID-RASP) 2023-2025 Edition considers and supports the objectives and priorities of GASP 2023-2025 Edition. MID-RASP also emphasizes the importance of identifying and mitigating risks at MID region level. In addition, MID-RASP is to create a common focus on regional aviation safety issues as a continuation of the MID region work to improve aviation safety and to comply with ICAO standards and supports MID States and industry in implementing the GASP 2023-2025 Edition.

Furthermore, the States national aviation safety plan (NASPs) should be developed in alignment with the GASP and the MID-RASP. However, priority should be given to national safety concerns. Moreover, the NASP should be also aligned and coordinated with the MID-RASP (as appropriate) and with other efforts aimed at enhancing aviation safety.

MID-RASP provides a three-year plan for States in MID Region to strengthen its safety oversight capability and implement an effective safety management. This relates to the continuous reduction of regional operational risks and improvement in States' safety oversight and safety management capabilities. It adopts a risk-based approach to managing safety at regional-level through a coordinated approach and collaboration between States in the region, regional organizations and industry.

The RASG-MD is the governing body responsible for the development, implementation and monitoring of the MID-RASP, in collaboration with the ICAO MID Office, international and regional organizations and with the aviation industry. The MID-RASP is to be reviewed by the Safety Enhancement Implementation Group (SEIG) every year mainly to include new identified Safety Enhancement initiatives' (SEIs), review the existing SEIs, as well as their respective actions.

The MID Region's strategic approach to managing safety at the regional level is to address the region's operational risks and other safety issues in a timely manner. Therefore, the MID-RASP strategic approach would focus on organizational challenges/issues, regional operational safety risks, and emerging risks as indicated below.

- a. Organizational challenges/issues including the States 'safety oversight, safety management, aircraft accident and incident investigation, human factors and competence of personnel, and Cybersecurity.
- b. Regional operational safety risks, the focus would be on Regional high risks categories (R-HRC) identified in the GASP 2023-2025 Edition mainly the LOCI-I, CFIT, RE, RI, and MAC; and
- c. Emerging risks, the focus would be on COVID-19 pandemic outbreak, Civil drones (Unmanned Aircraft Systems), GNSS outages, impact of security on safety, and 5G interference with Radar Altimeter frequency band.

MID Region safety indicators and targets were aligned with the 2023-2025 GASP goals and regional specific objectives and priorities. The RASG-MID would use the indicators listed in the MID Region Safety Performance Measurement & Monitoring (SPMM) to measure safety performance and monitor each regional safety target. Moreover, the RASG-MID would continuously monitor the implementation of the SEIs listed in the MID-RASP and measure safety performance of the regional civil aviation system, to ensure the intended results are achieved, using the MID Region SPMM.

The MID Region SPMM includes six (6) Goals in line with GASP 2023-2025 Edition. For each Goal established in the MID Region SPMM, identified SEI(s) be mapped to it including their respective actions. Thus, to address regional operational risks, organizational issues, and emerging risks; 24 SEIs and 61 safety actions have been identified, developed and proposed.

The MID-RASP provides guidance on how States should identify which top risks and key safety issues mentioned in the GASP and MID-RASP apply to their national context and then to be included in their NASPs. States should also add other safety issues which are unique to their operational context. Several MID-RASP SEIs which are intended for implementation by States at the national level are recommended for inclusion in their NASPs.

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# PART-I. PLANNING

## 1. INTRODUCTION

### 1.1 Objectives and Principles

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

The purpose of this MID-RASP is to continually reduce fatalities, and the risk of accidents, through the development and implementation of regional SEIs. A safe aviation system contributes to the economic development of MID Region, the States which comprise it, and their industries. In addition, MID-RASP is to create a common focus on regional aviation safety issues as a continuation of the MID Region work to improve aviation safety and to comply with ICAO standards. This approach complements the existing system of developing safety regulations, complying with them and investigating accidents and serious incidents when they occur.

The MID-RASP promotes the effective implementation of a State safety Programme (SSP) and Safety Management System (SMS) including National Aviation Safety plan (NASP), State's safety oversight system, and a risk-based approach to managing safety as well as a coordinated approach to collaboration between States, international organization, and industry. All stakeholders are encouraged to support and implement the MID-RASP as the regional strategy for the continuous improvement of aviation safety.

The MID RASP allows the region to define the strategy for improving safety within a specified timeframe, through defined Safety Enhancement Initiatives (SEIs).

The MID-RASP establishes the first layer of priorities which is further complemented at national level by national safety plans and Programmes. It builds a network for action; thus, coordination and close collaboration are key to keeping it up to date and effective.

The MID-RASP Edition 2023-2025 covers the three-year period between 2023 and 2025 and will be updated on a yearly basis, as required, to cover subsequent three years' periods. It is a rolling 3-year plan.

The planning activity would be followed up by a reporting activity, in which progress on the actions is evaluated and also documented. This feedback loop ensures that the process to manage risks continuously improves and may contribute to the identification of new safety issues.

MID Region is committed to enhancing aviation safety, to the resourcing of supporting activities and to increasing collaboration at the regional level.

### 1.2 Relationship between MID-RASP and GASP and other Plans

Aviation's contribution towards the United Nations 2030 Agenda for Sustainable Development and in order to maximize the benefits of aviation, the priorities of the aviation sector should be integrated and reflected in State's economic and social development planning with an appropriately balanced development of transport modes, including multi-modal and urban planning initiatives. In addition, recognizing that air transport is a catalyst for sustainable development and that it represents an essential lifeline for Least Developed Countries (LDCs), and especially for Landlocked Developing Countries (LLDCs).

ICAO Business Plan takes into consideration all of the work mandated to be undertaken by ICAO, regardless of source of funding. The Business Plan sets out the Strategic Objectives and priorities to guide the activities of the Organization to support Members States in their attainment of a safe, secure, efficient, economically viable and environmentally responsible air transport network.

ICAO's global plans are essential in supporting safe, secure, efficient, economically viable and environmentally responsible air transportation. They provide a means to advance ICAO's Strategic Objectives. The ICAO global plans include: the GASP, the GANP and the Global Aviation Security Plan (GASeP).

The GASP presents the global strategy for the continuous improvement of aviation safety. The purpose of the GASP is to continually reduce fatalities, and the risk of fatalities, by guiding the development of a harmonized aviation safety.

The purpose of the Global Air Navigation Plan (GANP) is to drive the evolution of the global air navigation system to meet the ever-growing expectations of all sectors in the aviation community by equitably accommodating all airspace user operations in a safe, secure and cost-effective manner while reducing the aviation environmental impact. To this end, the GANP provides a series of operational improvements to increase capacity, efficiency, predictability and flexibility, while ensuring interoperability of systems and harmonization of procedures. The implementation of the GANP is enabled by promoting the effective implementation of safety oversight and a safety management approach to oversight, including SRM to permit innovation in a managed way.

The GASP complements the GANP by providing States and industry with the tools to implement a safety management approach through their SSP and SMS. The GANP, through the evolution of the system described in the conceptual roadmap and the operational improvements detailed in the technical frameworks, supports the goals within the GASP and the GASeP by enhancing safety and security of the air navigation system as reflected in the performance ambitions.

The GASP goals and targets support the GASeP by providing best practices and models that can be as effective in managing security as they are in safety management. These include effective oversight, organizational culture, risk management and assurance processes. The GASeP in turn supports the GASP's vision of zero fatalities.

MID-RASP considers and supports the objectives and priorities of GASP. The purpose of GASP is to continually reduce fatalities, and the risk of accidents, by guiding the development of a harmonized aviation safety strategy and the development and implementation of regional and national aviation safety plans. A safe aviation system contributes to the economic development of States and their industries. The GASP promotes the effective implementation of SSP and SMS including NASP, a State's safety oversight system, and a risk-based approach to managing safety as well as a coordinated approach to collaboration between States, international organizations, and industry. One of the GASP goals is for States to improve their effective safety oversight capabilities and to progress in the implementation of SSPs including NASPs. Thus, GASP calls for States to put in place robust and sustainable safety oversight systems that should progressively evolve into more sophisticated means of managing safety.

Assembly Resolution A40-1 also calls for each State to develop and implement a national aviation safety plan (NASP), in line with the GASP goals, targets and the global high-risk categories of occurrences (G-HRCs). The NASP should also be developed having close regard for the RASP, while acknowledging that each State may have its own, specific safety issues and priorities, including addressing significant safety concerns (SSCs).



In addition, to addressing systemic safety, GASP addresses Global high-risk categories (G-HRC) of occurrences, which are deemed global safety priorities. These categories were determined based on actual fatalities from past accidents, high fatality risk per accident or the number of accidents and incidents. The following G-HRCs have been identified for the 2023-2025 edition of the GASP: controlled flight into terrain (CFIT); Loss of control in flight (LOC-I); Mid-air collision (MAC); runway excursion (RE); and runway incursion (RI). The GASP G-HRCs are addressed in MID-RASP.

The MID-RASP considers the objectives and priorities of the GASP to enhance the level of safety in aviation and to better prepare the Member States for the ICAO Universal Safety Oversight Audit Programme (USOAP) audits and State Safety Programme Implementation Assessment (SSPIA) of their SSPs.

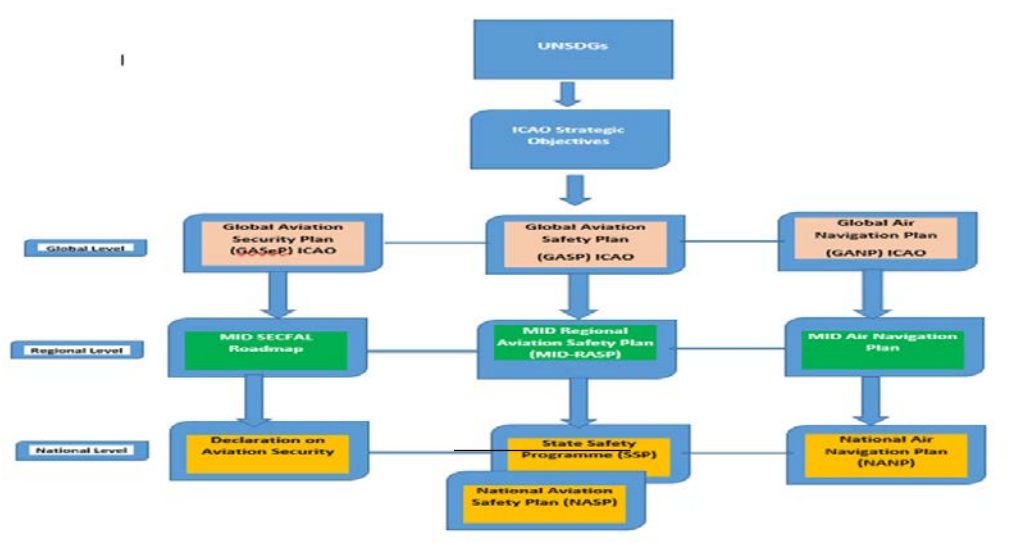
This MID-RASP edition 2023-2025 provides references to corresponding GASP 2023-2025 Safety Enhancement Initiatives (SEIs); covering organizational challenges, Regional operational risks, and emerging risks.

The 2023-2025 Edition of the GASP would set forth ICAO's Safety Strategy in support of the prioritization and continuous improvement of aviation. The plan guides the implementation of regional and national aviation safety plans.

The 2023-2025 Edition of the GASP includes a new set of goals, targets and indicators, in line with the United Nations' 2030 Agenda for Sustainable Development.

In respect of MID Region SPMM, the GASP provides the global strategic direction while the MID Region SPMM provides regional specific goals and support the region's strategic approach to managing safety at the regional level. Consequently, MID region safety indicators and targets were aligned with the 2023-2025 GASP goals and targets as relevant in the MID Region. Furthermore, the RASG-MID would continuously monitor the implementation of the identified SEIs in the MID-RASP and measure safety performance of the regional civil aviation system, to ensure the intended targets are achieved, using the MID Region safety performance measurement & monitoring to this plan. Moreover, MID safety performance measurement & monitoring Goals support the region's strategic approach to managing safety at the regional level. Therefore, for each Goal established in the MID Region SPMM identified SEI(s) is mapped to it including their respective actions.

The MID Region SPMM is included as an appendix and became an integral part of MID-RASP.



**Graph 1:** Relationship between MID-RASP and other Plans

## 2. HOW MID-RASP IS STRUCTURED

This MID-RASP presents the regional strategy for enhancing aviation safety for a period of three years. It is comprised of two parts and 7 chapters. The 2023-2025 MID- RASP Edition comprises two distinct parts:

- **Part I. Planning** provides an introduction, describes how the MID-RASP is developed and monitored and includes the safety priorities. It consists of **Chapters 1 to 5**.
- **Part II. Implementation** contains the safety performance measurement & monitoring and the detailed list of MID-RASP safety actions. It consists of **Chapters 6 and 7**.
- Both parts are supported by a number of appendices providing further details or assisting the reader.

### Part-I. Planning

Part I provides an introductory explaining the main objective of this MID-RASP. Chapter 2, 3, and 4 explain how MID-RASP is structured, developed, monitored and presents the structure of the document. Chapter 5 presents safety priorities and the key actions taken as indicated below:

- 5.1 Organizational Challenges/issues
- 5.2 Regional operational safety risks
- 5.3 Emerging risks

### Part-II. Implementation

Part II contains the safety performance measurement and monitoring and the detailed list of MID-RASP safety actions. It consists of Chapters 6 and 7.

Chapter 6 presents the MID Region safety indicators and targets.

In respect of **chapter 7**, it facilitates the identification of SEIs and their respective actions relevant for each Goal identified in the MID Region Safety performance measurement and monitoring as follows:

- Goal 1: Achieve a continuous reduction of operational safety risks;
- Goal 2: Strengthen States' safety oversight capabilities;
- Goal 3: Implement effective State safety Programmes (SSPs);
- Goal 4: Increase collaboration at the regional level;
- Goal 5: Expand the use of industry Programmes and safety information sharing networks ; and
- Goal 6: Ensure the appropriate infrastructure is available to support safe operations.

The MID Region SPMM includes six (6) Goals in line with GASP 2023-2025 Edition. For each Goal established in the MID Region SPMM, identified SEI(s) is mapped to it including their respective actions and the following information is provided:

**Goal:** Goal supports the region's strategic approach to managing safety at the regional level.

- **Name:** Goal #Number - SEI# Number: Description of the SEI
- **Target(s)/Metrics.** Targets which serve to fulfil their respective Regional Goal
- **Rationale** behind the safety issue (why it has been identified as an issue)
- **What it is to be achieved** (objective)
- **How we intend to monitor improvement** in the future
- **How we intend to achieve** the objective; here, the various actions contributing to mitigate

- the identified risk in that area are described
- **Actions:** The tasks required for the implementation of the SEI. The actions support the SEI and Targets of the Regional Goal
  - **References:**
    - Indicates key existing global documents from which the SEI is adopted, if applicable.

**Stakeholders: The entities/ stakeholders in the MID region, to which the Actions are addressed**

**Example Action 1:** Description of the Action to be taken

**Subtask(s)** if needed to be added

**Owner(s):** Appointed Group/State(s)/Organization(s) to further develop details for implementation of the respective Action.

**Priority:** Low, Medium, High

**Completion Date:** The date in which the respective Action is expected to be implemented.

**Status:** new, ongoing, on hold, completed. (Provide also updated progress if any)

**Example Action 2:** Description of the Action to be taken

**Subtask(s)** if needed to be added

**Owner(s):** Appointed Group/State(s)/Organization(s) to further develop details for implementation of the respective Action

**Priority:** Low, Medium, High

**Completion Date:** The year(s) in which the respective Action is expected to be implemented

**Status:** new, ongoing, on hold, completed. (Provide also updated progress if any)

**EXPECTED OUTPUT**

**Deliverable(s)**

**TIMELINE**

Description of the Result to be achieved

The year in which the respective Target is expected to be achieved

### 3. HOW MID-RASP IS DEVELOPED AND MONITORED

The RASG-MD is the governing body responsible for the development, implementation and monitoring of the MID-RASP, in collaboration with the ICAO MID Office, international and regional organizations and with the aviation industry. The MID-RASP was developed in consultation with States, regional organizations, and other stakeholders in the region, and in alignment with the 2023-2025 of the GASP. If required, RASG-MID would seek the support of MIDANPIRG and RASFG-MID, other sub-groups, States, regional organizations, and industry to ensure the timely implementation of SEIs to address safety deficiencies and mitigate risks. Through close monitoring of the SEIs, SEIG would make adjustments to the MID-RASP and its initiatives, if needed, and update the MID-RASP document accordingly.

Furthermore, the MID-RASP is to be reviewed by SEIG every year mainly to include new identified SEIs, review the existing SEIs, and their respective actions. In addition, the MID-RASP is to be updated/endorsed by RASG-MID at least every three years and as deemed necessary.

The SEIG is established to assist RASG-MID to develop and monitor the implementation of SEIs as at **Appendix A** related to identified regional operational risks, organizational challenges, and emerged risks. In addition, the SEIG takes the lead and ensures that SEIs are implemented in a timely, effective and efficient manner in coordination with RASG-MID, MIDANPIRG, and RASFG-MID groups and sub-groups (ASRG, ASPIG, AIIG, ATM-SG,..etc), States, regional organizations, and industry.

As a first step towards establishing this system and to facilitate MID-RASP implementation, it is necessary to enhance the communication and flow of safety data and information, as well as coordination processes, among RASG-MID and its subsidiaries, States, and regional organizations. There is also the need to continue to enhance collaboration with MIDANPIRG through coordinated processes to sustain the collection and sharing of regional air traffic management (ATM) data and the sharing and resolution of safety issues. This, in turn, would support the implementation of Aviation System Block Upgrade (ASBUs) and ensure that their implementation accounts for and properly manages existing and emerging risks, e.g. approaches with vertical guidance (APV) to mitigate risks associated with CFIT and runway excursions.

The MID-RASP was developed with the aim of addressing the MID region's operational and other safety issues in a timely manner, and as applicable. It is expected that this approach would facilitate MID States' support and participation in the implementation of these SEIs and their respective actions at both the regional and national levels. The three-year period of the MID-RASP, i.e. 2023 to 2025, was selected to coincide with the GASP review period of the same duration, to ensure continued alignment with the latest global plans.

States should ensure that a NASP is maintained and regularly reviewed. The MID-RASP provides the identified safety priorities in the region and States should identify which top risks and key issues mentioned in the GASP and MID-RASP which apply to their national context and identify suitable mitigations actions within their NASP. States should also add/consider other safety issues which are unique to their operational context. Furthermore, States to establish a NASP taking into account the GASP and MID-RASP; and based on their operational safety needs.

The key contents of the MID-RASP were developed using an eight-step process recommended by the GASP to develop RASPs and NASPs, similar to the Plan-Do-Check-Act (PDCA) continuous improvement cycle, as follows:

- Step 1: Conduct self-evaluation;
- Step 2: Identify hazards and safety deficiencies;
- Step 3: Develop list of prioritized regional safety issues;
- Step 4 – Define goals, indicators, and targets
- Step 5: Perform gap analysis to identify SEIs;
- Step 6: Develop a list of prioritized SEIs;
- Step 7: Develop a Regional aviation safety plan; and
- Step 8: Monitor implementation

The MID-RASP has been developed in congruence with the GASP, and supports the GASP aspirational goal of zero fatalities by 2030 and its objectives, goals, targets and indicators.

- a. The MID-RASP structure adheres closely to GASP;
- b. A comprehensive gap analysis was undertaken to identify the existing gaps between the existing work by RASG-MID, and subsequently also compared with ICAO Manual: Doc 10131, 'Manual on the Development of Regional and National Aviation Safety Plans;
- c. The MID Region SPM is aligned with GASP 2023-2025 Edition, retained and included as an Appendix in the MID-RASP; and
- d. MID-RASP SEIs were selected taking into consideration relevant SEIs for the region in line with GASP 2023-2025 Edition as well as relevant work plan items of DCGA, RASG-MID, MIDANPIRG, and RASFG-MID meetings. Moreover, GASP SEIs for States and Industry (domestic) were not considered as these are more suitable to be included in the NASPs of the MID States.

The MID-RASP supersedes the previous work of the RASG-MID subsidiary bodies (RAST and SST) initiatives to elevate the commitment of the MID Region to improve its safety oversight capability, which relates to the continuous reduction of regional operational risks and improvement in safety

oversight capabilities and safety management of States. In particular, the MID-RASP serves to raise awareness of safety risks and consequences, to States, industry and relevant stakeholders to commit and provide resources including financial, staffing and technical expertise, to making improvements in safety management, oversight capability and operational safety performance. It also provides a basis to facilitate information sharing between relevant stakeholders who can take actions or provide support to address issues.

At the regional level, the MID-RASP commits RASG-MID to continue the following efforts as indicated below:

- a. Focus on the update and the development of the new regional SEIs to address the Regional High-Risk Categories (R-HRCs) of LOC-I, CFIT, MAC, RI and RE, and other priorities;
- b. Support States to strengthen safety oversight capabilities
- c. Assist States in the development and implementation of SSP and SMS including the development of NASPs;
- d. Promote regional government and industry collaboration for sharing safety information and best practices in safety management;
- e. Promote the effective implementation of AGA, with a focus on implementation of Aerodrome Certification including the SMS, runway safety Programmes including the establishment of Runway Safety Teams (RSTs) and Global reporting Format methodology (GRF);
- f. Support States in the development of Unmanned aircraft system (UAS) national regulations;
- g. Support States on COVID-19 pandemic activities to enable a safe and secure return to operations, the GNSS interference, the impact of security on safety, manage Cybersecurity risks; and 5G interference with Radar Altimeter frequency band.
- h. Support States to establish and activate the MENA RSOO;
- i. Provide continuous support for the MENA ARCM activities.
- j. Continue implementation support to States and industry, including the development of improved guidance materials as well as the organization of workshops and training to provide assistance and guidance to MID States; and
- k. Put in place a structure for the collection, analysis and sharing of safety and operational data in the region to support a comprehensive approach to risk management, and facilitate initiatives to develop regional data collection, and analysis.

States and industry are committed to the following efforts:

- a. Implement, as appropriate, the GASP SEIs and MID-RASP SEIs and their respective actions in strategic and timely manner;
- b. (For any States with SSCs), accord priority to the resolution of any SSCs identified by the ICAO USOAP CMA Programme. These should draw on the necessary resources available, including technical assistance from other States and Regional Programmes to resolve the SSCs promptly;
- c. Accord priority to the implementation of SSP and SMS;
- d. Use data-driven methodologies to identify R-HRCs and their safety issues, and implement collaborative solutions to reduce accident rates and fatalities in the Region, and likewise accord priority to the implementation of respective SEIs; and
- e. Consider various options to leverage ICAO-recognized industry assessment Programmes such as the IATA Operational Safety Audit (IOSA), IATA Safety Audit for Ground Operations (ISAGO), IATA Standard Safety Assessment Programme (ISSA), and ACI APEX Programme. These options range from recognition of such Programmes to encouraging registration by all applicable operators as a means to strengthen their safety management and compliance.

## 4. OPERATIONAL CONTEXT

### 4.1 Worldwide Perspective

After the year 2020 when the global economy experienced the worst crisis since the Great Depression as a consequence of the COVID-19 pandemic, the activity in 2021 rapidly recovered and the prospects for the following years are that this trend will continue. However, it is too soon to draw firm conclusions, considering the uncertainties on the evolution of certain threats (not only the pandemic, but also climate change, increasing public debts and geopolitical changes).

According to the last general IMF forecast available at (<https://www.imf.org/en/Publications/WEO/Issues/2021/10/12/world-economic-outlook-october-2021>), GDP fell by 3.3 % in 2020 and is expected to rebound by 5.9 % in 2021, to continue with a growth rate of 4.9 % in 2022. Behind these global figures quite diverse situations are found in national economies due to differences in the pace of vaccine roll-out and the capability of States to offer financial support. The pandemic also affected the job market, the employment conditions and other socio-economic factors. From a worldwide perspective, according to the International Labour Office, the unemployment rate grew by 1.1 point to 6.5 % in 2020, compared to 5.4 % in 2019, and will only slowly decrease to an expected 6.3 % in 2021 and 5.7 % in 2022. ([https://www.ilo.org/wcmsp5/groups/public/-/dgreports/-/dcomm/-/publ/documents/publication/wcms\\_795453.pdf](https://www.ilo.org/wcmsp5/groups/public/-/dgreports/-/dcomm/-/publ/documents/publication/wcms_795453.pdf)). *Table 1.2 Employment-to-population ratio, unemployment rate.*

From a worldwide aviation perspective, large aeroplane commercial passenger flights, constituting the bulk of the aviation activity, showed an unprecedented drop in 2020 and started to recover in 2021. The closure of borders fundamentally contributed to this drop in traffic, hitting airline international traffic far more than domestic traffic. If the current positive trend of pandemic recovery continues, the domestic traffic in terms of number of airlines' commercial passengers would recover in 2022 in comparison with the 2019 level. International traffic would only recover in 2024.

### 4.2 Middle East Perspective

The Middle East Region has been, for years, at the forefront of aviation growth and reshaping the global long-haul markets by elevating its hub position for connecting Europe and Asia-Pacific, in line with the west to east shift of the geographical centre of gravity of air transport operations. Growth of the Region started to undergo a significant transition and slow down recently. Air transport supports 2.4 million jobs and USD 130 billion in GDP in the Middle East.

With the further movement of the air transport centre of gravity from West to East, the geographic position of the Gulf hubs will continue to offer a strategic advantage to several airlines in the Region. According to ICAO long-term traffic forecasts, total passenger traffic of the Middle East Region is expected to grow by around 4.6 per cent annually up to 2045, the second fastest growth among all Regions after Asia and Pacific. The Middle East is expected to be the fastest growing Region in terms of freight traffic growth, and is projected to grow at 5.4 per cent annually up to 2045. This increase will, in turn, drive growth in the economic output and jobs that are supported by air transport in the next decade. By 2036, it is forecasted that the impact of air transport and the tourism it facilitates in the Middle East will have grown to support 4.3 million jobs (78 per cent more than in 2016) and a USD 345 billion contribution to GDP (an increase of 166 per cent).

The Middle East has to contend with situations unique to the Region such as fluctuating oil revenues, regional conflict and overcrowded air space. In addition, airlines in this Region are now facing challenges to their business models.

The growth of air transport requires a high-performing aviation system including airlines, airports and ATM. The overall efficiency of the ATM system commensurate with the level of predicted traffic growth should be increased through improved airspace design and organization. Furthermore, this

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Region is in need of political commitment to market liberalization. Although the Middle East is home to some of the world's largest hub airports, the relations between States are still mostly bound by bilateral air services agreements that limit market access to each other. (Source: *Aviation Benefits Report-2019*).

The economic and social situation in the Middle East is similar to the world outlook provided above. The COVID-19 pandemic has battered world-wide aviation in a way that could never have been imagined and we are still trying to assess the full extent of the impact that it will have on civil aviation in the longer term. While the pandemic is not yet over, there are signs at last that vaccination offers a viable way to reduce levels of infection and a basis to realistically plan for a full reopening. Throughout the pandemic, the ICAO MID Office has continued to work collaboratively with all stakeholders to ensure that the industry is equipped to resume the flight operations.

In addition, the MID-RPTF mechanisms continued to serve as a platform for coordination and cooperation amongst all stakeholders to support States with the implementation of the CART and HLCC recommendations as well as the recovery of aviation industry in the MID Region during the COVID-19 pandemic outbreak.

During 2021 the reduction in airline passenger flights due to COVID-19 continued, subsequently resulting also in lack of capacity to transport cargo in that aircraft. The same can be stated for the complexity of operations, ranging from quarantine measures imposed on flight crews, disruption in training and scheduling, and the need to transport cargo in the cabin.

Airlines continued to have a large portion of their aircraft grounded, leaving flight and cabin crew members with uncertainty about the return to normal operations.

However, the recovery during the summer of 2021 was faster than expected. This was a positive development but led to difficulties for operators to cope with the increased demand, adding complexity in the return to service of aircraft and flight crews.

Over the last five years, the global scheduled commercial international operations accounted for approximately 24.96 million departures in 2021, compared to 36.3 million departures in 2017. The MID Region shows a decrease in traffic volumes during 2021. Total scheduled commercial departures in 2021 accounted for approximately 806,274 estimated departures compared to 1.37 million departures in 2017. In terms of aircraft accidents, the MID Region had no accident during the year 2021. The 5-year average accident rate for 2017-2021 is 2.21, which is slightly below the global average rate (2.41) for the same period. The MID Region accident rate in 2020 is higher than the global accident rate, which is 2.14 accidents per million departures.

The MID Region had no fatal accident in 2021. However, the 5-year average fatal accident rate for 2017-2021 is 0.42, which is almost similar to the global average rate (0.41) for the same period. The MID Region had no fatal accidents in 2017, 2019, and 2021. However, two fatal accidents occurred in 2018 and 2020. The 2018 accident caused 66 fatalities and the year 2020 caused 176 fatalities.

In terms of Safety Management, the average EI for SSP foundation PQs for States in the MID Region is 76, 1%. 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 SEIs. In connection with this, the RASG-MID/9 endorsed the Safety Management Implementation Team (SMIT) handbook to support MID States in the implementation of the SSP in an effective and efficient way.

Common challenges in MID Region include:

- a. The political/security situation in some States, the cross-national variation in Aviation development as well as the relatively small accreditation area, impede the provision of Technical assistance, implementation of Regional projects and the achievement of the Regional safety, air navigation and Security targets;



- b. The drastic reduction in traffic volumes due to the COVID-19 crisis and the new risks induced by its impacts;
- c. The lack of financial and human resources in some States, combined with the complexity of administrative arrangements for the approval of duty travel, political sensitivities, etc., affected the level of attendance to the activities organized by the ICAO MID Office as well as States' support to the MIDANPIRG, RASG-MID and the MID-RASFG Work Programmes and their subsidiary bodies;
- d. Low level of reporting by States (inputs to the MID-Air Navigation Report and MID Annual Safety Report, incidents, national plans, success stories, replies to State Letters, etc; and
- e. Resources constraints (financial and technical personnel) in the Regional Office, combined with a high rotation rate vs. necessary time for new staff/comers to cope with the way of doing business in ICAO considering the MID Region-specific challenges.

## **5. STRATEGIC PRIORITIES**

The MID-RASP presents the safety priorities that were developed based on the ICAO GASP's including organizational challenges, operational safety risks, and emerging risks as well as region-specific issues identified by a safety risk assessment and published in MID Region Annual Safety Reports and RASG-MID activities. Additionally, the MID region's strategic approach to managing safety at the regional level is to address the region's operational issues and other safety issues in a timely manner. Therefore, the MID-RASP strategic approach would focus on organizational challenges/issues, regional operational safety risks, and emerging risks as indicated in graph 2 below.

- a. Organizational challenges/issues including the States 'safety oversight, safety management, aircraft accident and incident investigation, Human factors and competence of personnel, and Cybersecurity. In terms of human factors and competence of personnel, 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. It is equally important for aviation personnel to take advantage of the safety opportunities presented by new technologies;
- b. In respect of regional operational safety risks, the focus would be on R-HRC identified in the GASP 2023-2025 Edition mainly the LOC-I, CFIT, RE, RI, and MAC; and
- c. Regarding the emerging risks, the focus would be on the COVID-19 crisis and the new risks induced by its impacts, Civil drones (Unmanned Aircraft Systems), Management of security risks with safety impact, and GNSS interference, and 5G interference with Radar altimeter band frequency.





**Graph 2: Safety Priorities**

Therefore, the MID-RASP adopts three focus areas approach:

First focus area involves enhancing existing regional mechanisms to strengthen effective safety oversight capabilities and improve the implementation of effective safety management, in particular to:

- Draft the MID-RASP 2023-20225 Edition and consider inputs from MID Annual Safety Report (MID ASR), MID Region safety management Roadmap, Runway Safety Go-Team; RASG-MID, MIDANPIRG, and RASFG-MID.
- enhance coordination and communication with regional organizations including ACAO, ACI, CANSO, IATA, and other regional mechanisms, MENA ARCM, especially MENA RSOO once activated;
- improve the scheduling and streamline the number of regional safety-related events including workshops, trainings, seminars; and
- improve communication and sharing of safety information between States, international organizations, and industry.

In addition to the varying levels of safety oversight capabilities in the MID Region, other regional safety issues and activities have been identified and selected for inclusion in the MID-RASP. These were derived from the RASG-MID reports, analysis of USOAP data, accident and incident investigation reports, safety oversight activities over recent years from MID States, as indicated below:

- Improve Regional Cooperation for the provision of Accident & Incident Investigation;
- Improve implementation of ELP requirements;
- Sharing of Safety Recommendations related to Accidents and Serious Incidents;
- Enhance State Oversight on Dangerous Goods;
- Need to manage the cybersecurity risks; and
- 5G interference with Radio altimeter frequency band.

Second focus area involves addressing effectively regional operational safety risks including specific operational risks stemming from the crisis as the vision of the GASP is to achieve and maintain the goal

of zero fatalities in commercial operations by 2030 and beyond.

Third focus area involves addressing the emerging safety risks that might impact safety in the future including recovering from the COVID-19 crisis without adversely affecting the high level of safety performance GNSS outages/vulnerability, civil drones to ensure safe operation of unmanned aircraft system (UAS), impact of security on safety, and 5G interference with Radar Altimeter frequency band. Additionally, for emerging risks, SEIs/safety actions would be developed and covered under the focus areas (organizational challenges and Regional operational safety risks).

## **5.1 Organizational Challenges/Issues**

Organizational challenges 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 authorities (CAAs) 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.

It is crucial that States' safety oversight capabilities and safety management, and aviation infrastructure should keep pace with these regional safety issues.

Therefore, for the triennium of 2023-2025, the MID Region should continue to focus its efforts in addressing the following top Regional organizational issues:

- a. Lower USOAP EI scores, especially States with EI below 60% as well as AIG, ANS, AGA, and OPS areas;
- b. Slow pace of SSP development & implementation including the NASP development, as well as understanding of newer safety management and performance based concepts;
- c. Slow pace of SMS acceptance and surveillance;
- d. Slow pace of developing Risk Management framework to support decision-making and deploy the resources needed to mitigate risks effectively;
- e. Improve Regional Cooperation for the Provision of Accident & Incident Investigation;
- f. Enhance State Oversight on Dangerous Goods;
- g. Support States related to Human factors and Competence of Personnel
- h. Support States to manage the cybersecurity risks;
- i. Management of security risks with safety impact;
- j. Slow pace of implementation of RASG-MID conclusion/ MID-RASP SEIs/safety actions and tools to mitigate identified safety risks and safety deficiencies;
- k. Insufficient resources and expertise to manage and collect safety data and safety information on a State level, and no formal mechanisms in place that allow for the sharing and benchmarking of information at the Regional level; and
- l. Increasing risks associated with airspace structure including ATS networks and associated airspaces to accommodate the traffic flow in safe and efficient manner.

### **5.1.1 Strengthening of States' Safety Oversight Capabilities**

Safety oversight is defined as a function by means of which States ensure effective implementation of the safety-related SARPs and associated procedures contained in the Annexes to the Convention on International Civil Aviation and related ICAO documents. States have overall safety oversight responsibilities, which emphasize a State's commitment to safety in respect of the State's aviation activity. An individual State's responsibility for safety oversight is the foundation upon which a safe global air transport system is built. States that experience difficulties in carrying out safety oversight functions can impact the state of International Civil Aviation.

USOAP-CMA audits had identified that States inability to effectively oversee aviation operations which 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 74, 67 %, which is above the world average 68.68 % (as of 29 May 2022). Three (3) States are currently below EI 60%.

All eight areas have an EI above 60%. However, the areas of AIG, AGA and ANS still need more improvement. Regarding the Critical Elements (CEs), CE4 (Qualified technical personnel) improved and is above 60% (62.39%) EI, whereas CE8 (resolution of safety issues) is the only one below EI 60% (58. 89%) EI.

Moreover, the effective implementation in certification, surveillance, and resolution of safety concerns need to be improved.

<b>Key Actions completed/planned</b>
a. Conducted technical assistance and NCLB mission activities to States
b. Capacity building activities
c. Developed and implemented a specific NCLB plan of actions for prioritized States according to established criteria
d. Established MENA RSOO to assist States and start operations

### **5.1.2 Improve Regional Cooperation for the Provision of Accident & Incident Investigation**

In respect of MID Region, the regional average overall Effective Implementation (EI) (13 out of 15 States have been audited) is 74.67 %, which is above the world average 68.68 % (as of 29 May 2022). Three (3) States are currently below EI 60%. Regarding the Critical Elements (CEs), CE4 (Qualified technical personnel) improved and is above 60% (60.08%) EI, whereas CE8 (resolution of safety issues) is the only one below EI 60% (59. 47%) EI. All eight areas have an EI above 60%. However, the area of AIG still need more improvement.

<b>Key Actions completed/planned</b>
a. AIG Strategy in the Provision of AIG Functions endorsed by the DGCA-MID/4
b. MENA AIG Regional Cooperation Mechanism (ARCM) endorsed by the DGCA meeting in Kuwait
c. Organized AIG capacity building activities
d. Draft MENA ARCM implementation action plan endorsed by the RSC/7
e. MENA ARCM Establishment and Activation

### **5.1.3 Sharing of Safety Recommendations related to Accidents and Serious Incidents**

- a. The Safety recommendations are the utmost results of investigation or safety studies conducted by States. In accordance with the provisions of Annex 13, a State shall send to ICAO a copy of the Final Report on its investigations into accidents and serious incidents involving aircraft of a maximum mass of over 5,700 kgs.
- b. A safety recommendation is defined as a proposal by an accident investigation authority, based on information derived from an investigation. The intended purpose of a safety recommendation is the prevention of accidents or incidents, and the reduction of the consequences of such occurrences.

<b>Key Actions completed/planned</b>
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- |   |
|---|
| a. Establishment of an Ad-hoc Action Group championed by Saudi Arabia and UAE   |
| b. The Questionnaire on establishing safety recommendations platform developed and circulated to MENA ARCM Member States. The questionnaire analysis has been shared with MENA ARCM/2 meeting |

#### 5.1.4 Improve Implementation of ELP Requirements

The decision to address language proficiency requirements (LPRs) for pilots and air traffic controllers was first made by the 32<sup>nd</sup> Session of the ICAO Assembly in September 1998 as a direct response to several fatal accidents, including one that cost the lives of 349 persons, as well as to previous fatal accidents in which the lack of proficiency in English was identified as a contributing factor. The intent was to improve the level of language proficiency in aviation worldwide and reduce the communication breakdowns caused by a lack of language skills. LPRs have now moved beyond implementation (Assembly Resolution A38-8 refers), entering a phase of post implementation.

<b>Key Actions completed/planned</b>
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- |   |
|---|
| a. Development and dissemination the Questionnaire on ELP       |
| b. Analysis of the survey results and was reviewed by the RSC/7 |

#### 5.1.5 Enhance State Oversight on Dangerous Goods

The data analysis results of the USOAP-CMA OPS area showed that Dangerous Goods is one of the unsatisfactory PQs in operations for some states in the region. The identified issues highlighted in the analysis report as indicated below:

- a. States have not implemented an effective system for safety oversight of the various entities involved in the transport of dangerous goods, including shippers, packers, cargo handling companies and air operators. Regarding the latter, some States, the authorities have not effectively reviewed the dangerous goods procedures of air operators, contained in the operations and ground handling manuals, mostly due to a lack of qualified dangerous goods inspectors.
- b. Some States have not kept records relating to dangerous goods-related approvals; and
- c. In addition, in some States, dangerous goods inspector procedures have not been established and implemented.

Safety actions have been planned to be taken during the year 2020 and 2021. However, due to the COVID-19 pandemic some of the ICAO MID Office work Programme activities have been postponed for 2022 including Dangerous Goods workshop.

<b>Key Actions completed/planned</b>
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- |   |
|---|
| a. Dangerous Goods webinar                      |
| b. Dangerous Goods Capacity building activities |

#### 5.1.6 Improve the Safety Management

Despite the fact that the last years have clearly brought continued improvements in safety across every operational domain, the latest accidents and serious incidents and the massive worldwide impact of the COVID-19 pandemic on the aviation system underline the complex nature of aviation safety and the significance of addressing human and organizational factor aspects.

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Effective safety management including robust risk management policies and processes are essential in dealing with the multiple impacts of the pandemic on the aviation system, both at authority and organization level. This is supported by ICAO Annex 19 on the reporting, analysis and follow-up of occurrences in civil aviation and when applicable, by flight data monitoring (FDM) requirements.

Therefore, States should build upon fundamental safety oversight systems to fully implement SSPs according to Annex 19, States shall require that applicable service providers under their authority implement an SMS. The SMS enables service providers to capture and transmit safety information which contributes to safety risk management. In this context, the role of the State evolves to include the establishment and achievement of safety performance targets as well as effective oversight of its service providers' SMS. Individual States should provide safety information derived from their SSPs to their respective RASGs to contribute to Regional safety risk management activities. The average EI for SSP foundation PQs for States in the MID Region is 76, 18%.

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 RSC/7 endorsed the safety management Roadmap and established the Safety Management Implementation Team (SMIT). Furthermore, the RASG-MID/9 endorsed the SMIT handbook to support MID States in the implementation of the SSP in an effective and efficient way

ICAO launched SSP Implementation Assessments (SSPIAs) phase 2 under the USOAP CMA. The assessments are based on a qualitative assessment of a State's progress in implementing a State Safety Programme (SSP), using SSP-related PQs.

The PQs are reflective of Annex 19- Safety Management and the Safety Management Manual (Doc 9859).

Unlike the USOAP CMA's audit activities, SSPIAs are linked to applicable SSP components rather than critical elements (CEs). The SSP components are:

1. State safety policy, objectives and resources;
2. State safety risk management;
3. State safety assurance; and
4. State safety promotion

The SSP assessment covers 8 areas as indicated below:

1. SSP general aspects (GEN);
2. safety data analysis general aspects (SDA);
3. personnel licensing and training (PEL);
4. aircraft operations (OPS);
5. airworthiness of aircraft (AIR), approved maintenance organization (AMO) aspects only;
6. air navigation services(ANS), air traffic services provider (ATSP) aspects only;
7. aerodromes and ground aids (AGA); and
8. aircraft accident and incident investigation (AIG).

In 2020, ICAO developed guidance supporting the determination of maturity levels for each SSP-related PQ. The SSP-related PQs, complemented by the maturity level matrices for each of the SSP audit areas, are available in the CMA Library of the USOAP CMA Online Framework (OLF) at [www.soa.icao.int](http://www.soa.icao.int) (restricted access). These matrices describe the level of progress for each element of the SSP, which can be described as:

- Not present and not planned;
- Not present but being worked on;
- Present; or
- Present and effective.

ICAO will use the SSP maturity level matrices for the scheduled SSPIAs under Phase 2, which will begin in 2021. This phase of assessments will utilize the maturity level matrices to provide a more detailed, quantitative measurement of a State's progress in the implementation and maintenance of its SSP. Two assessment missions have been planned for the year 2022.

<b>Key Actions completed/planned</b>
a. Conducted continuously SSP/SMS capacity building activities
b. Development of the MID Region Safety Management Implementation Roadmap
c. Establishment of the Safety Management Implementation Team (SMIT) and SMIT Handbook endorsed by RASG-MID/9
d. Establishment the MENA RSOO to support States in the expeditious implementation of SSP
e. Guidance material development
f. Technical Assistance missions

### **5.1.7 Certification of International Aerodromes**

All eight areas have an EI above 60%. In respect of the Critical Elements (CEs), CE4 (Qualified technical personnel) improved and is above 60% (60.08%) EI, whereas CE8 (resolution of safety issues) is the only one below EI 60% (59.47%) EI. However, the areas of AGA still need more improvement.

<b>Key Actions completed/ planned</b>
a. Conducted Aerodrome Safety Management Workshops
b. Wildlife hazard Management and Control Workshop
c. RSA on Wildlife Management and Control Regulatory Framework & Guidance Material.
d. Certification of Annex 14 training courses
e. GRF training courses

### **5.1.8 Establishment of Runway Safety Teams at International Airports**

All eight areas have an EI above 60%. In terms of the Critical Elements (CEs), CE4 (Qualified technical personnel) improved and is above 60% (60.08%) EI, whereas CE8 (resolution of safety issues) is the only one below EI 60% (59.47%) EI. However, the areas of AGA still need more improvement

<b>Key Actions completed/planned</b>
a. Runway Safety Go-Team Missions
b. Support States to implement the Global Reporting Format Methodology through capacity building activities

### **5.1.9 Human Factors and Competence of Personnel**

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. While both human factors and human performance examine the capabilities, limitations and tendencies of human beings, they have different emphases:

- Human Factors (HF) – this term focusses on why human beings function in the way that they do. The term incorporates both mental processes and physical ones, and the



- interdependency between the two.
- Human Performance (HP) – the output of human factors is human performance. This term focusses on how people do the things that they do.

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. CRM has been identified in the MID ASR as most important human factors issue in the domain of commercial air transport and safety actions would be identified and developed. In addition, Team Resource Management (TRM) was introduced into ATC following the success achieved with Crew Resource Management (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

Key Actions completed/planned
a. CRM and TRM workshops/webinars
b. FRMS workshops/webinars

### 5.1.10 Cybersecurity Resilience

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.

Key Actions completed/planned
a. Cybersecurity symposium/workshops
b. Development of MID Region Cybersecurity Action Plan

## 5.2 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 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 RASG-MID utilizes available safety data and information to determine the region's operational safety risks which include G-HRCs and additional regional operational safety risks.

### 5.2.1 Address Operational Safety Risks in Commercial Air Transport (CAT) Aeroplane Operations above 5,700 kgs

In terms of an aircraft accident, the MID Region had no accident during the year 2021. The 5-year average accident rate for 2017-2021 is 2.21, which is slightly below the global average rate (2.41) for the same period. The MID Region accident rate in 2020 is higher than the global accident rate, which is 2.14 accidents per million departures.

The MID Region had no fatal accident in 2021. However, the 5-year average fatal accident rate for 2017-2021 is 0.42, which is almost similar to the global average rate (0.41) for the same period. The MID Region had no fatal accidents in 2017, 2019, and 2021. However, two fatal accidents occurred in 2018 and 2020. The 2018 accident caused 66 fatalities and the year 2020 caused 176 fatalities.

The GASP 2023-2025 Edition identifies the G-HRCs as LOC-I, CFIT, MAC, RE and RI. In the MID Region in 2017-2021 the topmost frequent accidents related to the loss of control-inflight and runway safety, which includes RE and ARC during Landing. In terms of fatality risk, the fatal accidents for the period 2017- 2021 were attributed to LOC-I.

Therefore, for the triennium of 2023-2025, the MID Region should continue to focus its efforts on mitigating and minimizing occurrences related to the R-HRCs for this time period, namely:

1. Loss of Control-In Flight (LOC-I);
2. Runway Safety (RS); mainly (RE and ARC during landing);
3. Runway Incursion (RI);
4. Controlled Flight into Terrain (CFIT); and
5. Mid-Air Collision (MAC).

MAC is established as a top risk for the MID region based on the existing data driven approach used to determine the R-HRCs though there is no fatal accident during the last five years. Therefore, there is a need for the MID region to build up its capability to collect and analyze safety data pertaining to MAC.

In addition, safety issues have been identified in the MID ASR and need to be considered by the States while developing their NASP as well as the industry as indicated at **Appendix B**.

### 5.2.2 Aircraft Upset in Flight (Loss of Control-Inflight)

Aircraft upset or loss of control inflight is the most common accident outcome for fatal accidents in CAT aero plane operations. It includes uncontrolled collisions with terrain, but also occurrences where the aircraft deviated from the intended flight path or intended aircraft flight parameters, regardless of whether the flight crew realized the deviation and whether it was possible to recover or not. It also includes the triggering of stall warning and envelope protections. During 2017-2021 aircraft upset, or loss of control contributed to one fatal accident involving MID Region aeroplane.

<b>Key Actions completed/Planned</b>
a. Organized and promoted training provisions on recovery from upset scenarios (UPRT workshops)
b. Assistance to States to implement the SSP/SMS through workshops/trainings
c. Development and publication of RSAs related to the LOC-I Airplane States Awareness (ASA) – Low Speed Alerting Standard Operating Procedures Effectiveness and Adherence Airplane States Awareness (ASA) –Training –Flight Crew training (Approach to stall & Up set recovery) Verification and Validation
d. Construction, approval and implementation of RNAV(GNSS) / RNP-AR procedures to all runways not currently served by precision approach procedure
e. Develop guidance material/share best practices on Ground Handling Service Provider Certification Process
f. Guidance material on flight crew proficiency
g. Advisory Circular: Mode Awareness and Energy State Management Aspects of Flight Deck Automation

### 5.2.3 Runway Excursion

Runway excursion covers materialized runway excursions, both at high and low speed, and occurrences where the flight crew had difficulties in maintaining the directional control of the aircraft or of the braking action during landing, where the landing occurred long, fast, off-centred or hard, or where the aircraft had technical problems with the landing gear (not locked, not extended or collapsed) during



landing. During the period 2017-2021, Runway Excursions and abnormal runway contact accidents and serious incidents mainly occurred in the landing phase of flight.

<b>Key Actions completed/planned</b>	
a.	Conduct of assistance missions by the Runway Safety Go-Team (RST)
b.	Establishment of a MID-FPP to support states on the effective implementation of the PBN procedures
c.	Promoted operational improvements and safety enhancements associated with the implementation of ASBU modules, e.g. PBN, CDO. Implementation of Performance-Based Navigation (PBN); particularly Approaches with Vertical Guidance (APV)
d.	Assistance to States to implement the SSP/SMS
e.	RSA on Wildlife Management and Control Regulatory Framework & Guidance Material
f.	Support States to implement the Global Reporting Format (GRF) Methodology through Webinar/ Workshops/Training
g.	Guidance material on un-Stabilized Approach
h.	MID Region Action Plan/Milestones on the Global Reporting Format (GRF) Implementation.

#### **5.2.4 Runway Incursion (RI)**

A Runway Incursions refers to the incorrect presence of an aircraft, vehicle or person on an active runway or in its areas of protection. Their accident outcome is runway collisions. While there were no fatal accidents or accidents involving MID States operators in the last years involving runway collision, the risk of the reported occurrence demonstrated to be very real. In addition to this, MID States should provide further data analysis regarding runway incursion to identify the root causes and associated safety issues.

<b>Key Actions completed/planned</b>	
a.	Conduct of assistance missions by the Runway Safety Go-Team (RST)
b.	Assistance to States to implement the SSP/SMS

#### **5.2.5 Controlled Flight into Terrain (CFIT)**

It comprises those situations where the aircraft collides or nearly collides with terrain while the flight crew has control of the aircraft. It also includes occurrences, which are the direct precursors of a fatal outcome, such as descending below weather minima, undue clearance below radar minima, etc. There was no fatal accident involving MID States operators during this period. This key risk area has been raised by some MID States and in other parts of the world that make it an area of concern. However, additional data is needed for further analysis to identify the underlying safety issues.

<b>Key Actions completed/planned</b>	
a.	Establishment of MID-FPP to support states on the effective implementation of the PBN procedures
b.	Promoted operational improvements and safety enhancements associated with the implementation of ASBU modules; e.g., PBN, CDO, CCO. Implementation of Performance-Based Navigation (PBN); particularly Approaches with Vertical Guidance (APV)
c.	Assistance to States to implement PBN routes for en-route and terminal airspace through meeting and workshops/seminars
d.	Assistance to States to implement the SSP/SMS

e. Development and publication of RSAs
f. Construction, approval and implementation of RNAV (GNSS) / RNP-AR procedures to all runways not currently served by precision approach procedure
g. Guidance for designing RNP Approach

### 5.2.6 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. Although there have been no aero-plane mid-air collision accidents in recent years within the MID States. 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 a main priority in this key risk area. However, additional data is needed for further analysis to identify the underlying safety issues.

Key Actions completed/planned
a. Assistance to States to implement the SSP/SMS
b. Establishment of Near Mid-Air Collision (NMAC) Group to carry out further analyses of the reported NMAC incidents and provide feedback to the ATM SG and ASRG.
c. Conduct workshop to implement Civil-Military cooperation
d. Conduct seminar on raising awareness among stakeholders related to the potential risk of MAC over high seas

### 5.3 Emerging Risks

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, a 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, for the triennium of 2023-2025, the MID Region should continue to focus its efforts on mitigating and minimizing the safety impact of emerging risks for this time period, namely:

- a. Support States on establishing the UAS regulatory framework.
- b. Decrease the GNSS interference impact.
- c. support on maintaining collectively the pre-pandemic high aviation safety level throughout the recovery phase and improving safety post-recovery due to the drastic reduction in traffic volumes due to the COVID-19 crisis and the new risks induced by its impacts.
- d. Management of security risks with safety impact.
- e. 5G interference with Radio Altimeter frequency band.

The emerging risks SEIs and safety actions will be covered under organizational issues and operational safety risk SEIs.

#### 5.3.1 GNSS interference

GNSS interference, including intentional and unintentional signal interference, has been identified as a major safety issue.

Flight Data Exchange analysis showed that the majority of GPS Signal Lost was detected within or in vicinity of Turkish airspace (Ankara FIR and Istanbul FIR), and in Eastern Mediterranean area. Compared to previous analysis, the identified hot spots have been expanded into entire Anatolian peninsula, including Istanbul FIR.

The GNSS interference SEI /safety actions covered under CFIT SEI.

<b>Key Actions completed/t planned</b>
a. RSA on GNSS vulnerability has been developed and published
b. Safety data analysis shared by IATA
c. Raise awareness on the potential impact of GNSS interference on the aviation during the Civil-Mil Workshop
d. Urge States to follow the reporting procedure agreed by MIDANPIRG Conclusion 19/4 when needed

### **5.3.2 COVID-19 Pandemic Outbreak- Safe return to operations**

It was noted that the rapidly evolving COVID-19 crisis heavily affected all aspects of civil aviation. The urgent need to coordinate all efforts to reduce the risks of the spread of COVID-19 by air transport and to protect the health of air travellers and aviation personnel, while maintaining essential aviation transport operations and ensuring an orderly return to normal operations in due course was underlined. The COVID-19 pandemic resulted in an extreme reduction in operations that began in late March 2020. Recovering from this crisis without adversely affecting the high level of safety performance is proposed as a strategic priority.

In addition to the specific operational risks stemming from the crisis, there are currently a substantial number of exemptions and extensions granted; however, the use of flexibility provisions is diminishing. The aviation safety issues arising as a result of the pandemic have been identified and those safety issues that were considered to constitute the highest risk to the aviation system were assessed and resulted in a number of safety interventions and the publication of guidance material including ICAO CART documents to support stakeholders with the management of the specific risks posed by the crisis. The UAS SEIs /safety actions covered under MAC SEI.

<b>Key Actions completed/planned</b>
a. Establishment of MID Region Recovery Plan Task Force (MID-RPTF) to assist in developing regional restart and recovery planning
b. MID-RPTF activities
c. Conduct of teleconferences with DGCA's and Regional international organization
d. Development of MID CART Regional Implementation Roadmap
e. Continuous communication and coordination with MID States;
f. Development of a COVID-19 web page to communicate to States and all stakeholders the guidance material issued by ICAO, WHO, international organizations, States best practices and
g. Deployment of iPacks
h. Capacity building activities

### **5.3.3 Ensure the safe operations of UAS (drones)**

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. Operators of aircraft, whether manned or unmanned, are likewise responsible for operating safely. The rapid rise of UAS raises new challenges that were not considered in historic aviation regulatory frameworks. Before devising any regulatory framework for UAS operations, the regulator should understand and assess the UAS situation in its State.

UA operations will involve stakeholders' familiar with aviation as well as many who are not. It is important to include these stakeholders from the beginning when developing the UAS regulations. Their early involvement will ensure that the regulations appropriately address the needs of these groups while also serving to educate them on expectations and what is feasible.

Therefore, safety actions would be developed to support States to develop their national regulations in order to ensure safe operation of UAS.

<b>Key Actions completed/planned</b>
a. UAS iPack deployment
b. Drones symposium
c. Conduct survey on States UAS regulatory framework

### **5.3.4 Management of security risks with safety impact**

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. Thus, military or terrorist conflicts may occur in any State at any time and pose risks to civil aviation. This is why it's important for governments, aircraft operators, and other airspace users such as air navigation service providers (ANSPs), to work together to share the most up-to-date conflict zone risk-based information possible to assure the safety of civilian flights.

Furthermore, flying over or nearby conflict zones is related to both security and safety management and requires an integrated risk management process, as proposed by ICAO in the second edition of the Risk Assessment Manual for Civil Aircraft Operations Over or Near Conflict Zones (Doc 10084) as an activity for further development. Several steps have to be taken, as part of the continuous risk assessment cycle including: the collection of information and intelligence; the subsequent threat analysis; the security risk assessment; the hazard identification; the safety risk assessment; the determination of the acceptable risk level and lastly information sharing. Each mitigating action should be accompanied with the identification of (new) hazards as a result of unintended consequences of the risk assessment mitigating actions.

The crash of flight MH17 shows, safety and security are intertwined. To manage the risks related to flying over conflict zones and other risks at the interface of safety and security as good as possible, closer cooperation between both worlds is necessary.

<b>Key Actions taken/planned</b>
<b>a-</b> Circulate ICAO Doc 10084 Risk Assessment Manual for Civil Aircraft Operations Over or Near Conflict Zones
<b>b-</b> Organize seminar/Symposium 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
<b>c-</b> Encourage States to issue NOTAMs to share threats information emanated from conflict zones within their airspaces.

### **5.3.5 5G Operation on Radio Altimeter**

Radar altimeters (RA), operating at 4.2-4.4 GHz, are the only sensors onboard a civil aircraft which provide a direct measurement of the clearance height of the aircraft over the terrain or other obstacles (i.e. the Above Ground Level - AGL - information).

The RA systems' input is required and used by many aircraft systems when AGL is below 2500 ft. Any failures or interruptions of these sensors can therefore lead to incidents with catastrophic outcome, potentially resulting in multiple fatalities. The radar altimeters also play a crucial role in providing

situational awareness to the flight crew. The measurements from the radar altimeters are also used by Automatic Flight Guidance and Control Systems (AFGCS) during instrument approaches, and to control the display of information from other systems, such as Predictive Wind Shear (PWS), the Engine-Indicating and Crew-Alerting System (EICAS), and Electronic Centralized Aircraft Monitoring (ECAM) systems, to the flight crew.

There is a major risk that 5G telecommunications systems in the 3.7–3.98 GHz band will cause harmful interference to radar altimeters on all types of civil aircraft- including commercial transport airplanes; business, regional, and general aviation airplanes; and both transport and general aviation helicopters. If there is no proper mitigation, this risk has the potential for broad impacts to aviation operations in the United States as well as in other regions where the 5G network is being implemented next to the 4.2-4.4 GHz frequency band.

List of potential equipment failures:

Auto land functions, EICAS/ECAM, False or missing GPWS alert, Unreliable instrument Indications, and Abnormal behaviors in Automatic Flight Systems.

The 5G interference with Radar Altimeter SEIs/safety actions covered under CFIT SEI.

<b>Key Actions taken/planned</b>
<b>a-</b> Develop a guidance material on safeguarding measures to protect Radio Altimeter from potential harmful interference from 5G Operation
<b>b-</b> Conduct a Webinar addressing the matter to raise awareness and promote the guidance material developed by the RADALT AG.

## PART-II. IMPLEMENTATION

### 6. SAFETY IMPLEMENTATION

#### 6.1 Safety Monitoring and Implementation

This section presents an outline of the safety performance indicators reflecting the MID Region safety strategic priorities in the area of safety. The RASG-MID would use the indicators listed in the MID Region SPMM at **Appendix C** to measure safety performance and monitor each regional safety target. Furthermore, the MID Region SPMM includes six (6) Goals in line with GASP 2023-2025 Edition.

The RASG-MID would continuously monitor the implementation of the identified SEIs in the MID-RASP and measure safety performance of the regional civil aviation system, to ensure the intended targets are achieved, using the MID Region SPMM to this plan. Therefore, for each Goal established in the MID Region SPMM, identified SEI(s) be mapped to it including their respective actions.

MID region safety indicators and targets were aligned with the 2023-2025 GASP goals and targets as relevant in the MID Region. A MID Region Annual safety report would be annually published to provide stakeholders with relevant up-to-date information on the progress made in achieving the regional safety goals and targets, as well as the implementation status/progress of the SEIs.

In the event that the regional safety goals and targets are not met, the causes would be addressed and presented to stakeholders. If RASG-MID identifies critical operational safety risks, reasonable measures would be taken to mitigate them as soon as practicable, possibly leading to an earlier revision of the MID-RASP by SEIG.

The monitoring of safety performance and its enhancement is achieved through identification of relevant Goals and Safety Indicators, taking into consideration the GASP 2023-2025 and regional specific objectives and priorities, as well as the adoption and attainment of Safety Targets with a specific timeframe.

The MID Region Safety performance measurement and monitoring includes the following Goals:

Aspirational Goal: Zero fatality by 2030, the GASP aspirational goal of ‘zero fatalities in commercial operations by 2030 and beyond’.

**Goal 1: Achieve a Continuous Reduction of Operational Safety Risks:** This is related to 2023-2025 GASP Goal 1. This is aligned with the high-level ICAO safety metrics, thereby facilitating comparison of MID Region performance with global averages. Indicators related to risk areas are identified through the MID Region risk assessment methodology and described in the MID Region ASR. These ‘operational’ safety indicators would continue to be monitored through the MID Region ASR.

**Goal 2: Strengthen States’ safety oversight capabilities:** This is related to 2023-2025 GASP Goal 2. The Monitoring will be based on the available data published through USOAP-CMA (OLF) and iSTARS. The Regional average overall Effective Implementation (EI) in the MID Region (13 out of 15 States have been audited) is 74.67 %, which is above the world average 68.68% (as of 29 May 2022). Three (3) States are currently below EI 60%. The objective is aligned with the 2023-2025 GASP requiring all States to improve their score for the effective implementation (EI) of the critical elements (CEs) of the State’s safety oversight system (with focus on priority PQs) as follows: a) by 2024 -75 per cent; b) by 2026 – 85 per cent EI score; c) by 2030 EI Score – 95 per cent EI score.

**Goal 3: Implement effective State safety Programmes (SSPs):** This is related to 2023-2025 GASP. Related indicators will mainly be based on data available through ICAO iSTARS and USOAP-CMA (OLF). Feedback provided by Member States and Regional organizations would also be considered.



MID Office will in addition collect relevant documentation and information from States (SSP and NASP). The objective is aligned with the 2023-2025 GASP requiring all States to implement the foundation of an SSP by 2023, all States to publish a national aviation safety plan (NASP) by 2024, all States to work towards an effective SSP with maturity levels – Present by 2025, and Present and Effective by 2028.

**Goal 4: Increase Collaboration at the Regional Level:** This is related to 2023-2025 GASP. Related indicators will mainly be based on data available through ICAO iSTARS and USOAP-CMA (OLF). Feedback provided by Member States would be also considered. The objective is aligned with the 2023-2025 GASP requiring all States to achieve a positive safety oversight margin, and an effective SSP, to actively lead RASGs' safety risk management activities, by 2025.

**Goal 5: Expand the use of Industry Programmes and safety information sharing networks:** This is related to 2023-2025 GASP. Related indicators will mainly be collected from IATA and other international and regional organizations. Feedback provided by Member States would also be considered. The objective is aligned with the 2023-2025 GASP requiring all States that do not expect to meet GASP Goals 2 and 3 to seek assistance to strengthen their safety oversight capabilities or facilitate SSP implementation, all States to contribute information on operational safety risks, including SSP safety performance indicators regional aviation safety group (RASG) by 2025, and all regions to publish an updated regional aviation safety plan (RASP), in line with the 2023–2025 edition of GASP by 2023.

**Goal 6: Ensure the appropriate infrastructure is available to support safe operations:** This is related to 2023-2025 GASP Goal 6. Related indicators will mainly be based on data available through ICAO iSTARS. Feedback provided by Member States would also be considered. The objective is aligned with the 2023-2025 GASP requiring all States to implement the air navigation and airport core infrastructure including aerodrome safety by 2025.

## 6.2 Communication of Progress to RASG-MID and Regional Stakeholders

A MID Region Annual safety report would be annually published to provide stakeholders with relevant up-to-date information on the progress made in achieving the regional safety goals and targets, as well as the implementation status of the SEIs. In addition, the abovementioned information would culminate in a report on progress of implementation of the MID-RASP SEIs and their respective actions as well as in achieving the regional safety goals and targets; would be presented at every SEIG and RASG-MID meetings as well as safety seminars. The progress report should cover at least the following aspects:

- a. Brief overview of the overall implementation of the MID-RASP;
- b. Analysis on delay/ challenges encountered in implementation of SEIs and their respective actions; and
- c. If regional safety goals and targets are not met, causes would be addressed and presented to relevant stakeholders.

## 7 SAFETY ACTIONS

This chapter addresses system-wide problems that affect aviation as a whole including the SEIs and their respective actions. In most scenarios, these problems are related to organizational processes and procedures, regional operational safety risks, and emerging risks. The safety actions in this chapter are driven principally by the need to maintain or increase the current level of safety in the aviation sector for the region.

This chapter also facilitates the identification of SEIs and their respective actions relevant for each Goal established in the MID Region Safety performance measurement and monitoring as follows:

- **Goal 1:** Achieve a continuous reduction of operational safety risks.
- **Goal 2:** strengthen States safety oversight capabilities.
- **Goal 3:** Implementation of effective State safety Programmes.
- **Goal 4:** Increase collaboration at the regional level.
- **Goal 5:** Expand the use of industry Programmes and safety information sharing networks.
- **Goal 6:** Ensure the appropriate infrastructure is available to support safe operations.

## 7.1 Organizational Challenges/issues

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

The States safety oversight capabilities remains an issue mainly for AIG, AGA, ANS, and OPS areas. The lack of effective oversight remains an issue and the difficulties experienced by some authorities in properly discharging their oversight responsibilities is a concern also in the light of the size, scope and complexity of the aviation industry that some of them oversee.

Furthermore, while a number of CAAs have reached a suitable and stable level of maturity, certain continue to underperform and/or struggle in achieving sustainable improvements. Most notably, while progress has been noted in the implementation of Authorities' management systems, effective oversight of undertakings' safety management systems continues to be an area of concern in several domains.

#### 7.1.1.1 G2-SEI-01: Strengthening States' Safety Oversight Capabilities

**Target:** The safety targets of this goal are indicated in the MID Region SPM at **Appendix C**.

#### **Rationale:**

The CEs are essentially the safety defense tools of the State Safety Oversight system needed for the effective and sustainable implementation of a safety-related policy and associated procedures. The effective implementation of the CEs is an indication of a State's capability for safety oversight. States must establish CE-1 through CE-5 prior to the implementation of CE-6 through CE-8 in order to provide effective safety oversight and safety management. An individual State's responsibility for safety oversight is the foundation upon which a safe global air transport system is built. States that experience difficulties in carrying out safety oversight functions can impact the state of International Civil Aviation.

States should work to continually improve their effective implementation of the eight CEs of the State's safety oversight system in all relevant areas, as appropriate to their aviation system complexity. Through collaborative efforts, the level of effective implementation of the CEs of a State's safety oversight system can increase, particularly in those States where a State faces shortages of human, financial or technical resources.

The below elements are considered enablers of a robust safety oversight system, expected to be in place according to the requirements in force:

1. ability and determination to conduct effective oversight;
2. ability to identify risks through a process to collect and analyze data;
3. ability to mitigate the identified risks in an effective way, implying measurement of performance and leading to continuous improvement;
4. willingness and possibility to exchange information and cooperate with other CAAs;
5. ability to ensure the availability of adequate personnel, where 'adequate' includes the notion of sufficient training and proper qualification; and
6. focus on the implementation of effective management systems in industry, wherever required by the regulations in force.

#### **What we want to achieve:**

A robust oversight system across MID Region, where each CAA is able to properly discharge its oversight responsibilities, with particular care to exchange of information and cooperation with other



CAAs and to the implementation of management systems in all organizations, as well as to ensure the availability of adequate personnel in CAAs. In addition, to Support MID Region States' civil aviation authorities to Strengthen States' Safety Oversight Capabilities and increase progressively the USOAP-CMA EI results.

**How we monitor improvement:**

Significant increase of the number of States with an EI above 60% and implementing risk-based oversight.

**How we want to achieve it:** This SEI should be considered by States for inclusion in their NASPs.

<b>Actions: A1-A2-A3-A4-A5-A6-A7</b>
<b>A1-</b> Conduct Capacity Building Activities to promote effective implementation of SARPs,
<b>A2-</b> Conduct technical assistance activities and NCLB missions to States with a focus on ANS, AGA, AIG, and OPS areas.
<b>A3-</b> Develop and implement a specific NCLB plan of actions for prioritized States
<b>A4-</b> Conduct a Capacity Building Activity for Aerodrome Inspectors (Training Course on Aerodrome Inspection) (Action addressed under <b>G6-SEI-01 A5</b> )
<b>A5-</b> Develop guidance material to assist MID Region States in the issuance of exemptions related to temporary deviations from standards
<b>A6-</b> Develop guidance material to support States for the conduct of remote surveillance
<b>A7-</b> Develop guidance material on the enhancement of understanding the concept of judicial enforcement for aviation inspectors

**References:** ICAO SARPs and guidance documents and 2023-2025 GASP Goal 2 "Strengthen States' safety oversight capabilities"

**Component 1 — State Safety Oversight (SSO) System**

**Phase 1 — Establishment of a Safety Oversight Framework**

- GASP SEI-1: Consistent implementation of ICAO SARPs at the national level.
- GASP SEI-3: Regional safety enhancement initiatives to support consistent coordination of Regional Programmes in establishing adequate safety oversight capabilities.
- GASP SEI-4 & GASP SEI-10: Strategic collaboration with key aviation stakeholders to enhance safety in a coordinated manner.
- GASP SEI-5: Provision of the Regional safety information to ICAO by asking States to complete, submit and update all relevant documents and records.

**Phase 2 — Implementation of a Safety Oversight System**

- GASP SEI-6: Continued implementation of and compliance with ICAO SARPs at the Regional level.
- GASP SEI-8: Strategic collaboration with key aviation stakeholders to enhance safety in a coordinated manner.
- GASP SEI-9: Continued provision of the primary source of Regional safety information to ICAO by asking States to update all relevant documents and records as progress is made.

**Stakeholders:** RASG-MID, MIDANPIRG, States, international organizations, and industry

**Action 1: Conduct Capacity Building Activities to promote effective implementation of SARPs**

**Owner:** ICAO, States, international organizations, and industry

**Priority:** Medium

**Completion date:** 2025

**Status:** Ongoing

**Action 2: Conduct technical assistance and NCLB missions to States with focus on ANS, AGA, AIG, and OPS areas**

**Owner:** ICAO

**Priority:** High

**Completion date:** 2025

**Status:** Ongoing

**Action 3: Develop and implement a specific NCLB plan of actions for prioritized States**

**Owner:** ICAO and concerned States

**Priority:** High

**Completion date:** 2025

**Status:** Ongoing

**Action 4: Conduct a Capacity Building Activity for Aerodrome Inspectors (Training Course on Aerodrome Inspection) (Action addressed under G6-SEI-01 A5)**

**Owner:** Qatar and ICAO

**Priority:** Medium

**Completion date:** 2025

**Status:** New

**A5- Develop guidance material to assist MID Region States in the issuance of exemptions related to temporary deviations from standards**

**Owner:** Qatar supported by Iran, Sudan, UAE, and IATA

**Priority:** Medium

**Completion date:** 2025

**Status:** New

**A6- Develop guidance material to support States for the conduct of remote surveillance**

**Owner:** Qatar supported by Iran, Jordan, Saudi Arabia, Sudan, UAE, and ACAO

**Priority:** Medium

**Completion date:** 2025

**Status:** New

**A7- Develop guidance material on the enhancement of understanding the concept of judicial enforcement for aviation inspectors**

**Owner:** Qatar supported by Saudi Arabia and UAE

**Priority:** Medium

**Completion date:** 2025

**Status:** New

**EXPECTED OUTPUT**

<b>Deliverable(s)</b>	<b>Timeline</b>
MID States to improve their score for the effective implementation (EI)	2025

### 7.1.1.2 G2-SEI-02: Improve Regional Cooperation for the Provision of Accident & Incident Investigation

**Target/Metrics:** The safety targets of this goal are indicated in the MID Region SPM at **Appendix C**.

**Rationale:**

States should work to continually improve their effective implementation of the CEs of the State's safety oversight system in the area of AIG. Through collaborative efforts and joining the MENA ARCM, the level of effective implementation of the CEs of a State's AIG can increase, particularly in those States where a State faces shortages of human, financial or technical resources.

**What we want to achieve:**

MID Region States to Strengthen States' Safety Oversight Capabilities and increase progressively the USOAP-CMA EI results in the area of AIG.

**How we monitor improvement:**

Increase of the number of States with an EI above 60% for AIG area and then establishing an independent aircraft accident and incident investigation authority.

**How we want to achieve it:**

**Actions: A1-A2**

**A1-** Support of MENA ARCM activities

**A2-** Conduct AIG Capacity Building Activities.

**References:** ICAO SARPs and guidance documents and 2023-2025 GASP Goal 2 "Strengthen States' safety oversight capabilities"

#### Component 1 — State Safety Oversight (SSO) System

##### Phase 1 — Establishment of a Safety Oversight Framework

- GASP SEI-2: Establishment of an independent regional accident and incident investigation process, consistent with Annex 13.
- GASP SEI-3: Regional safety enhancement initiatives to support consistent coordination of Regional Programmes in establishing adequate safety oversight capabilities.
- GASP SEI-4: Strategic collaboration with key aviation stakeholders to enhance safety in a coordinated manner.

**Stakeholders:** RASG-MID, States, international organization, and industry

**Action 1: Support of MENA ARCM activities**

**Owner:** ICAO, ACAO, and MENA ARCM Member States

**Priority:** High

**Completion date:** 2025

**Status:** Ongoing

**Action 2: Conduct AIG Capacity Building Activities**

**Owner:** ICAO, States, international organizations, and industry

**Priority:** Medium

**Completion date:** 2025

**Status:** Ongoing

**EXPECTED OUTPUT**

**Deliverable(s)**

**Timeline**

MID States to improve their score for the effective implementation (EI) especially the area of AIG 2025

**7.1.1.3 G2-SEI-03: Sharing of Safety Recommendations related to Accidents and Serious Incidents**

**Target/Metrics:** The safety targets of this goal are indicated in the MID Region SPM at **Appendix C**.

**Rationale:**

States should work to continually improve their effective implementation of the CEs of the State's safety oversight system in the area of AIG. Through collaborative efforts, the level of effective implementation of the CEs of a State's AIG can increase, particularly in those States where a State faces shortages of human, financial or technical resources.

**What we want to achieve:**

MID Region States' civil aviation authorities to Strengthen States' Safety Oversight Capabilities and increase progressively the USOAP-CMA EI results in the area of AIG. In addition, the prevention of accidents or incidents, and the reduction of the consequences of such occurrences.

**How we monitor improvement:**

Increase of the number of States with an EI above 60% for AIG area and establishing an independent aircraft accident and incident investigation authority.

**How we want to achieve it:**

**Action: A1**

**A1-** Establishing a Platform for Sharing Safety Recommendations for MENA ARCM Member States

**References:** ICAO SARPs and guidance documents and 2023-2025 GASP Goal 2 "Strengthen States' safety oversight capabilities"

**Component 1 — State Safety Oversight (SSO) System**

**Phase 1 — Establishment of a Safety Oversight Framework**

- GASP SEI-3: Regional safety enhancement initiatives to support consistent coordination of Regional Programmes in establishing adequate safety oversight capabilities
- GASP SEI-4: Strategic collaboration with key aviation stakeholders to enhance safety in a coordinated manner

**Stakeholders:** RASG-MID, States, and international organization

**Action 1: Development of platform on sharing safety recommendations**

**Owner:** ICAO, ACAO, and MENA ARCM Member

**Priority:** Low

**Completion date:** 2025

**Status:** On-hold

#### EXPECTED OUTPUT

Deliverable(s)	Timeline
Improve MID States the effective implementation (EI) in the area of AIG	2025

#### 7.1.1.4 G2-SEI-04: Enhance State Oversight on Dangerous Goods

**Target/Metrics:** The safety targets of this goal are indicated in the MID Region SPM at **Appendix C**.

#### Rationale:

States should work to continually improve their effective implementation of the eight CEs of the State's safety oversight system in the area of OPS.

#### What we want to achieve:

States to implement an effective system for safety oversight of the various entities involved in the transport of dangerous goods. In addition, MID Region States' to Strengthen States' Safety Oversight Capabilities and increase progressively the USOAP-CMA EI results in the area of OPS and enhance the state oversight on Dangerous Goods

#### How we monitor improvement:

Increase of the number of States with an EI above 60% for OPS area and then to Strengthen States' Safety Oversight Capabilities.

**How we want to achieve it:** This SEI should be considered by States for inclusion in their NASPs.

#### Actions: A1

**A1-** Conduct Dangerous Goods (DG) capacity building activities including Lithium batteries fires/smoke risks in cabin

**A2-** Develop guidance material on carriage and transport of Lithium batteries

**References:** ICAO SARPs and guidance documents and 2023-2025 GASP Goal 2 "Strengthen States' safety oversight capabilities" and ICAO Annex 18 "Safe Transport of Dangerous Goods by Air".

#### Component 1 — State Safety Oversight (SSO) System

##### Phase 1 — Establishment of a Safety Oversight Framework

GASP SEI-1: Consistent implementation of ICAO SARPs at the national level

##### Phase 2 — Implementation of a Safety Oversight System

GASP SEI-6: Continued implementation of and compliance with ICAO SARPs at the Regional level

**Stakeholders:** RASG-MID, States, international organizations, and industry

**Action 1- Conduct Dangerous Goods (DG) capacity building activities including Lithium batteries fires/smoke risks in cabin**

**Owner:** ICAO, States, international organizations, and industry.

**Priority:** Medium

**Completion date:** 2025

**Status:** Ongoing

**Action 2: Develop guidance material on carriage and transport of Lithium batteries**

**Owner:** IATA

**Priority:** Medium

**Completion Date:** 2025

**Status:** Ongoing

**EXPECTED OUTPUT**

<b>Deliverable(s)</b>	<b>Timeline</b>
MID States to improve their score for the effective implementation (EI) especially the area of OPS	2025

### 7.1.1.5 G2-SEI-05: Human factors and Competence of Personnel

**Target/Metrics:** The safety targets of this goal are indicated in the MID Region SPM at **Appendix C**.

**Rationale:**

Human factors and competence of personnel are strategic priorities in the region. Human factors and the impact on human performance, as well as medical fitness are strategic priorities. As new technologies and/or operating concepts emerge on the market and the complexity of the system continues increasing, it is of key importance to properly address human factors and human performance, in terms of both limitations and its contribution to delivering safety, as part of the safety management implementation. CRM has been identified in the MID ASR as most important human factors issue in the domain of commercial air transport Aeroplanes above 5700 kgs. The safety actions related to competence of personnel mainly English language proficiency would be further developed in the future.

The main objectives of TRM for operational staff are the development of attitudes and behaviour, which will contribute to enhanced teamwork skills and performance in order to reduce teamwork failures as contributory factors in ATM related incidents and accidents. The benefits of TRM are considered to be enhanced Threat and Error Management capabilities, continuity and stability of teamwork, task efficiency, sense of working as a part of a larger and more efficient team, increased job satisfaction; and improved use of staff resources.

In addition, the safety action identified currently related to aviation personnel is also focusing on fatigue risk management (FRMS) by COVID-19 to mitigate safety issues in all domains such as personal readiness, flight crew perception or crew resource management (CRM) and communication, which play a role in improving safety across all aviation domains.

**What we want to achieve:**

Ensure continuous improvement in safety management activities as related to human factors and human performance.

**How we monitor improvement:**

Improvement in aviation personnel competence at all levels and then to Strengthen States' Safety Oversight Capabilities.

**How we want to achieve it:** This SEI should be considered by States for inclusion in their NASPs.

<b>Actions: A1-A2-A3-A4</b>
<b>A1-</b> Advisory Circular: Crew Resource Management Training Programme (CRM). ( <b>Action addressed under G1-SEI-04:CFIT</b> )
<b>A2-</b> Conduct Crew Resource Management capacity building activities
<b>A3-</b> Organize Team Resource Management capacity building activities.
<b>A4-</b> FRMS capacity building activities

**References:** ICAO SARPs and guidance documents and 2023-2025 GASP Goal 2 "Strengthen States' safety oversight capabilities". ICAO Human Performance Manual (ICAO Doc 10151) and ICAO Safety Management Manual (ICAO Doc 9859).

### Component 1 — State Safety Oversight (SSO) System

#### Phase 1 — Establishment of a Safety Oversight Framework

GASP SEI-1: Consistent implementation of ICAO SARPs at the national level

**Stakeholders:** RASG-MID, States, industry, international organizations

#### **Action 2: Organize Crew Resource Management capacity building activities**

**Owner:** ICAO, States, international organizations, and industry.

**Priority:** Medium

**Completion date:** 2023

**Status:** ongoing

#### **Action 3: Organize Team Resource Management capacity building activities**

**Owner:** ICAO, States, international organizations, and industry

**Priority:** Medium

**Completion Date:** 2023

**Status:** ongoing

#### **Action 4: FRMS capacity building activities**

**Owner:** ICAO, States, international organizations, and industry

**Priority:** Medium

**Completion Date:** 2025

**Status:** ongoing

### EXPECTED OUTPUT

Deliverable(s)	Timeline
MID States to improve their score for the effective implementation (EI) and mitigate contributing factors to accidents and incidents	2025

### 7.1.1.6 G2-SEI-06: Management of security risks with safety impact

**Target/Metrics:** The safety targets of this goal are indicated in the MID Region SPMM at **Appendix C**.

**Rationale:**

The safety action in this area is aimed at mitigating the security related safety risks. The safety action in this area also include the mitigation of the risks posed by flying over zones where an armed conflict exists. Managing the impact of security on safety is a strategic priority in MID region.

**What we want to achieve:**

Increase safety by managing the impact of security on safety and mitigating related safety risks.

**How we monitor improvement:**

Continuous assessment and mitigation of security threats.

**How we want to achieve it:** This SEI should be considered by States for inclusion in their NASPs.

<b>Actions: A1</b>
<b>Action 1-</b> 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

**References:** ICAO SARPs and guidance documents and 2023-2025 GASP Goal 2 “Strengthen States’ safety oversight capabilities”. ICAO Annex 17.

#### Component 1 — State Safety Oversight (SSO) System

##### Phase 1 — Establishment of a Safety Oversight Framework

- GASP SEI-1: Consistent implementation of ICAO SARPs at the national level

**Stakeholders:** RASG-MID, RASFG-MID, MIDANPIRG, States, international organizations, industry

**Action 1-** Organize seminar/Symposium/workshop to exchange experiences and good practices on assessing risks and sharing of information related to the overflying of conflict zones in coordination with RASFG-MID and MIDANPIRG

<b>Owner:</b>	ICAO
<b>Priority:</b>	High
<b>Completion date:</b>	2023
<b>Status:</b>	Ongoing

#### EXPECTED OUTPUT

Deliverable(s)	Timeline
mitigate contributing factors to accidents and incidents	2025

### 7.1.1.7 G2-SEI-07: Managing cybersecurity risks

**Target/Metrics:** The safety targets of this goal are indicated in the MID Region SPMM at **Appendix C**.



**Rationale:**

The safety action in this area is aimed at mitigating the cybersecurity related safety risks. Assess the safety impact of cybersecurity threats to aviation users, support the development of mitigations and specific Training actions, identify and mitigate the vulnerabilities of aviation products and identify the required changes to aviation standards.

**What we want to achieve:**

Increase safety by managing the impact of cybersecurity on safety and mitigating related safety risks.

**How we monitor improvement:**

Continuous assessment and mitigation of cybersecurity threats.

**How we want to achieve it:** This SEI should be considered by States for inclusion in their NASPs.

**Actions: A1-A2-A3**

**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

**A2-** Conduct activities on Cyber Security and Resilience- (Jointly ANS and AVSEC)

**A3-** Develop a MID Region Cybersecurity Action Plan.

**References:** ICAO SARPs and guidance documents and 2023-2025 GASP Goal 2 “Strengthen States’ safety oversight capabilities”. ICAO Annex 17.

**Component 1 — State Safety Oversight (SSO) System****Phase 1 — Establishment of a Safety Oversight Framework**

- GASP SEI-1: Consistent implementation of ICAO SARPs at the national level

**Stakeholders:** RASG-MID, RASFG-MID, MIDANPIRG, States, international organizations, industry

**Action 1- 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**

**Owner:** ANS Cyber SeC Action group

**Priority:** Medium

**Completion date:** 2025

**Status:** New

**Action 2- Conduct activities on Cyber Security and Resilience**

**Owner:** ICAO

**Priority:** Medium

**Completion date:** 2025

**Status:** New

**Action 3: Develop a MID Region Cybersecurity Action Plan**

**Owner:** Cybersecurity Security Ad-hoc Group

**Priority:** Medium

**Completion date:** 2025

**Status:** New

**EXPECTED OUTPUT**

Deliverable(s)	Timeline
mitigate contributing factors to accidents and incidents	2025

### 7.1.1.8 G2-SEI-08: Impact of COVID-19 pandemic- Safe return to operations

**Target/Metrics:** The safety targets of this goal are indicated in the MID Region SPMM at **Appendix C**.

**Rationale:**

States should manage a dedicated safety promotion campaign in support of safe return to operations. The safety action in this area is aimed at mitigating the COVID-19 pandemic related safety risks. The safety action in this area would focus on continuous support to the MID-RPTF and sharing of guidance material/best practices to mitigate the risks stemmed from the pandemic.

**What we want to achieve:**

Increase safety by managing the impact of COVID-19 pandemic on safety and mitigating related safety risks.

**How we monitor improvement:**

Continuous assessment and mitigation of COVID-19 pandemic induced safety risks.

**How we want to achieve it:** This SEI should be considered by States for inclusion in their NASPs.

<b>Actions: A1-A2</b>
<b>A1-</b> Continued support to the aviation industry through MID-RPTF meetings/Activities, as needed
<b>A2-</b> Sharing of guidance material/best practices

**References:** ICAO SARPs and guidance documents and 2023-2025 GASP Goal 2 “Strengthen States’ safety oversight capabilities”.

#### Component 1 — State Safety Oversight (SSO) System

##### Phase 1 — Establishment of a Safety Oversight Framework

- GASP SEI-1: Consistent implementation of ICAO SARPs at the national level

<b>Stakeholders:</b> RASG-MID, RASFG-MID, MIDANPIRG, States, international organizations, industry	
<b>Action 1- Continued support to the aviation industry through MID-RPTF Activities, as needed</b>	
<b>Owner:</b>	States, international organizations, and industry
<b>Priority:</b>	High
<b>Completion date:</b>	2025
<b>Status:</b>	Ongoing
<b>Action 2: Sharing of guidance material/best practices</b>	
<b>Owner:</b>	States, international organizations, and industry
<b>Priority:</b>	High
<b>Completion date:</b>	2025

<b>Status:</b>	Ongoing
<b>EXPECTED OUTPUT</b>	
<b>Deliverable(s)</b>	<b>Timeline</b>
mitigate contributing factors/safety issues to accidents and incidents 2025	

## 7.1.2 Goal 3: Implementation of Effective States Safety Programme (SSP)

### 7.1.2.1 G3-SEI-01: Implement an effective Safety Management

**Target:** The safety targets of this goal are indicated in the MID Region SPMM at **Appendix C**.

#### **Rationale:**

Management of safety in a systematic and proactive way enables authorities and organizations to set up management systems that take into consideration potential hazards and associated risks before aviation accidents occur. This global move is at the core of ICAO Annex 19. This safety area would enable further work to improve reporting processes, occurrence investigation at organizational level, and also the continued development of integrated data collection taxonomies.

#### **What we want to achieve:**

MID Region States to implement SSP and consequently their services providers to implement SMS. In addition, work with authorities and organizations to implement safety management.

#### **How we monitor improvement:**

ICAO Annex 19 framework requiring safety management is in place across all aviation domains, and organizations and authorities are able to demonstrate compliance.

**How we want to achieve it:** This SEI should be considered by States for inclusion in their NASPs.

#### **States to give priority to the work on SSPs**

In the implementation and maintenance of the SSP, States should in particular:

- ensure effective implementation of the Annex 19 Requirements and address deficiencies in oversight capabilities, as a prerequisite for effective SSP implementation;
- ensure effective coordination between State authorities having a role in safety management;
- ensure that inspectors have the right competencies to support the evolution towards risk- and performance based oversight;
- ensure that policies and procedures are in place for risk- and performance based oversight, including a description of how an SMS is accepted and regularly monitored;
- establish policies and procedures for safety data collection, analysis, exchange and protection;
- establish a process to determine safety performance indicators at State level addressing outcomes and processes;
- ensure that an approved SSP document is made available and shared with other States; and
- ensure that the SSP is regularly reviewed and that SSP effectiveness is regularly assessed;
- ensure that the specific safety risks induced by COVID-19 be assessed and be included in the State risk picture.

#### **SMS Assessment**

States should make use of the available tools to support risk- and performance-based oversight. States also should regularly monitor status of compliance with SMS requirements of their industry.

#### **SMS international cooperation**

States should promote the common understanding of safety management and human factors principles and requirements in different countries, share lessons learned and encourage progress and harmonization, through active participation in the RASG-MID and other safety groups and fora.

**FDM precursors of main operational safety risks**

States in partnership with industry, other regional and international organizations should complete the good practice documentation which supports the inclusion of main operational safety risks such as RE, RI, LOC-I, CFIT and MAC into operators' FDM Programmes.

**States to set up a regular dialogue with their national aircraft operators on flight data monitoring (FDM) Programmes**

States to set up a regular dialogue with their national aircraft operators on flight data monitoring (FDM) Programmes, with the objectives of:

- promoting the operational safety benefits of FDM,
- fostering an open dialogue on FDM Programmes that takes place in the framework of just culture,
- encouraging operators to include and further develop FDM events relevant for the prevention of REs, MACs, CFIT and LOC-I, or other issues identified by the SSP

**Actions: A1-A2**

A1- Conduct SSP/SMS capacity building activities

A2- Conduct technical assistance missions by SMIT

**References:** ICAO Annex 19 and GASP 2023-2025 Goal 3 "Implement effective State Safety Programmes"

**Component 2 — State Safety Programme**

- GASP SEI-10: Start of promotion of SSP implementation at the regional level.
- GASP SEI-11: Regional safety enhancement initiatives to support consistent coordination of Regional Programmes for SSP implementation.
- GASP SEI-12: Strategic collaboration with key aviation stakeholders to support SSP implementation.
- GASP SEI-13: Start of SSP implementation at the national level.
- GASP SEI-14: Regional allocation of resources to support continued development of the proactive use of risk modelling capabilities.
- GASP SEI-15: Regional collaboration with key aviation stakeholders to support the proactive use of risk modelling.
- GASP SEI-16: Advancement of safety risk management at the regional level.

**Component 2 — State Safety Programme**

GASP SEI-7: Strategic collaboration with key aviation stakeholders to complete SSP implementation

**Stakeholders:** RASG-MID, States, industry, international organizations

**Action 1-** Conduct SSP/SMS training courses and workshops

**Owner:** ICAO, supported by organizations, and industry

**Priority:** High

**Completion Date:** 2025

**Status:** ongoing

**Action 2- Conduct technical assistance missions by SMIT****Owner:** ICAO and SMIT Team**Priority:** High**Completion Date:** 2025**Status:** New**EXPECTED OUTPUT**

Deliverable(s)	Timeline
<b>MID States to implement the foundation of an SSP</b>	<b>2023</b>
<b>MID States to implement an effective SSP</b>	<b>2025</b>

**7.1.2.2 G3-SEI-02: NASP Development & Implementation**

**Target:** The safety targets of this goal are indicated in the MID Region SPMM at **Appendix C**.

**Rationale:**

States should ensure that a NASP is maintained and regularly reviewed. The MID-RASP provides the identified safety priorities in the Region and States should identify which top risks and key issues mentioned in the GASP and MID-RASP; which apply to their national context, and identify suitable mitigation actions within their NASP. States should also add/consider others which are unique to their operational context.

**What we want to achieve:**

MID Region States to develop NASP. Successful implementation of the NASP actions would require the commitment of resources from stakeholders within State, availability of data to effectively monitor the achievement of NASP Targets, and proper project governance. In addition to the actions, NASP shall also consider how to measure their effectiveness.

**How we monitor improvement:**

ICAO GASP requiring States to develop NASP and region to develop RASP.

**How we want to achieve it:** This SEI should be considered by States for inclusion in their NASPs.

**States to establish and maintain a National Aviation Safety Plan (NASP)**

States should ensure that a NASP is maintained and regularly reviewed. NASP should:

- describe how the plan is developed and endorsed, including collaboration with different entities within the State, with industry and other stakeholders;
- include safety objectives, goals, indicators and targets in line with in line with GASP as well as regional safety plan;
- identify the main safety risks at national level in addition to the ones identified in MID-RASP as applicable to the State;
- include series of SEIs to address safety issues; and
- Reflect the GASP and MID-RASP SEIs as applicable to the State.

**Actions: A1-A2****A1-** Conduct NASPs workshops & technical assistance missions**A2-** NASP iPacks deployment

**References:** ICAO Annex 19 and GASP 2023-2025 Goal 3 "Implement effective State Safety Programmes"

## Component 2 — State Safety Programme

- GASP SEI-10: Start of promotion of SSP implementation at the Regional level.
- GASP SEI-11: Regional safety enhancement initiatives to support consistent coordination of Regional Programmes for SSP implementation.
- GASP SEI-12: Strategic collaboration with key aviation stakeholders to support SSP implementation.
- GASP SEI-13: Start of SSP implementation at the national level.
- GASP SEI-14: Regional allocation of resources to support continued development of the proactive use of risk modelling capabilities.
- GASP SEI-15: Regional collaboration with key aviation stakeholders to support the proactive use of risk modelling.
- GASP SEI-16: Advancement of safety risk management at the Regional level.

## Component 2 — State Safety Programme

GASP SEI-7: Strategic collaboration with key aviation stakeholders to complete SSP implementation

<b>Stakeholders:</b> RASG-MID, States, industry, international organizations	
<b>Action 1- Conduct NASPs workshops &amp; technical assistance missions</b>	
<b>Owner:</b>	ICAO
<b>Priority:</b>	High
<b>Completion Date:</b>	2025
<b>Status:</b>	Ongoing
<b>Action 2- NASP iPacks deployment</b>	
<b>Owner:</b>	ICAO and States
<b>Priority:</b>	High
<b>Completion Date:</b>	2025
<b>Status:</b>	New
<b>EXPECTED OUTPUT</b>	
Deliverable(s)	Timeline
MID States to develop and implement NASP	2025

### 7.1.3 Goal 4: Increase Collaboration at the Regional Level

#### 7.1.3.1 G4-SEI-01: Development and Implementation of MID-RASP

**Target:** The safety targets of this goal are indicated in the MID Region SPMM at **Appendix C**.

**Rationale:** The RASG-MD is the governing body responsible for the development, implementation and monitoring of the MID-RASP, in collaboration with the ICAO MID Office, international and regional organizations and with the aviation industry. The MID-RASP is to be reviewed by the Safety Enhancement Implementation Group (SEIG) every year mainly to include new identified Safety Enhancement initiatives' (SEIs), review the existing SEIs, as well as their respective actions.

**What we want to achieve:**

States, international organization, and industry to increase collaboration at the regional level so that to enhance safety.

**How we monitor improvement:**

MID region to publish an updated regional aviation safety plan (MID-RASP), in line with the 2023–2025 edition of GASP.

**How we want to achieve it:** This SEIs included in MID-RASP to be considered by States for inclusion in their NASPs.

**References:** GASP 2023-2025 Goal 4 “Increase collaboration at the Regional level”

<b>Action: A1</b>
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<b>A1- Development and Implementation of MID-RASP 2023-2025 Edition</b>
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**Component 1 — State Safety Oversight (SSO) System****Phase 1 — Establishment of a Safety Oversight Framework**

- GASP SEI- SEI-1: Consistent implementation of ICAO SARPs at the Regional level.
- GASP SEI-3: Regional safety enhancement initiatives to support consistent coordination of Regional Programmes in establishing adequate safety oversight capabilities.
- GASP SEI-5: Provision of the Regional safety information to ICAO by asking States to complete, submit and update all relevant documents and records.

**Phase 2 — Implementation of a Safety Oversight System**

GASP SEI-9: Continued provision of the primary source of Regional safety information to ICAO by asking States to update all relevant documents and records as progress is made.

**Stakeholders:** RASG-MID, MIDANPIRG, RASFG-MID, States, International organizations, and industry.

**Action 1: Development and Implementation of MID-RASP 2023-2025 Edition**

**Owner:** SEIG

**Priority:** High

**Completion date:** 2025

**Status:** Ongoing

**EXPECTED OUTPUT**

<b>Deliverable(s)</b>	<b>Timeline</b>
To manage and enhance safety at the regional	2025

**7.1.3.2 G4-SEI-02: Enhance collaboration between States, international organizations, and industry**

**Target:** The safety targets of this goal are indicated in the MID Region SPMM at **Appendix C**.

**Rationale:** cooperation and collaboration among all stakeholders through conducting MID RCM meetings and agreeing on joint activities to avoid duplication of effort.

**What we want to achieve:**

States, international organizations, and industry to increase collaboration at the regional level so that to enhance safety.

**How we monitor improvement:** Reinforce efficient and effective cooperation and collaboration with all stakeholders, avoiding duplication and optimizing the allocation of resources at the regional level.

**How we want to achieve it:** Joint Programme activities

**References:** GASP 2023-2025 Goal 4 “Increase collaboration at the Regional level”

<b>Actions: A1-A2</b>
<b>A1- Develop and agree on joint work activities through MID-RCM meetings</b>
<b>A2- Support the establishment of MENA RSOO and its activities</b>

### **Component 1 — State Safety Oversight (SSO) System**

#### **Phase 1 — Establishment of a Safety Oversight Framework**

- GASP SEI- SEI-1: Consistent implementation of ICAO SARPs at the Regional level.
- GASP SEI-3: Regional safety enhancement initiatives to support consistent coordination of Regional Programmes in establishing adequate safety oversight capabilities.
- GASP SEI-5: Provision of the Regional safety information to ICAO by asking States to complete, submit and update all relevant documents and records.

#### **Phase 2 — Implementation of a Safety Oversight System**

GASP SEI-9: Continued provision of the primary source of Regional safety information to ICAO by asking States to update all relevant documents and records as progress is made.

**Stakeholders:** RASG-MID, MIDANPIRG, RASFG-MID, States, international organizations, and industry.

#### **Action 1: Develop and agree on joint work activities through MID RCMs**

**Owner:** ICAO, States, international organizations, industry

**Priority:** High

**Completion date:** 2025

**Status:** New

#### **Action 2: Support the establishment of MENA RSOO and its activities**

**Owner:** ICAO and States

**Priority:** Medium

**Completion date:** 2025

**Status:** New

#### **EXPECTED OUTPUT**

##### **Deliverable(s)**

To increase States USOAP EI and SSP level of maturity.

##### **Timeline**

2025



## 7.2.1 Goal 5: Expand the Use of Industry Programmes and safety information sharing networks

### 7.1.4.1 G5-SEI-01: Promote the Use of industry Programmes

**Target:** The safety targets of this goal are indicated in the MID Region SPMM at **Appendix C**.

**Rationale:**

**What we want to achieve:**

Work with authorities and organizations to increase the number of service providers participating in the corresponding ICAO recognized industry assessment Programmes.

**How we monitor improvement:**

Increase the number of service providers participating in the corresponding ICAO recognized industry assessment Programmes. The RASG-MID, IATA, and ACI will give feedback on the effectiveness of the activities.

**How we want to achieve it:**

<b>Actions:</b> A1-A2
A1- Encourage IATA’s IOSA and ISAGO registrations through safety promotion
A2- Encourage the implementation of ACI Airport Excellence (APEX) in Safety Programme

**References:** This is related to 2023-2025 GASP Goal 5 “Expand the use of industry Programmes and safety information sharing networks”

#### Component 1 — State Safety Oversight (SSO) System

GASP SEI-1 — Strategic collaboration with key aviation stakeholders to enhance safety in a coordinated manner.

<b>Stakeholders:</b> RASG-MID, States, industry, international organizations	
<b>Action 1: Encourage IATA’s IOSA and ISAGO registrations through safety promotion</b>	
<b>Owner:</b>	IATA
<b>Priority:</b>	Medium
<b>Completion Date:</b>	2025
<b>Status:</b>	Ongoing
<b>Action 2: Encourage the implementation of ACI Airport Excellence (APEX) in Safety Programme</b>	
<b>Owner:</b>	ICAO and ACI
<b>Priority:</b>	medium
<b>Completion Date:</b>	2025
<b>Status:</b>	ongoing

#### EXPECTED OUTPUT

Deliverable(s)	Timeline
Increase the number of service providers participating in ICAO recognized industry assessment Programmes and maintain recurrent APEX Missions in the region:	2025

## 7.2.1 Goal 6: Ensure the Appropriate Infrastructure is available to Support Safe Operations

### 7.1.1.1 G6-SEI-01: Certification of International Aerodromes

**Target/Metrics:** The safety targets of this goal are indicated in the MID Region safety strategy at Appendix C.

**Rationale:**

Many International Airports are yet to be fully certified and many that are certified are facing challenges to apply the Standards and Recommended Practices (SARPs) as laid out in ICAO Annex 14- Aerodromes and the ICAO Manual on Certification of Aerodromes (Doc 9774).

**What we want to achieve:**

MID Region States to improve international aerodromes infrastructures and ensure continuous improvement.

**How we monitor improvement:**

The number of certified international airports. The RASG-MID, members States, and partners would provide feedback on the effectiveness of the activities.

**How we want to achieve it:** This SEI should be considered by States for inclusion in their NASPs.

<b>Actions:</b>	<b>A1-A2-A3-A4-A5-A6</b>
<b>A1-</b>	Support States on the implementation of the ICAO Annex 14 requirements to achieve compliance with regards to Aerodrome Design and Operations, through Workshops/Trainings
<b>A2-</b>	Enhance capacity building for States CAAs and Airport operators related to aerodromes certification through Workshops/Training
<b>A3</b>	– Deployment of iPack on Aerodrome Re-Start
<b>A4</b>	- Support States in implementing aerodrome oversight/inspection mechanism through capacity building activities on Aerodrome Oversight
<b>A5</b>	– Conduct a Capacity Building Activity for Aerodrome Inspectors (Training Course + OJT)
<b>A6</b>	– Conduct a Wildlife Hazard Management Control capacity building Activities

**References:** ICAO SARPs and guidance documents and 2023-2025 GASP. This is related to 2023-2025 GASP Goal 6 “Ensure the appropriate infrastructure is available to support safe operations”

#### Component 1 — State Safety Oversight (SSO) System

- GASP SEI-1: Consistent implementation of ICAO SARPs at the Regional level.
- GASP SEI-3: Regional safety enhancement initiatives to support consistent coordination of Regional Programmes in establishing adequate safety oversight capabilities.
- GASP SEI-4: Strategic collaboration with key aviation stakeholders to enhance safety in a coordinated manner.

**Stakeholders:** RASG-MID, States, industry, International organizations

**Action 1: 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**

**Owner:** ICAO and ACI.

**Priority:** High

**Completion Date:** 2025

**Status:** Ongoing

**Action 2: Enhance capacity building for States CAAs and Airport operators related to aerodromes certification through capacity building activities**

**Owner:** ICAO and ACI

<b>Priority:</b>	High
<b>Completion date:</b>	2025
<b>Status</b>	ongoing
<b>Action 3: Deployment of iPack on Aerodrome Re-Start</b>	
<b>Owner:</b>	ICAO
<b>Priority:</b>	Medium
<b>Completion Date:</b>	2025
<b>Status:</b>	Ongoing
<b>A4: Support States in implementing aerodrome oversight/inspection mechanism through capacity building activities on Aerodrome Oversight</b>	
<b>Owner:</b>	ICAO and FAA
<b>Priority:</b>	Medium
<b>Completion Date:</b>	2025
<b>Status:</b>	New
<b>A5: Conduct a Capacity Building Activity for Aerodrome Inspectors (Training Course + OJT)</b>	
<b>Owner:</b>	TBD
<b>Priority:</b>	Medium
<b>Completion Date:</b>	2025
<b>Status:</b>	New
<b>A6: Conduct a Wildlife Hazard Management Control capacity building Activities</b>	
<b>Owner:</b>	ICAO, ACAO, WBA
<b>Priority:</b>	Medium
<b>Completion Date:</b>	2025
<b>Status:</b>	New

#### EXPECTED OUTPUT

Deliverable(s)	Timeline
Increase the number of Certificated International Aerodromes	2025

#### 7.1.5.2 G6-SEI-02: Establish Runway Safety Team (RST) at International Aerodromes

**Target:** The safety targets of this goal are indicated in the MID Region SPMM at **Appendix C**.

**Rationale:**

Many States have difficulties on the development of the Runway Safety Programme and the establishment of Runway Safety Teams (RSTs) at airports as an effective means to reduce runway related accidents and incidents.

**What we want to achieve:**

MID Region States' civil aviation authorities to establish an effective RSTs at their aerodromes which would significantly reduce the runway safety related risks.

**How we monitor improvement:**

Number of the RSTs established at international aerodromes and number of the RST missions

conducted. The RASG-MID, members States, and partners will give feedback on the effectiveness of the activities.

**How we want to achieve it:** This SEI should be considered by States for inclusion in their NASPs.

<b>Actions:</b>	<b>A1-A2</b>
<b>A1-</b>	Conduct of assistance missions by the Runway Safety Go-Team (RST)
<b>A2-</b>	Support States to implement the Global Reporting Format Methodology through capacity building activities: (Action addressed under G1-SEI-02: Runway Excursion)

**References:** ICAO SARPs and guidance documents and 2023-2025 GASP. This is related to 2023-2025 GASP Goal 6 “Ensure the appropriate infrastructure is available to support safe operations”.

### Component 1 — State Safety Oversight (SSO) System

- GASP SEI-1: Consistent implementation of ICAO SARPs at the Regional level.
- GASP SEI-3: Regional safety enhancement initiatives to support consistent coordination of Regional Programmes in establishing adequate safety oversight capabilities.
- GASP SEI-4: Strategic collaboration with key aviation stakeholders to enhance safety in a coordinated manner.

**Stakeholders:** RASG-MID, States, industry, international organizations

#### Action 1: Conduct of assistance missions by the Runway Safety Go-Team (RST)

**Owner:** ICAO, RSP (Runway Safety Programme Partners)

**Priority:** High

**Completion date:** 2025

**Status:** Ongoing

#### Action 2: Support States to implement the Global Reporting Format Methodology through capacity building. (Action addressed under G1-SEI-02: Runway Excursion)

**Owner:** ICAO, ACI and Aircraft Manufactures

**Priority:** High

**Completion Date:** 2025

**Status:** Ongoing

#### EXPECTED OUTPUT

Deliverable(s)	Timeline
Increase the number of establishment RST at international aerodromes	
2025	

## 7.2 Regional Operational Safety Risks

### 7.2.1 Goal 1: Achieve a continuous reduction in Operational Risks

#### 7.2.1.1 G1-SEI-01: Aircraft upset in flight (LOC-I)

**Target:** The safety targets of this goal are indicated in the MID Region safety strategy at **Appendix C**.

**Rationale:**

Loss of control usually occurs because the aircraft enters a flight regime which is outside its normal

envelope, usually, but not always, at a high rate, thereby introducing an element of surprise for the flight crew involved. Prevention of loss of control is a strategic priority. In addition, Aircraft upset or loss of control is the key risk area with the highest risk related to fatal accidents in CAT aeroplane operations having a maximum take-off weight above 5700 kg. It includes uncontrolled collisions with terrain, but also occurrences where the aircraft deviated from the intended flight path or intended aircraft flight parameters, regardless of whether the flight crew realized the deviation and whether it was possible to recover or not. It also includes the triggering of stall warning and envelope protections.

During 2017-2021 Aircraft upset or Loss of control contributed to one accident and counted for around 27% of fatalities. During the year 2018, the LOC-I occurred during En-route phase of flight.

#### **What we want to achieve:**

Increase safety by continuously assessing and improving risk controls to mitigate the risk of loss of control.

#### **How we monitor improvement:**

Continuous monitoring of safety issues identified in the MID Region annual safety report for CAT aeroplane above 5,700 kgs.

#### **How we want to achieve it:**

**States should set up a regular dialogue with their national aircraft operators on flight data monitoring (FDM) Programmes**, with the objectives of: promoting the operational safety benefits of FDM, fostering an open dialogue on FDM Programmes that takes place in the framework of just culture, encouraging operators to include and further develop FDM events relevant for the prevention of LOC-I, or other issues identified by the SSP.

**States to include LOC-I in national SSPs:** LOC-I should be addressed by the States on their SSPs and included in NASPs. This should include as a minimum agreeing a set of actions and measuring their effectiveness.

<b>Actions:</b>	<b>A1-A2-A3</b>
<b>A1-</b>	Guidance material on flight crew proficiency
<b>A2-</b>	Advisory Circular: Mode Awareness and Energy State Management Aspects of Flight Deck Automation
<b>A3-</b>	Conduct Upset Recovery Workshops/Webinars
<b>A4-</b>	Develop guidance material on the air cargo safety

#### **References:**

- GASP 2023-2025 Goal 1 "Achieve a Continuous Reduction of Operational Safety Risks".
- GASP SEIs (States, Region, and industry) – Mitigate contributing factors to LOC-I accidents and incidents.

<b>Stakeholders:</b> RASG-MID, States, industry, international organizations/associations	
<b>Action 1: Guidance material on flight crew proficiency</b>	
<b>Owner</b>	IATA and Aircraft manufacturers
<b>Priority:</b>	Medium
<b>Completion Date:</b>	2025
<b>Status:</b>	Ongoing
<b>Action 2: Advisory Circular: Mode Awareness and Energy State Management Aspects of Flight Deck Automation</b>	

<b>Owner:</b>	IATA and Aircraft manufacturers. Supported by KSA
<b>Priority:</b>	High
<b>Completion Date:</b>	2025
<b>Status:</b>	ongoing
<b>Action 3: Conduct Upset Recovery workshop/Webinar</b>	
<b>Owner:</b>	ICAO, IATA, Industry.
<b>Priority:</b>	High
<b>Completion Date:</b>	2025
<b>Status:</b>	Ongoing
<b>A4- Develop guidance material on the air cargo safety</b>	
<b>Owner:</b>	Oman
<b>Priority:</b>	Medium
<b>Completion Date:</b>	2025
<b>Status:</b>	New
<b>EXPECTED OUTPUT</b>	
<b>Deliverable(s)</b>	<b>Timeline</b>
Mitigate contributing factors to LOC-I accidents and incidents	2025

### 7.2.1.2 G1-SEI-02: Runway Safety- Runway Excursion

**Target:** The safety targets of this goal are indicated in the MID Region SPMM at **Appendix C**.

#### **Rationale:**

Runway excursion covers materialized runway excursions, both at high and low speed, and occurrences where the flight crew had difficulties in maintaining the directional control of the aircraft or of the braking action during landing, where the landing occurred long, fast, off-centred or hard, or where the aircraft had technical problems with the landing gear (not locked, not extended or collapsed) during landing. During 2017-2020, Runway Excursions and abnormal runway contact accidents and serious incidents mainly occurred in the landing phase of flights.

#### **What we want to achieve:**

Increase safety by continuously assessing and improving risk controls to mitigate the risk of RE.

#### **How we monitor improvement:**

Continuous monitoring of safety issues identified in the MID Region annual safety report for CAT aeroplane above 5,700 kgs.

#### **How we want to achieve it:**

**States to set up a regular dialogue with their national aircraft operators on flight data monitoring (FDM) Programmes**, with the objectives of: promoting the operational safety benefits of FDM, fostering an open dialogue on FDM Programmes that takes place in the framework of just culture, encouraging operators to include and further develop FDM events relevant for the prevention of REs.

**States to include Runway Excursions in national SSPs:** REs should be addressed by the States on their SSPs and included in NASPs in close cooperation with the aircraft operators, air traffic control,

and airport operators. This should include as a minimum agreeing a set of actions and measuring their effectiveness.

<b>Actions:</b>	<b>A1-A2</b>
<b>A1-</b>	Support States to implement the Global Reporting Format (GRF) Methodology through capacity building activities
<b>A2-</b>	MID Region Action Plan/Milestones on the Global Reporting Format (GRF) Implementation

**References:**

- GASP 2023-2025 Goal 1 “Achieve a Continuous Reduction of Operational Safety Risks”.
- GASP SEIs (States, Region, and industry) – Mitigate contributing factors to RE accidents and incidents.

**Stakeholders:** RASG-MID, MIDANPIRG, States, industry, international organizations/associations

**Action 1: Support States to implement the Global Reporting Format (GRF) Methodology through capacity building activities (Reference: G3-SEI-02)**

**Owner:** ICAO, ACI, and Aircraft Manufactures

**Priority:** Medium

**Completion Date:** 2025

**Status:** Ongoing

**Action 2: MID Region Action Plan/Milestones on the Global Reporting Format (GRF) Implementation**

**Owner:** ICAO

**Priority:** High

**Completion Date:** 2025

**Status:** ongoing

**EXPECTED OUTPUT**

<b>Deliverable(s)</b>	<b>Timeline</b>
Mitigate contributing factors to RE accidents and incidents	2025

**7.2.1.3 G1-SEI-03: Runway Safety- Runway Incursion**

**Target:** The safety targets of this goal are indicated in the MID Region SPMM at **Appendix C**.

**Rationale:**

Collision on runway covers collisions between an aircraft and another object (other aircraft, vehicles, etc.) or person that occur on a runway of an aerodrome or other predesignated landing area; it does not include collisions with birds or wildlife. While there were no fatal accident or accident involving MID States operators in the last years involving runway collision, the risk of the reported occurrence demonstrated to be very real.

**What we want to achieve:**

Increase safety by continuously assessing and improving risk controls to mitigate the risk of RI.

**How we monitor improvement:**

Continuous monitoring of safety issues identified in the MID Region annual safety report for CAT aeroplane above 5,700 kgs.

**How we want to achieve it:**

**States to include Runway Incursions in national SSPs:** RIs should be addressed by the States on their SSPs and included in NASPs in close cooperation with the aircraft operators, air traffic control, and airport operators. This should include as a minimum agreeing a set of actions and measuring their effectiveness.

<b>Action:</b>	<b>A1</b>
<b>A1- Conduct Capacity Building Activities on the Advanced Surface Movement Guidance and Control System (A-SMGCS) Implementation</b>	

**References:**

- GASP 2023/2025 Goal 1 “Achieve a Continuous Reduction of Operational Safety Risks”.
- GASP SEIs (States, Region, and industry) – Mitigate contributing factors to RI accidents and incidents.

**Stakeholders:** RASG-MID, MIDANPIRG, States, industry, international organizations

**Action 1: Conduct Capacity Building Activities on the Advanced Surface Movement Guidance and Control System (A-SMGCS) Implementation**

**Owner:** ICAO

**Priority:** High

**Completion Date:** 2025

**Status:** New

**EXPECTED OUTPUT**

<b>Deliverable(s)</b>	<b>Timeline</b>
Mitigate contributing factors to RI accidents and incidents	2025

**7.2.1.4 G1-SEI-4: Controlled Flight into Terrain (CFIT)****7.2.1.4.1 G1-SEI-4A1- Controlled Flight into Terrain (CFIT)**

**Target:** The safety targets of this goal are indicated in the MID Region SPMM at **Appendix C**.

**Rationale:**

It comprises those situations where the aircraft collides or nearly collides with terrain while the flight crew has control of the aircraft. It also includes occurrences, which are the direct precursors of a fatal outcome, such as descending below weather minima, undue clearance below radar minima, etc. There was no fatal accident involving MID States operators during this period. This key risk area has been raised by some MID States and in other parts of the world that make it an area of concern.

**What we want to achieve:**

Increase safety by continuously assessing and improving risk controls to mitigate the risk of CFIT.

**How we monitor improvement:**

Continuous monitoring of safety issues identified in the MID Region annual safety report for CAT aeroplane above 5,700 kgs.

**How we want to achieve it:**

**States to set up a regular dialogue with their national aircraft operators on flight data monitoring (FDM) Programmes,** with the objectives of: promoting the operational safety benefits of FDM, fostering an open dialogue on FDM Programmes that takes place in the framework of just culture,



encouraging operators to include and further develop FDM events relevant for the prevention of CFIT or other issues identified by the SSP.

**States to include CFITs in national SSPs:** CFIT should be addressed by the States on their SSPs and included in NASPs. This should include as a minimum agreeing a set of actions and measuring their effectiveness.

<b>Actions: A1-A2-A3</b>
<b>A1-</b> Advisory Circular: Instrument Approach Procedures Using Continuous Descent Final Approach Techniques
<b>A2-</b> Guidance for designing RNP Approach
<b>A3-</b> Advisory Circular: Crew Resource Management Training Programme (CRM)

#### References:

- GASP 2023-2025 Goal 1 “Achieve a Continuous Reduction of Operational Safety Risks”.
- GASP SEIs (States, Region, and industry) – Mitigate contributing factors to CFIT accidents and incidents.

<b>Stakeholders:</b> ICAO, RASG-MID, MIDANPIRG States, industry, international organizations	
<b>Action 1: Advisory Circular: Guidance for Operators on Training Programme on the use of GPWS</b>	
<b>Owner:</b>	IATA and Aircraft manufacturers
<b>Priority:</b>	Medium
<b>Completion Date:</b>	2025
<b>Status:</b>	ongoing
<b>Action 2- Guidance for designing RNP Approach</b>	
<b>Owner:</b>	ICAO AND MID-FPP
<b>Priority:</b>	Medium
<b>Completion Date:</b>	2025
<b>Status:</b>	New
<b>Action 3: Advisory Circular: Crew Resource Management Training Programme (CRM)</b>	
<b>Owner:</b>	IATA and Aircraft manufacturers
<b>Priority:</b>	High
<b>Completion Date:</b>	2025
<b>Status:</b>	ongoing

#### EXPECTED OUTPUT

Deliverable(s)	Timeline
Mitigate contributing factors to CFIT accidents and incidents	2025

#### 7.2.1.4.2 G1-SEI-4A2- 5G Operation on Radio Altimeter

<b>Stakeholders:</b> ICAO, RASG-MID, MIDANPIRG, RASFG-MID States, industry, international organizations	
<b>Action 1: Develop a guidance material on safeguarding measures to protect Radio Altimeter from potential harmful interference from 5G Operation</b>	
<b>Owner:</b>	Radio Altimeter action group (RADALT AG)

**Priority:** Medium

**Completion Date:** 2025

**Status:** New

**Action 2: Conduct a Webinar addressing the matter to raise awareness and promote the guidance material developed by the RADALT AG**

**Owner:** ICAO and RADALT AG

**Priority:** Medium

**Completion Date:** 2025

**Status:** New

#### EXPECTED OUTPUT

Deliverable(s)	Timeline
Mitigate contributing factors to CFIT accidents and incidents including LOC-I	2025

### 7.2.1.5 G1-SEI-05: Airborne Conflict (Mid-Air Collisions)

#### 7.2.1.5.1 G1-SEI-05A1: Loss of separation/TCAS RA

**Target:** The safety targets of this goal are indicated in the MID Region SPMM at **Appendix C**.

#### Rationale:

Airborne collision includes all occurrences involving actual or potential airborne collisions between aircraft, while both aircraft are airborne, and between aircraft and other airborne objects. This also includes all separation-related occurrences caused by either air traffic control (ATC) or cockpit crew, AIRPROX reports and genuine ACAS alerts. It includes direct precursors such as separation minima infringements, genuine TCAS resolution advisories or airspace infringements.

Although there have been no aeroplane mid-air collision accident in recent years within the MID States, this risk area has been raised by some MID States specifically in the context of the collision risk posed by military aircraft operating 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 a main priority in this key risk area.

States must have due regard for the safety of civil aircraft and must have established respective regulations for national State aircraft.

Some States had reported an increase in incidents involving close encounters between civil and military aircraft and more particularly an increase in non-cooperative international military traffic over the high-sea waters. The States could consider the following recommendations:

1. Fully apply the ICAO Manual on Civil-Military Cooperation in Air Traffic Management (Doc 10088);
2. Closely coordinate to develop, harmonize and publish operational requirements and instructions for State aircraft to ensure that 'due regard' for civil aircraft is always maintained;
3. Support the development and harmonization of civil/military coordination procedures for ATM at MID Region level and beyond if possible; and
4. Report relevant occurrences.

#### What we want to achieve:

Increase safety by continuously assessing and improving risk controls to mitigate the risk of MAC.

**How we monitor improvement:**

Continuous monitoring of safety issues identified in the MID Region Annual Safety Report for CAT aeroplane above 5,700 kgs.

**How we want to achieve it:**

**States to include MACs in national SSPs:** MACs should be addressed by the States on their SSPs and included NASPs. This should include as a minimum agreeing a set of actions and measuring their effectiveness.

States to reinforce the appropriate reactions of flight crew in response to an airborne collision avoidance system (ACAS) resolution advisories (RA), which would help to mitigate the risk of mid-air collisions by providing safety promotion material and clear messages to pilots on the need to follow the instructions of the ACAS in high-risk situations.

<b>Actions: A1-A2</b>
<b>A1-</b> Conduct workshop to implement Civil-Military cooperation
<b>A2-</b> Conduct seminar on raising awareness among stakeholders related to the potential risk of MAC over high seas

**References:**

- GASP 2023-2025 Goal 1 “Achieve a Continuous Reduction of Operational Safety Risks”.
- GASP SEIs (States, Region, and industry) – Mitigate contributing factors to MAC accidents and incidents.
- ICAO Doc 10088 ‘Manual on Civil/Military Cooperation in Air Traffic Management’

**Stakeholders:** RASG-MID, MIDANPIRG, States, industry, international organizations

**Action 1: Conduct workshop to implement Civil-Military cooperation**

**Owner:** ICAO, IATA, and States

**Priority:** High

**Completion Date:** 2025

**Status:** Ongoing

**Action 2: Conduct seminar on raising awareness among stakeholders related to the potential risk of MAC over high seas**

**Owner:** ICAO and States

**Priority:** High

**Completion Date:** 2025

**Status:** Ongoing

**EXPECTED OUTPUT**

<b>Deliverable(s)</b>	<b>Timeline</b>
Mitigate contributing factors to MAC accidents and NMAC incidents	2025

**7.2.1.5.2 G1-SEI-05A2: GNSS Interference**

**Stakeholders:** RASG-MID, MIDANPIRG, States, industry, international organizations

**Action 1: Raise awareness on the potential impact of GNSS interference on the aviation during the Civil-Mil Workshop.**

<b>Owner:</b>	ICAO and IATA
<b>Priority:</b>	Medium
<b>Completion Date:</b>	2025
<b>Status:</b>	New

**Action 2: Urge States to follow the reporting procedure agreed by MIDANPIRG Conclusion 19/4 when needed.**

<b>Owner:</b>	ICAO
<b>Priority:</b>	Medium
<b>Completion Date:</b>	2025
<b>Status:</b>	New

**EXPECTED OUTPUT**

<b>Deliverable(s)</b>	<b>Timeline</b>
Mitigate contributing factors to MAC accidents and NMAC incidents	2025

**7.2.1.5.3 G1-SEI-05A3: Ensure the Safe Operations of UAS (drones)**

**Target:** The safety targets of this goal are indicated in the MID Region SPMM at Appendix C.

**Rationale:**

The civilian use of UAS has markedly increased in recent years. Research and development into the civilian applications of unmanned aircraft (UA) is a dynamic and rapidly evolving area. Control and guidance systems are now available that enable these aircraft to perform a variety of tasks that were previously unachievable, unreasonably expensive, or involved too much personal risk. As a result, UA have an increasing presence in controlled and uncontrolled airspace. In addition, 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. In connection with this, some States in the region developed their national regulations to ensure safe operations of UAS. However, there are currently some States in the region are unable to develop their national regulations to ensure safe operations of UAS. Therefore, guidance material to be developed to assist states' CAA personnel in the implementation and oversight of UAS operations and to mitigate the risk of the MAC.

When available, the guidance material would serve as an example for consideration by MID States to create, add, or amend, future or existing national UAS guidance material by the respective CAA.

**What we want to achieve:**

MID Region States' civil aviation authorities to develop national regulations to ensure safe operations of UAS and to create growth while maintaining a high and uniform level of safety.

**How we monitor improvement:**

Increase of number of states established national regulations to ensure safe operations of UAS. The RASG-MID, members States, and partners would give feedback on the effectiveness of the activities.

**How we want to achieve it:** This SEI should be considered by States for inclusion in their NASPs

<b>Actions:</b>	<b>A1-A2-A3</b>
A1- UAS iPack deployment	

A2- Organize symposium
------------------------

A3- Conduct survey on States UAS regulatory framework
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**References:** ICAO SARPs and guidance documents and 2023-2025 GASP. This is related to 2023-2025 GASP Goal 1. “Achieve a Continuous Reduction of Operational Safety Risks”

### Component 1 — State Safety Oversight (SSO) System

- GASP SEI-1: Consistent implementation of ICAO SARPs at the Regional level.
- GASP SEI-3: Regional safety enhancement initiatives to support consistent coordination of Regional Programmes in establishing adequate safety oversight capabilities.

**Stakeholders:** RASG-MID, MIDANPIRG, States, industry, international organizations

#### Action 1: UAS iPack Deployment

**Owner:** ICAO

**Priority:** High

**Completion date:** 2025

**Status:** New

#### Action 2: Organize symposium related to drones (UAS)

**Owner:** ICAO, ACAO. Supported by FAA

**Priority:** Medium

**Completion date:** 2023

**Status:** Ongoing

#### Action 3- Conduct survey on States UAS regulatory framework

**Owner:** ICAO and States

**Priority:** Medium

**Completion date:** 2023

**Status:** New

#### EXPECTED OUTPUT

Deliverable(s)	Timeline
Ensure the safe operations of UAS to mitigate the risk of MID-Air Collision (MAC).	2025

#### 7.2.1.5.2 G1-SEI-05A2: GNSS Interference

**Stakeholders:** RASG-MID, MIDANPIRG, States, industry, international organizations

#### Action 1: Raise awareness on the potential impact of GNSS interference on the aviation during the Civil-Mil Workshop.

**Owner:** ICAO and IATA

**Priority:** Medium

**Completion Date:** 2025

**Status:** New  
**Action 2: Urge States to follow the reporting procedure agreed by MIDANPIRG Conclusion 19/4 when needed.**

**Owner:** ICAO

**Priority:** Medium

**Completion Date:** 2025

**Status:** New

### EXPECTED OUTPUT

Deliverable(s)	Timeline
Mitigate contributing factors to MAC accidents and NMAC incidents	2025

### 7.2.1.5.3- G1-SEI-05A3: Ensure the Safe Operations of UAS (drones)

Target: The safety targets of this goal are indicated in the MID Region SPM at Appendix C.

#### Rationale:

The civilian use of UAS has markedly increased in recent years. Research and development into the civilian applications of unmanned aircraft (UA) is a dynamic and rapidly evolving area. Control and guidance systems are now available that enable these aircraft to perform a variety of tasks that were previously unachievable, unreasonably expensive, or involved too much personal risk. As a result, UA have an increasing presence in controlled and uncontrolled airspace. In addition, 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. In connection with this, some States in the region developed their national regulations to ensure safe operations of UAS. However, there are currently some States in the region are unable to develop their national regulations to ensure safe operations of UAS. Therefore, guidance material to be developed to assist states' CAA personnel in the implementation and oversight of UAS operations and to mitigate the risk of the MAC.

When available, the guidance material would serve as an example for consideration by MID States to create, add, or amend, future or existing national UAS guidance material by the respective CAA.

#### What we want to achieve:

MID Region States' civil aviation authorities to develop national regulations to ensure safe operations of UAS and to create growth while maintaining a high and uniform level of safety.

#### How we monitor improvement:

Increase of number of states established national regulations to ensure safe operations of UAS. The RASG-MID, members States, and partners would give feedback on the effectiveness of the activities.

**How we want to achieve it:** This SEI should be considered by States for inclusion in their NASPs

Actions:	A1-A2-A3
A1-	UAS iPack deployment
A2-	Organize symposium
A3-	Conduct survey on States UAS regulatory framework

**References:** ICAO SARPs and guidance documents and 2023-2025 GASP. This is related to 2023-2025 GASP Goal 1. "Achieve a Continuous Reduction of Operational Safety Risks"

### Component 1 — State Safety Oversight (SSO) System

- GASP SEI-1: Consistent implementation of ICAO SARPs at the Regional level.
- GASP SEI-3: Regional safety enhancement initiatives to support consistent coordination of Regional Programmes in establishing adequate safety oversight capabilities.

**Stakeholders:** RASG-MID, MIDANPIRG, States, industry, international organizations

#### Action 1: UAS iPack Deployment

**Owner:** ICAO

**Priority:** High

**Completion date:** 2025

**Status:** New

#### Action 2: Organize symposium related to drones (UAS)

**Owner:** ICAO, ACAO. Supported by FAA

**Priority:** Medium

**Completion date:** 2023

**Status:** Ongoing

#### Action 3- Conduct survey on States UAS regulatory framework

**Owner:** ICAO and States

**Priority:** Medium

**Completion date:** 2023

**Status:** New

### EXPECTED OUTPUT

Deliverable(s)	Timeline
Ensure the safe operations of UAS to mitigate the risk of MID Air Collision (MAC)	2025

#### 7.2.1.5.4 G1-SEI-05A4: Expansion of ATS route Networks

**Stakeholders:** RASG-MID, MIDANPIRG, States, industry, international organizations

#### Action 1: Conduct gap analysis to identify current ATS route networks gaps

**Owner:** ICAO and States

**Priority:** Medium

**Completion Date:** 2025

**Status:** New

#### Action 2: Establishment of parallel unidirectional ATS routes (De-confliction)

**Owner:** ICAO and States

**Priority:** Medium

**Completion Date:** 2025

**Status:** New

### EXPECTED OUTPUT

<b>Deliverable(s)</b>	<b>Timeline</b>
Mitigate contributing factors to MAC accidents and NMAC incidents	2025



## **Appendix A- SEIG TORs**

### **SAFETY ENHANCEMENT INITIATIVE GROUP**

#### **(SEIG)**

#### **TERMS OF REFERENCE**

##### **1. PURPOSE OF THE SEIG TO:**

- 1.1 Support the RASG-MID in the development/update of the MID Regional Aviation Safety Plan (MID-RASP) and the monitoring of the implementation of Safety Enhancement Initiatives (SEIs) related to identified safety issues.
- 1.2 Assist in the development, implementation and review of SEIs to reduce aviation safety risks. These SEIs could be established based on the analysis of regional data, based on ICAO initiatives or the initiatives of other relevant organizations or based on the risks and issues identified through the USOAP audits process.
- 1.3 Recommend safety mitigations to the RASG-MID related to identified safety issues which would reduce aviation risks.

##### 1.4 In order to meet its Terms of Reference, the SEIG shall:

- a. follow-up the updates of the Global Aviation Safety Plan (GASP) and support the development, update and implementation of the MID Regional Aviation Safety Plan (MID-RASP) at the regional level and provide feedback to the RASG-MID;
- b. identify and develop the SEIs, which are aligned with the regional priorities and targets, for implementation within the MID Region. The focus of these SEIs is to effectively and economically mitigate the safety risks identified by the ASRG;
- c. identify difficulties, challenges and deficiencies related to the implementation of each SEI and propose mitigation measures;
- d. identify assistance Programmes such as, but not limited to, workshops, seminars and capacity building activities to improve the level of implementation of the approved SEIs by the RASG-MID;
- e. share expertise and experience and provide recommended actions for each SEI, in a prioritized manner based on best practices;
- f. monitor the status of achieving related safety objectives and targets included in the MID Region Safety Strategy;
- g. identify areas of concern to aviation safety that may be unique to the region, and develop data and mitigations to address those concerns;
- h. work closely with States and stakeholders to ensure that SEIs and mitigation measures are implemented through a coordinated effort;
- i. propose input to the RASG-MID for the development of the RASG-MID Annual Work Programme; and

- j. Coordinate with relevant RASG-MID, MIDANPIRG and MID-RASFG subsidiary bodies issues with common interest.

## **2. COMPOSITION**

The SEIG is composed of Members designated by the MID States and Partners.

## **3. ROLES AND RESPONSIBILITIES**

- SEIG Chairpersons: – Coordinate SEIG activities and provide overall guidance and leadership;
- ICAO: Support; and
- Partners: collaborate in the development of materials as requested by the SEIG, and provide technical expertise and support, as required.

## **4. MEETINGS ARRANGEMENTS**

- The Chairperson, in close co-operation with the Secretary, shall make all necessary arrangements for the most efficient working of the SEIG. The SEIG shall at all times conduct its activities in the most efficient manner possible with a minimum of formality and paper work (paperless meetings). Permanent contact shall be maintained between the Chairperson, Secretary and Members of the SEIG to advance the work. Best advantage should be taken of modern communications facilities, particularly video-conferencing (Virtual Meetings) and e-mails.
- Face-to-face meetings will be conducted when it is necessary to do so.

## Appendix B- Identified safety issues as indicated in the 11<sup>th</sup> MID ASR

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	x	x			x	x	
Un-stabilized Approach		x			x		x
Flight planning and preparation	x	x	x	x	x		
Crew Resource Management	x	x	x	x	x		
Handling of technical failure	x	x		x	x		x
Handling and execution of GOA	x	x			x		
Loss of separation in flight/ and/or airspace/TCAS RA			x			x	
Experience, training and competence of Flight Crews	x	x	x		x		
Deconfliction between IFR and VFR traffic			x				
Inappropriate flight control inputs		x			x		
Fatigue	x	x					
Entry of aircraft performance data		x					
Contained engine Failure/Power Plant Malfunctions		x			x	x	
Birdstrike/Engine Bird ingestion		x			x		
Fire/Smoke-non impact		x				x	
Wake Vortex		x				x	
Deviation from pitch or roll attitude	x	x			x		
Security Risks with impact on Safety		x					
Tail/Cross wind/Winds hear		x			x		x

Potential Accident Outcome							
Safety Issues	CFIT	LOC-I	MAC	GCOL	RE/ARC	Injury Damage inflight	Injury Damage on Ground
Runway Incursion				X	X		X
Maintenance events	X	X				X	
Contaminated runway/Poor braking action					X		X
Clear Air Turbulence (CAT) and Mountain Waves		X				X	

## Appendix C-MID Region-Safety Performance Measurement &Monitoring (SPMM)

**Aspirational Goal: Zero Fatality by 2030**

**Goal 1: Achieve a Continuous Reduction of Operational Safety Risks**

Safety Indicator	Safety Target	Timeline
Number of accidents per million departures	Regional average rate of accidents to be in line with the global average rate	2025
Number of fatal accidents per million departures	Regional average rate of fatal accidents to be in line with the global average rate	2025
Number of fatalities per million departures	Number of fatalities per billion passengers carried (fatality rate) to be in line with the global average rate	2025
Number of Runway Excursion accidents per million departures	Regional average rate of Runway Excursion accidents to be below the global average rate	2025
Number of Runway Incursion accidents per million departures	Regional average rate of Runway Incursion accidents to be below the global average rate	2025
Number of LOC-I related accidents per million departures	Regional average rate of LOC-I related accidents to be below the global rate	2025
Number of CFIT related accidents per million departures	Regional average rate of CFIT related accidents to be below the global rate	2025
Number of Mid Air Collision (accidents)	Regional average Mid Air Collision accident	2025

**Goal 2: Strengthen States' Safety Oversight Capabilities**

Safety Indicator	Safety Target	Timeline
USOAP-CMA Effective Implementation (EI) results: a. Regional average EI b. Number of audited States with an overall EI over 60% c. Regional average EI by area d. Regional average EI by CE e. Regional average EI of PPQs	a. Regional average EI to be above 80% : b. All MID audited States to be above 60% EI c. Regional average EI for each area to be above 70% d. Regional average EI for each CE to be above 70% e. Regional average EI PPQs above 75% :	a. 2023-2025 b. 2023-2025 c. 2023-2025 d. 2023-2025 e. 2023-2025

**Goal 3: Implement effective State safety Programmes (SSPs)**

Safety Indicator	Safety Target	Timeline
Regional Average SSP Foundation	85%	2023- 2025
Number of States having an SSP that is present*	At least 4 States	2023- 2025
Number of States that have developed and published a national aviation safety plan (NASP)	All States	2023- 2025
Number of States that require applicable service providers under their authority to implement an SMS	All States	2023- 2025

\*: The term “present” is based on the maturity levels established in the ICAO SSP Implementation Assessment (SSPIA).

**Goal 4: Increase Collaboration at the Regional Level**

Safety Indicator	Safety Target	Timeline
Percentage of safety enhancement initiatives (SEIs)/Safety Actions completed	80%	2023-2025
Number of States seeking/receiving assistance, to strengthen their Safety Oversight capabilities through NCLB MID Strategy/Technical assistance	States with SSC as a first priority All States as a second priority having EI below 80%	2023-2025
Number of States seeking assistance to facilitate SSP & NASP implementation through NCLB MID Strategy/Technical assistance	All States	2023-2025
Number of States sharing safety information including operational safety risks and emerging issues to support the development of MID ASR	All States	2023-2025

**Goal 5: Expand the use of Industry Programmes and safety information sharing networks**

Safety Indicator	Safety Target	Timeline
Use of the IATA Operational Safety Audit (IOSA), to complement safety oversight activities.	a. Maintain at least 60% of eligible MID airlines to be certified IATA-IOSA at all times.  b. All MID States with an EI of at least 60% use the IATA Operational Safety Audit (IOSA) to complement their safety oversight activities.	a. 2023-2025  b. 2023- 2025
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.  Pursue at least 25% increase in ISAGO registration	2023-2025
Coordinate the ACI Airport Excellence (APEX) in Safety Programme	At least 2 ACI APEX in Safety to be conducted for 2 Airports of the Region per year	2023-2025
Number of States that have established Safety data collection and processing system (SDCPS)	At least 12 States	2023-2025
Number of MID RASP developed in consultation with industry	MID-RASP 2023-2025	2023



**Goal 6: Ensure Appropriate Infrastructure is available to Support Safe Operations**

Safety Indicator	Safety Target	Timeline
Percentage of Certified International Aerodromes*	65%	2023-2025
Percentage of Runway Safety Team (RST) effectively implemented at International Aerodromes*	80%	2023-2025
Percentage of Global reporting Format (GRF) Plans implemented for International Aerodromes*	75%	2023-2025

\*: International Aerodromes included in the MID ANP (Aerodromes Operations: AOP Table I-I)

## Appendix D: Safety Actions- Consolidated List of SEIs with their respective Actions for follow up- Draft

SEI Code	SEI Name	Actions	Owner(s)	Status/Progress	Completion Date
<b>Regional Operational Safety Risks</b>					
<b>Goal 1: Achieve a Continuous Reduction in Operational Risks</b>					
<b>G1-SEI-01:</b>	Aircraft Upset in Flight (LOC-I)	<b>A1-</b> Guidance material on flight crew proficiency	IATA and Aircraft manufacturers/industry	To be supported by Airbus	2025
		<b>A2-</b> Advisory Circular: Mode Awareness and Energy State Management Aspects of Flight Deck Automation	IATA and Aircraft manufacturers/industry.	To be supported by Airbus	2025
		<b>A3-</b> Conduct Upset Recovery capacity building activities	UPRT Workshop. Airbus, ICAO, Kuwait		2025
		<b>A4-</b> Develop guidance material on the air cargo safety	Oman		2025
<b>G1-SEI-02:</b>	Runway Safety- Runway Excursion	<b>A1-</b> Support States to implement the Global Reporting Format (GRF) Methodology through capacity building activities.	ICAO and ACI		2025
		<b>A2-</b> MID Region Action Plan/Milestones on the Global Reporting Format (GRF) Implementation.	ICAO		2025

SEI Code	SEI Name	Actions	Owner(s)	Status/Progress	Completion Date
<b>G1-SEI-03:</b>	Runway Safety- Runway Incursion	<b>A1-</b> Conduct Capacity Building Activities on the Advanced Surface Movement Guidance and Control System (A-SMGCS) Implementation	ICAO	To be supported by Euro-Control, FAA	2023
<b>G1-SEI-04A1:</b>	Controlled Flight into Terrain (CFIT)	<b>A1-</b> Advisory Circular: Instrument Approach Procedures Using Continuous Descent Final Approach Techniques.	IATA and Aircraft manufacturers		2025
		<b>A2-</b> Guidance for designing RNP Approach	ICAO and MID FPP		2025
		<b>A3-</b> Advisory Circular: Crew Resource Management Training Programme (CRM)	IATA and Aircraft manufacturers		2025
<b>G1-SEI-04A2</b>	5G Operations on Radar Altimeter	<b>A1-</b> 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	2025
		<b>A2-</b> 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	2025
<b>G1-SEI-05B1:</b>	MAC- Loss of Separation	<b>A1-</b> Conduct workshop to implement Civil-Military cooperation	ICAO, States, and International Organizations		2025
		<b>A2-</b> Conduct seminar on raising awareness among stakeholders related to the potential risk of MAC over high seas	ICAO, States, and international organizations		2025
<b>G1-SEI-05B2:</b>	GNSS Interference	<b>A1:</b> Raise awareness on the potential impact of GNSS interference on the aviation during the Civil-Mil Workshop	ICAO and IATA		2025

SEI Code	SEI Name	Actions	Owner(s)	Status/Progress	Completion Date
		<b>A2-</b> Urge States to follow the reporting procedure agreed by MIDANPIRG Conclusion 19/4 when needed	ICAO		2025
<b>G1-SEI-05B3:</b>	Ensure the Safe Operations of UAS (Drones)	<b>A1-</b> UAS iPack deployment	ICAO and States		2025
		<b>A2-</b> Organize symposium on Drones related subjects	ICAO and ACAA	Supported FAA and Boeing	2023
		<b>A3-</b> Conduct survey on States UAS regulatory framework	ICAO and States		2025
<b>G1-SEI-05B4:</b>	Expansion of ATS route Networks	<b>A1-</b> Conduct gap analysis to identify current ATS route networks gaps	ICAO and States		2025
		<b>A2-</b> Establishment of parallel unidirectional ATS routes (De-confliction)	ICAO and States		2025
<b>Organizational Challenges/issues</b>					
<b>Goal 2: Strengthen States' Safety Oversight Capabilities</b>					
<b>G2-SEI-01:</b>	Strengthening of States' Safety Oversight Capabilities	<b>A1-</b> Conduct Capacity Building Activities to promote effective implementation of SARPs	ICAO, States, International Organizations, and Industry	"Inspectors training" to be Supported by Airbus.	2025
		<b>A2-</b> 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		2025
		<b>A3-</b> Develop and implement a specific NCLB plan of actions.	ICAO, States, International Organizations, and Industry		2025

SEI Code	SEI Name	Actions	Owner(s)	Status/Progress	Completion Date
		<b>A4</b> - Conduct a Capacity Building Activity for Aerodrome Inspectors (Training Course on Aerodrome Inspection) ( <b>Action addressed under G6-SEI-01 A5</b> )	States (Qatar) and ICAO		2025
		<b>A5</b> - 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	2025
		<b>A6</b> - Develop guidance material to support States for the conduct of remote surveillance	Qatar	supported by Iran, Jordan, Saudi Arabia, Sudan, UAE, and ACAO	2025
		<b>A7</b> - Develop guidance material on the enhancement of understanding the concept of judicial enforcement for aviation inspectors	Qatar	supported by Saudi Arabia and UAE	2025
<b>G2-SEI-03:</b>	Sharing of Safety Recommendations related to Accidents and Serious Incidents	<b>A1</b> - Establishing a Platform for Sharing Safety Recommendations for MENA ARCM Member States	ICAO, ACAO, and MENA ARCM Member States	On-hold	2025
<b>G2-SEI-04:</b>	Enhance State Oversight on Dangerous Goods	<b>A1</b> - Dangerous Goods (DG) capacity building activities including Lithium batteries fire/smoke risk in cabin	ICAO, States, International Organizations, And Industry		2025
		<b>A2</b> - Develop guidance material on carriage and transport of Lithium batteries	IATA, States, International Organizations, And Industry		2025
<b>G2-SEI-05:</b>	Human factors and Competence of Personnel	<b>A1</b> - Advisory Circular: Crew Resource Management Training Programme (CRM). ( <b>Action addressed under G1-SEI-04: CFIT</b> ).	IATA and Industry		2025

SEI Code	SEI Name	Actions	Owner(s)	Status/Progress	Completion Date
		<b>A2-</b> Organize Crew Resource Management Capacity building activities	ICAO & Jordan, States, International Organizations, and Industry	CBTA and EBT to be supported by Airbus and FAA	2025
		<b>A3-</b> Organize Team Resource Management Capacity building activities	ICAO & Jordan States, International Organizations, and Industry	FAA	2025
		<b>A4-</b> Conduct Fatigue Risk Management and Mental Health Best Practices Capacity building activities	ICAO & Jordan States, International Organizations, and Industry	To be supported by Airbus	20225
<b>G2-SEI-06:</b>	Impact of security on safety	<b>A1-</b> 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		2025
		<b>A2-</b> Risk management on conflict zone workshop	ICAO/ACAO		2023
<b>G2-SEI-07:</b>	Managing cybersecurity risks	<b>A1-</b> 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		2025
		<b>A2-</b> Conduct activities on Cyber Security and Resilience- (Jointly ANS and AVSEC)	ICAO	To be supported by Boeing	2025

SEI Code	SEI Name	Actions	Owner(s)	Status/Progress	Completion Date
		<b>A3-</b> Develop a MID Region Cybersecurity Action Plan	Cybersecurity Security Ad-hoc Group		2025
<b>G2-SEI-08:</b>	Impact of COVID-19 pandemic- Safe return to operations	<b>A1-</b> Continued support to the aviation industry through MID-RPTF meetings/Activities, as needed	ICAO, States, International Organizations, and Industry		2025
		<b>A2-</b> Sharing of guidance material/best practices	ICAO, States, International Organizations, and Industry	To be support by Airbus	2025
<b>Goal 3: Implementation of Effective States Safety Programme (SSP)</b>					
<b>G3-SEI-01:</b>	Implement an effective Safety Management	<b>A1-</b> Conduct ICAO SSP/SMS Capacity building activities	SSP workshops for States.  SMS & Flight Data analysis workshop for airlines. Airbus, ACAO and ICAO. 2023		2025
		<b>A2-</b> Conduct Technical Assistance missions by SMIT	ICAO and States		2025
<b>G3-SEI-02:</b>	NASP Development & Implementation	<b>A1-</b> Conduct NASPs workshops & technical assistance missions	ICAO		2025
		<b>A2-</b> NASP iPacks deployment	ICAO		2025
<b>Goal 4: Increase Collaboration at the Regional Level</b>					
<b>G4-SEI-01:</b>	Development and Implementation of	<b>A1-</b> Development and Implementation of MID-RASP 2023-2025 Edition	ICAO & SEIG		2023

	MID-RASP				
<b>G4-SEI-02:</b>	Enhance collaboration between States, international organizations, and industry	<b>A1-</b> Develop and agree on joint work activities through MID-RCM meetings	ICAO, States, Regional Groups, International Organizations, and Industry		2025
		<b>A2-</b> Support the establishment of MENA RSOO and its activities	ICAO and States		2025

**Goal 5: Expand the Use of Industry Programmes and Safety Information Sharing Networks**

<b>G5-SEI-01:</b>	Promote the Use of industry Programmes	<b>A1-</b> Encourage IATA's IOSA and ISAGO registrations through safety promotion	IATA		2025
		<b>A2-</b> Encourage the implementation of ACI Airport Excellence (APEX) in Safety Programme	ICAO and ACI		2025

**Goal 6: Ensure the Appropriate Infrastructure is available to Support Safe Operations**

<b>G6-SEI-01:</b>	Certification of International Aerodromes	<b>A1-</b> 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		2025
		<b>A2-</b> Enhance capacity building for States CAAs and Airport operators related to Aerodromes Certification through capacity building activities.	ICAO and ACI		2025
		<b>A3 -</b> Deployment of iPack on Aerodrome Re-Start	ICAO and States		2025
		<b>A4 -</b> Support States in implementing aerodrome oversight/inspection mechanism through capacity building activities on Aerodrome Oversight	ICAO	Supported by FAA	2025
		<b>A5 –</b> Conduct a Capacity Building Activity for Aerodrome Inspectors	States (Qatar) and ICAO		2025



		(Training Course on Aerodrome Inspection)			
		A6 – Conduct a Wildlife Hazard Management Control capacity building Activities	ICAO, ACAO, WBA	Supported by International Organizations	2025
<b>G6-SEI-02:</b>	Establish Runway Safety Team (RST) at International Aerodromes	A1- Conduct Runway Safety Go-Team (RST) assistance missions	ICAO	Supported RSP (Runway Safety Programme Partners)	2025
		A2: Support States to implement the Global Reporting Format Methodology through capacity building activities: <b>(Action addressed under G1-SEI-02: Runway Excursion).</b>	ICAO and ACI		2025

## Appendix E:

### SEIs identified in MID-RASP may be considered by States for inclusion in their NASPs, as appropriate

SEI Code	SEI name
<b>Organizational Challenges</b>	
<b>Goal 2: Strengthen States' Safety Oversight Capabilities</b>	
<b>G2-SEI-01:</b>	Strengthening of States' Safety Oversight Capabilities
<b>G2-SEI-04:</b>	Enhance State Oversight on Dangerous Goods
<b>G2-SEI-05:</b>	Human factors and Competence of Personnel
<b>G2-SEI-06:</b>	Impact of security on safety
<b>G2-SEI-07:</b>	Managing cybersecurity risks
<b>G2-SEI-08:</b>	Impact of COVID-19 pandemic- Safe return to operations
<b>Goal 3: Implementation of Effective States Safety Programme (SSP)</b>	
<b>G3-SEI-01:</b>	Implement safety management
<b>G3-SEI-02:</b>	NASP Development & Implementation
<b>Goal 6: Ensure the Appropriate Infrastructure is available to Support Safe Operations</b>	
<b>G6-SEI-01:</b>	Certification of International Aerodromes
<b>G6-SEI-02:</b>	Establish Runway Safety Team (RST) at International Aerodromes
<b>Regional Operational Safety Risks</b>	
<b>Goal 1: Achieve a continuous reduction in Operational Risks</b>	
<b>G1-SEI-01:</b>	Aircraft upset in flight (LOC-I)
<b>G1-SEI-02:</b>	Runway Excursion (RE)
<b>G1-SEI-03:</b>	Runway Incursion (RI)
<b>G1-SEI-4A1:</b>	Controlled Flight Into Terrain (CFIT)
<b>G1-SEI-04A2:</b>	5G operations on Radar Altimeter
<b>G1-SEI-05A1:</b>	MAC- Loss of separation/TCAS RA
<b>G1-SEI-05A2:</b>	GNSS Interference
<b>G1-SEI-05A3:</b>	Ensure the Safe Operations of UAS (drones)

## Appendix F: Definitions

**Accident Investigation Authority.** The authority designated by a State as responsible for aircraft accident and incident investigations within the context of Annex 13.

**Audit Area.** One of eight audit areas pertaining to the Universal Safety Oversight Audit Programme (USOAP), i.e. primary aviation legislation and civil aviation regulations (LEG), civil aviation organization (ORG); personnel licensing and training (PEL); aircraft operations (OPS); airworthiness of aircraft (AIR); aircraft accident and incident investigation (AIG); air navigation services (ANS); and aerodromes and ground aids (AGA).

**Contributing Factors.** Actions, omissions, events, conditions, or a combination thereof, which, if eliminated, avoided or absent, would have reduced the probability of the accident or incident occurring, or mitigated the severity of the consequences of the accident or incident. the identification of contributing factors does not imply the assignment of fault or the determination of administrative, civil or criminal liability.

**Critical Elements (CEs).** The critical elements of a safety oversight system encompass the whole spectrum of civil aviation activities. They are the building blocks upon which an effective safety oversight system is based. The level of effective implementation of the CEs is an indication of a State's capability for safety oversight.

**Effective Implementation (EI).** A measure of the State's safety oversight capability, calculated for each critical element, each audit area or as an overall measure. The EI is expressed as a percentage.

**Operator.** The person, organization or enterprise engaged in or offering to engage in an aircraft operation.

**Safety.** The state in which risks associated with aviation activities, related to, or in direct support of the operation of aircraft, are reduced and controlled to an acceptable level.

**Safety Audit.** A USOAP CMA audit that a State requests and pays for (on a cost recovery basis). The State determines the scope and date of a safety audit. Also see definition of audit.

**Safety Data.** A defined set of facts or set of safety values collected from various aviation related sources, which is used to maintain or improve safety.

**Note:** such safety data is collected from proactive or reactive safety-related activities, including but not limited to:

- a. accident or incident investigations;
- b. safety reporting;
- c. continuing airworthiness reporting;
- d. operational performance monitoring;
- e. inspections, audits, surveys; or
- f. safety studies and reviews.

**Safety Enhancement:** initiative (SEI). One or more actions to eliminate or mitigate risks associated with contributing factors to a safety occurrence or to address an identified safety deficiency. There are two main types of SEIs to address safety risks and issues at the Regional level.

**Safety Information.** Safety data processed, organized or analyzed in a given context so as to make it useful for safety management purposes.

**Safety Management System (SMS).** A systematic approach to managing safety, including the necessary organizational structures, accountability, responsibilities, policies and procedures.

**Safety Oversight.** A function performed by a State to ensure that individuals and organizations performing an aviation activity comply with safety-related national laws and regulations.

**Safety Performance.** A State or a service provider's safety achievement as defined by its safety performance targets and safety performance indicators.

**Safety Performance Indicator.** A data-based parameter used for monitoring and assessing safety performance.

**Safety Performance Target.** The State or service provider's planned or intended target for a safety performance indicator over a given period that aligns with the safety objectives.

**Safety Risk.** The predicted probability and severity of the consequences or outcomes of a hazard.

**Significant Safety Concern (SSC).** Occurs when the State allows the holder of an authorization or approval to exercise the privileges attached to it, although the minimum requirements established by the State and by the Standards set forth in the Annexes to the Convention are not met, resulting in an immediate safety risk to International Civil Aviation.

**State Safety Programme (SSP).** An integrated set of regulations and activities aimed at improving safety.

## Appendix G: Abbreviations and Acronyms

<b>AIIA:</b>	Accident and Incident Investigation Authority
<b>ACI:</b>	Airports Council International
<b>ADRM:</b>	Aerodrome
<b>AGA:</b>	Aerodrome and Ground Aids
<b>AIG:</b>	Aircraft Accident and Incident Investigation
<b>ALAR:</b>	Approach and Landing Reduction
<b>ANS:</b>	Air Navigation Services
<b>ANSP:</b>	Air Navigation Service Provider
<b>APV:</b>	Approaches with Vertical Guidance
<b>ARC:</b>	Abnormal Runway Contact
<b>ASBU:</b>	Aviation System Block Upgrade
<b>ASR:</b>	Annual Safety Report
<b>ATM:</b>	Air Traffic Management
<b>ATS:</b>	Air Traffic Services
<b>BIRD:</b>	Bird Strike
<b>CAA:</b>	Civil Aviation Authority
<b>CASI:</b>	Civil Aviation Safety Inspectors
<b>CAST:</b>	Commercial Aviation Safety Team
<b>CE:</b>	Critical Element
<b>CFIT:</b>	Controlled Flight into Terrain
<b>CICTT:</b>	CAST/ICAO Common Taxonomy Team
<b>CMA:</b>	Continuous Monitoring Approach
<b>CRM:</b>	Crew Resource Management
<b>CAST:</b>	US Commercial Aviation Safety Team
<b>DGCA:</b>	Conference of Directors General of Civil Aviation
<b>EI:</b>	Effective Implementation
<b>FDAP:</b>	Flight Data Analysis Programme
<b>FIR:</b>	Flight Information Region
<b>F-NI:</b>	Fire/ Smoke (Non-Impact)
<b>GADSS:</b>	Global Aeronautical Distress and Safety System
<b>GANP:</b>	Global Air Navigation Plan
<b>GASeP:</b>	Global Aviation Security Plan
<b>GASOS:</b>	Global Aviation Safety Oversight System
<b>GASP:</b>	Global Aviation Safety Plan
<b>GASP-SG:</b>	Global Aviation Safety Plan Study Group
<b>GEN:</b>	General Aspects
<b>GPWS:</b>	Ground Proximity Warning System
<b>G- HRC:</b>	Global-High Risk Categories of Occurrences
<b>IATA:</b>	International Air Transport Association
<b>ICAO:</b>	International Civil Aviation Organization
<b>IFALPA:</b>	International Federation of Airline Pilots' Associations
<b>IOSA:</b>	IATA Operational Safety Audit
<b>ISAGO:</b>	IATA Safety Audit for Ground Operations
<b>iSTARS:</b>	Integrated Safety Trend Analysis and Reporting System
<b>LOC-I:</b>	Loss of Control In-flight
<b>MAC:</b>	AIRPROX/ TCAS alert/ loss of separation/ near miss collisions/ mid-air collisions
<b>MTOW:</b>	Maximum Take-Off Weight

<b>NASP:</b>	National Aviation Safety Plan
<b>NCLB:</b>	No Country Left Behind
<b>NDP:</b>	National Development Plan
<b>OAG:</b>	Official Airline Guide
<b>OPS:</b>	Flight Operations (USOAP Audit Area)
<b>ORG:</b>	Civil Aviation Organization (USOAP Audit Area)
<b>PDCA:</b>	Plan-Do-Check-Act methodology
<b>RAMP:</b>	Ground Handling
<b>RASG:</b>	Regional Aviation Safety Group
<b>RASP:</b>	Regional Aviation Safety Plan
<b>RE:</b>	Runway Excursion (departure or landing)
<b>RI:</b>	Runway Incursion
<b>RS:</b>	Runway Safety
<b>RSOO:</b>	Regional Safety Oversight Organization
<b>RST:</b>	Runway Safety Team
<b>RTC:</b>	ICAO Regional Training Centre of Excellence
<b>SAFE:</b>	ICAO Safety Fund
<b>SARPs:</b>	Standards and Recommended Practices
<b>SCF-NP:</b>	System/Component Failure or Malfunction – Non-power plant
<b>SCF-PP:</b>	System/Component Failure or Malfunction - Power plant
<b>SDCPS:</b>	Safety Data Collection and Processing System
<b>SEI:</b>	Safety Enhancement Initiatives
<b>SISG:</b>	ICAO's Safety Indicator Study Group
<b>SMS:</b>	Safety Management Systems
<b>SPI:</b>	Safety Performance Indicator
<b>SSC:</b>	Significant Safety Concern
<b>SSO:</b>	State Safety Oversight
<b>SSP:</b>	State Safety Programme
<b>SRP:</b>	Safety Reporting and Programme
<b>TCAS:</b>	Traffic Collision and Avoidance System
<b>TOR:</b>	Terms of Reference
<b>UAS:</b>	Unmanned Aircraft Systems
<b>UNK:</b>	Unknown or Undetermined
<b>UPRT:</b>	Upset Prevention and Recovery Training
<b>USOAP:</b>	Universal Safety Oversight Audit Programme
<b>USOS:</b>	Undershoot/ Overshoot

-END-

## CREDITS

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