



ICAO MID

SAFETY

MID-RASP

MIDDLE EAST REGIONAL AVIATION SAFETY PLAN



First Edition

2020-2022

MIDDLE EAST REGIONAL AVIATION SAFETY PLAN (MID-RASP)



FIRST EDITION 2020–2022
DRAFT

Executive Summary

The Global Aviation Safety Plan (GASP) contains an aspirational safety goal to achieve and maintain zero fatalities in commercial operations by 2030 and beyond. This goal is deemed “aspirational” as it represents an ambition of achieving an even safer aviation system. The year 2030 has been selected as the timeframe for reaching this goal as it is when the traffic volume is forecasted to double. It is also the target year presented in the UN SDGs Agenda for Sustainable Development. In addition, 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 ICAO 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.

The Middle East Regional Aviation Safety Plan (MID-RASP) 2020-2022 Edition considers and supports the objectives and priorities of GASP. 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 2020-2022 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’s (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, and human factors and competence of personnel.
- b. In respect of regional operational safety risks, the focus would be on high risks categories identified in the GASP 2020-2022 Edition mainly the LOCI-I, CFIT, RE, RI, and MAC; and
- c. Regarding the emerging risks, the focus would be on COVID-19 pandemic outbreak, Civil drones (Unmanned Aircraft Systems), and impact of security on safety. For GNSS outages, action has been taken.

MID Region safety indicators and targets were aligned with the 2020-2022 GASP goals and regional specific objectives and priorities. The RASG-MID would use the indicators listed in the MID Region safety strategy 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 safety strategy.

The MID Region Safety Strategy includes six (6) Goals in line with GASP 2020-2022 Edition. For each Goal established in the MID Region Safety Strategy, identified SEI(s) be mapped to it including their respective actions. Thus, to address regional operational risks, organizational issues, and emerging risks; 16 SEIs and 43 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

MID Regional Aviation Safety Plan (MID-RASP) constitutes the regional safety plan for MID Region, setting out the strategic priorities, main risks affecting the region 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 a regional aviation safety strategy. 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 safety oversight systems of States in MID region, a risk-based approach to managing safety at the regional level, as well as a coordinated approach to collaboration between States in the region, international organizations and industry. All stakeholders are encouraged to support and implement the MID-RASP as the regional strategy for the continuous improvement of aviation safety.

The MID-RASP tries to add a proactive element to the current system by closing the safety management cycle and connecting the safety issues at regional level with the action plans and initiatives launched to mitigate the underlying risks.

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 2020-2022 covers the three-year period between 2020 and 2022 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.

The GASP contains an aspirational safety goal to achieve and maintain zero fatalities in commercial operations by 2030 and beyond. This goal is deemed “aspirational” as it represents an ambition of achieving an even safer aviation system. The year 2030 has been selected as the timeframe for reaching this goal as it is when the traffic volume is forecasted to double. It is also the target year presented in the UN SDGs Agenda for Sustainable Development.

MID-RASP considers and supports the objectives and priorities of GASP. The purpose of GASP is to continually reduce fatalities, and the risk of accidents, by guiding the development of a harmonized aviation safety strategy and the development and implementation of regional and national aviation safety plans. A safe aviation system contributes to the economic development of States and their industries. GASP promotes the implementation of a State’s safety oversight system, a risk-based approach to managing safety as well as a coordinated approach to collaboration between States, regional 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. 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.

The States national aviation safety plans (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’s (as appropriate) and with other efforts aimed at enhancing aviation safety.

In addition, to addressing systemic safety, GASP addresses high-risk categories of occurrences, which are deemed global safety priorities. These categories were determined based on actual fatalities from past accidents, high fatality risk per accident or the number of accidents and incidents. The following high-risk categories have been identified for the 2020-2022 edition of the GASP: controlled flight into terrain; loss of control in flight; mid-air collision; runway excursion; and runway incursion. The GASP global priorities 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 Universal Safety Oversight Audit Programme (USOAP) audits of their SSPs. ICAO, based on USOAP audit results, identified that States’ inability to effectively oversee aviation operations remains a global safety concern. Thus, the GASP objectives call for States to put in place robust and sustainable safety oversight systems that should progressively evolve into more sophisticated means of managing safety. These objectives are aligned with ICAO Standards and Recommended Practices (SARPs) for the implementation of SSP by States and safety management systems (SMS) by service providers.

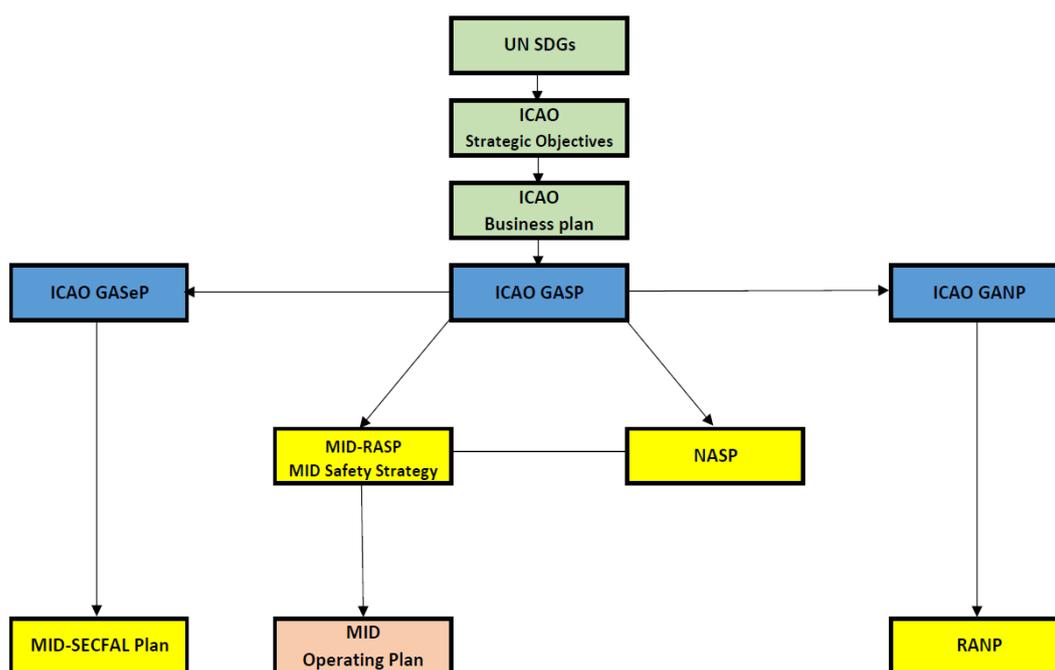
This MID-RASP edition 2020-2022 provides references to corresponding GASP 2020-2022 Safety Enhancement Initiatives (SEIs); covering organizational challenges, operational risks, and emerging risks.

The 2020-2022 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 2020-2022 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-Safety strategy, the GASP provides the global strategic direction while the MID Safety Strategy 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 2020-2022 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 strategy to this plan. Moreover, MID safety strategy Goals support the region's strategic approach to managing safety at the regional level. Therefore, for each Goal established in the MID Region Safety Strategy, identified SEI(s) be mapped to it including their respective actions.

The MID safety strategy is included as an appendix and became an integral part of MID-RASP.



Graph 1: Relationship between MID-RASP and other Programmes and 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 2020-2022 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 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 monitoring and the detailed list of MID-RASP safety actions. It consists of Chapters 6 and 7.

The **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 Strategy as follows:

- Goal 1: Achieve a continuous reduction of operational safety risks;
- Goal 2: Strengthen States' safety oversight capabilities/Progressively increase the USOAP-CMA EI scores/results;
- Goal 3: Ensure the appropriate infrastructure is available to support safe operations;
- Goal 4: Expand the use of Industry Programmes;
- Goal 5: Implementation of effective SSPs and SMSs; and
- Goal 6: Increase Collaboration at the Regional Level to enhance safety.

The MID Region Safety Strategy includes six (6) Goals in line with GASP 2020-2022 Edition. For each Goal established in the MID Region Safety Strategy, identified SEI(s) be 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
achieved

The year in which the respective Target is expected to be

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 2020-2022 of the GASP. If required, RASG-MID would seek the support of MIDANPIRG, 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 accomplished in a timely, effective and efficient manner in coordination with RASG-MID, MIDANPIRG, and RASFG-MID groups and sub-groups (ASRG, SPIG, AIIG, ATM-SG,..etc), States, regional organizations, and industry.

As a first step towards establishing this system and to facilitate MID-RASP implementation, it is necessary to enhance the communication and flow of safety data and information, as well as coordination processes, among RASG-MID and its subsidiaries, States, and regional organizations. There is also the need to continue to enhance collaboration with MIDANPIRG through coordinated processes to sustain the collection and sharing of regional air traffic management (ATM) data and the sharing and resolution of safety issues. This, in turn, would support the implementation of Aviation System Block Upgrade (ASBUs) and ensure that their implementation accounts for and properly manages existing and emerging 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 to address 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 domestic levels. The three-year period of the MID-RASP, i.e. 2020 to 2022, 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 a seven-step process recommended by the GASP to develop RASPs and NASPs, similar to the Plan-Do-Check-Act (PDCA) continuous improvement cycle, as follows:

- a. Step 1 – Conduct self-analysis;
- b. Step 2 – Identify safety deficiencies;
- c. Step 3 – Identify key stakeholders and enablers;
- d. Step 4 – Perform gap analysis with roadmap to identify SEIs;
- e. Step 5 – Develop a list of prioritized SEIs to be implemented;
- f. Step 6 – Develop a Regional aviation safety plan; and
- g. Step 7 – 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 safety strategy is aligned with GASP 2020-2022 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 2020-2022 Edition as well as relevant work plan items of DCGA, RASG-MID, and MIDANPIRG 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 development of the current regional SEIs to address the global High Risk Categories HRCs of LOC-I, CFIT, MAC, RI and RE, and other priorities as identified for the MID region in a data-driven and strategic manner, which may include organizational challenges and emerging risks;
- b. 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;
- c. Assist States in the implementation of SSP and SMS, and in the development of NASPs;
- d. Promote regional government and industry collaboration for sharing best practices in safety management;
- e. 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;
- f. Promote the effective implementation of AGA, with a focus on runway safety Programmes that support the establishment of Runway Safety Teams (RSTs) and implementation of SMS;
- g. Support States in the development of their civil drones (UAS) national regulations;
- h. Support States related to the impact of security on safety
- i. Support States to establish and activate the MENA RSOO and the MENA ARCM.

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 HRCs, 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) and IATA Standard Safety Assessment Programme (ISSA). 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

Aviation has continued to expand. It has weathered crises and demonstrated long-term resilience, becoming an indispensable means of transport. Historically, air transport has doubled in size every fifteen years and has grown faster than most other industries. In addition, air transport is a key enabler for sustainable economic and social development. Currently, the Global Air Transport Industry supports almost 65.5 million jobs worldwide and contributes USD 2.7 trillion to Global Gross Domestic Product (GDP), equivalent to 3.6% of global GDP and USD704.4 billion aviation direct economic impact.

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 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*).

Over the last five years, the global scheduled commercial international operations accounted for approximately 38.4 million departures in 2019, compared to 32.9 million departures in 2015. The MID Region shows a slight decrease in traffic volumes during 2019. Total scheduled commercial departures in 2019 accounted for approximately 1.31 million departures compared to 1.22 million departures in 2015. In terms of an aircraft accident, the MID Region had an accident rate of 1.5 accidents per million departures in 2019, which decreased compared to the previous year (2018) for aircraft with a maximum certificated take off mass greater than 5,700 kg. The 5-year average accident rate for 2015-2019 is 2.02, which is below the global average rate (2.6) for the same period. The MID Region accident rate in 2019 is still below the global accident rate, which is 3.0 accidents per million departures.

In respect of States' Safety Oversight capabilities, the Regional average overall Effective Implementation (EI) (13 out of 15 States have been audited) is 75.59 %, which is above the world average 68.39 % (as of May 5, 2020). Three (3) States are currently below EI 60%. All eight areas have an EI above 60%. However, the areas of AIG and AIG still need more improvement. 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. Moreover, the effective implementation in certification, surveillance, and resolution of Safety concerns need to be improved.

In terms of Safety Management, the average EI for SSP foundation PQs for States in the MID Region is 76, 21%. 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.

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 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;
- c. 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
- d. 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 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 the graph 1 below.

- a. Organizational challenges/issues including the States 'safety oversight, safety management, aircraft accident and incident investigation, and Human factors and competence of personnel. 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 high risks categories identified in the GASP 2020-2022 Edition mainly the LOC-I, CFIT, RE, RI, and MAC; and
- c. Regarding the emerging risks, the focus would be on COVID-19 pandemic outbreak, Civil drones (Unmanned Aircraft Systems), and impact of security on safety. For GNSS outages, action has been taken.



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:

- integrate and refine existing RASG-MID building blocks already put in place such as MID Region Safety strategy, MID Annual Safety Report (MID ASR); existing SEIs, MID Region safety management Roadmap, Runway Safety Go-Team;
- enhance coordination and communication with regional organizations including ACAO, ACI, CANSO, IATA, and other regional mechanisms, especially MENA RSOO once activated and MENA ARCM once established;
- improve the scheduling and streamline the number of regional safety-related events including workshops, trainings, seminars; and
- improve communication and sharing of data/ information between States.

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; and
- Enhance State Oversight on Dangerous Goods.

Second focus area involves addressing regional operational safety risks effectively 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 the COVID-19 pandemic outbreak, GNSS outages/vulnerability, civil drones to ensure safe operation of unmanned aircraft system (UAS), and impact of security on safety. Taking into the consideration the actions which have been taken to ease the impact of COVID-19, additional safety actions would be developed and covered under the first focus area (organizational challenges).

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 2020-2022, 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%;
- b. Slow pace of SSP implementation, as well as understanding of newer safety management and performance based concepts;
- c. Slow pace of implementation of RASG-MID conclusion/ SEIs and tools to mitigate operational risks;
- d. Lack of resources and expertise to manage and collect data on a State level, and no formal mechanisms in place that allow for the sharing and benchmarking of information at the Regional level;
- e. Increasing risks associated with airspace congestion, and the lack of appropriate infrastructure to support safe operations; lack of capacity of regulatory authorities; and
- f. Ease the impact of COVID-19 pandemic by supporting states and industry during the restart and recovery phases.

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 75.59 %, which is above the world average 68.39 % (as of 5 May 2020). Three (3) States are currently below EI 60%.

All eight areas have an EI above 60%. However, the areas of AGA and AIG still need more improvement. 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.

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

Key Actions completed/taken
a. Conducted technical assistance and NCLB missions to States to provide assistance related to the preparation of USOAP-CMA activities;
b. Conducted USOAP CMA Workshops to harmonize competencies of technical personnel needed to support effective safety oversight at the Regional level;
c. Developed and implemented a specific NCLB plan of actions for prioritized States according to established criteria;
d. Organized Government Safety Inspector (GSI) Course (AIR); and
e. Established MENA RSOO to assist States to resolve safety oversight deficiencies and carry out tasks and functions in the area of PEL, OPS, AIR, AGA and ANS.

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 75.59 %, which is above the world average 68.39 % (as of 5 May 2020). 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.

Key Actions completed/taken
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 ACAO/ICAO AIG Workshop on aircraft accident investigation techniques; and
d. Draft MENA ARCM implementation action plan endorsed by the RSC/7.

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.

Key Actions completed/taken
a. Establishment of an Ad-hoc Action Group championed by Saudi Arabia and UAE

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 32nd 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.

Key Actions completed/taken
a. Development and dissemination the Questionnaire on ELP ; and
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 the 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. However, due to the COVID-19 pandemic some of the ICAO MID Office work Programme activities have been postponed for 2021 including Dangerous Goods workshop.

5.1.6 Improve the Status of Implementation of State Safety Programme (SSP) and Safety Management System (SMS)

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.

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). Currently, States in the MID Region could not reach to full implementation of the SSP framework. Common challenges/difficulties have been identified based on the States feedback and recommendations for the way forward were provided in this regard.

Key Actions completed/taken
a. Conducted and organized the Safety Management Training Courses and Workshops on SSP/SMS;
b. Development of the MID Region Safety Management Implementation Roadmap;
c. Establishment of the Safety Management Implementation Team (SMIT); and
d. Establishment the MENA RSOO to support States in the expeditious implementation of SSP.

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.

Key Actions completed/taken
a. Conducted Aerodrome Safety Management Workshop;
b. Wildlife hazard Management and Control Workshop; and
c. RSA on Wildlife Management and Control Regulatory Framework & Guidance Material.

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

Key Actions completed/taken
a. Runway Safety Go-Team Missions

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

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 global 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 an accident rate of 1.5 accidents per million departures in 2019, which decreased compared to the previous year (2018). The 5-year average accident rate for 2015-2019 is 2.02, which is below the global average rate (2.6) for the same period. The MID Region accident rate in 2019 is still below the global accident rate, which is 3.0 accidents per million departures.

The 5-year average fatal accident rate for 2015-2019 is 0.61, which is slightly above the global average rate (0.44) for the same period. The MID region had no fatal accidents in 2017 and 2019. However, four fatal accidents occurred in 2015, 2016, and 2018. The 2015 accident caused 224 fatalities, 67 were registered in 2016, and the year 2018 caused 66 fatalities.

The GASP 2020-2022 Edition identifies the global high risk categories (HRCs) as LOC-I, CFIT, MAC, RE and RI. In the MID Region in 2015-2019, the top most 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 2015- 2019 were attributed to LOC-I.

Therefore, for the triennium of 2020-2022, the MID Region should continue to focus its efforts on mitigating and minimizing occurrences related to the Regional 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).

As a new global HRC, MAC is established as a top risk for the MID region based on the existing data driven approach used to determine the Regional HRCs. 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**.

5.2.1.1 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 2015-2019 aircraft upset, or loss of control contributed to two fatal accidents involving MID Region aeroplane.

Key Actions completed/taken
a. Organized and promoted training provisions on recovery from upset scenarios (UPRT workshop);
b. Assistance to States to implement the SSP/SMS through workshops/trainings; and
c. Development and publication of RSAs related to the LOC-I. <ul style="list-style-type: none"> - 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

5.2.1.2 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 2015-2019, Runway Excursions and abnormal runway contact accidents and serious incidents mainly occurred in the landing phase of flight.

Key Actions completed/taken	
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 through workshops/trainings; and
e.	RSA on Wildlife Management and Control Regulatory Framework & Guidance Material.

5.2.1.3 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.

Key Actions completed/taken	
a.	Conduct of assistance missions by the Runway Safety Go-Team (RST); and
b.	Assistance to States to implement the SSP/SMS through workshops/trainings.

5.2.1.4 Controlled Flight into Terrain (CFIT)

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

Key Actions completed/taken
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 through workshops/trainings;
e. Development and publication of RSAs; and
f. Construction, approval and implementation of RNAV(GNSS) / RNP-AR procedures to all runways not currently served by precision approach procedure.

5.2.1.5 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/taken
a. Assistance to States to implement the SSP/SMS through workshops/trainings; and
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.

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.

5.3.1 GNSS Outages/ Vulnerability

Between 2015 and 2018, GPS outages accounted for 92 reported incidents. Air operators reported the most frequent GNSS outages problems. The reports were mainly located in the FIR Middle East-Europe. The majority of GPS outages were closely linked with political conflict in the Region. The most affected geographical area was Eastern Mediterranean related to the political conflict in the Region.

Key Actions completed/taken
a. RSA on GNSS vulnerability has been developed and published.

5.3.2 COVID-19 Pandemic Outbreak

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.

Key Actions completed/taken
a. Establishment of MID Region Recovery Plan Task Force (RPTF) to assist in developing Regional restart and recovery planning;
b. Establishment of RPTF 4 technical work streams namely: Public Health Requirements, Operational Safety Measures, Airport & Passengers Facilitation, and Air Navigation Services/Air Traffic Management;
c. Conduct of teleconferences with DGCA's and Regional international organization;
d. Development of MID CART Regional Implementation Roadmap;
e. Conduct of RASG-MID and MIDANPIRG virtual meetings;
f. Continuous communication and coordination with MID States;
g. 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
h. CART document and CRRIC webinars conducted.

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

5.3.4 Impact of Security on Safety

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.

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 safety strategy at **Appendix C** to measure safety performance and monitor each regional safety target. Furthermore, the MID Region Safety Strategy includes six (6) Goals in line with GASP 2020-2022 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 safety strategy to this plan. Therefore, for each Goal established in the MID Region Safety Strategy, identified SEI(s) be mapped to it including their respective actions.

MID region safety indicators and targets were aligned with the 2020-2022 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 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 2020-2022 and regional specific objectives and priorities, as well as the adoption and attainment of Safety Targets with a specific timeframe.

The MID Region Safety Strategy 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 2020-2022 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 2020-2022 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 75.23 %, which is above the world average 68.53% (as of 25 Sep 2019). Three (3) States are currently below EI 60%.

Goal 3: Ensure the appropriate infrastructure is available to support safe operations: This is related to 2020-2022 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 2020-2022 GASP requiring all States to implement the air navigation and airport core infrastructure including aerodrome safety by 2022.

Goal 4: Expand the use of Industry Programmes: This is related to 2020-2022 GASP Goal 5. 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 2020-2022 GASP requiring all States increase the number of service providers participating in the corresponding ICAO recognized industry assessment Programmes by 2022.

Goal 5: Implementation of effective SSPs and SMSs: This is related to 2020-2022 GASP Goal 3 and Goal 5. Related indicators will mainly be based on data available through ICAO iSTARS. 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 2020-2022 GASP requiring States to achieve an effective SSP, as appropriate to their aviation system complexity, by 2025.

Goal 6: Increase Collaboration at the Regional Level to enhance safety: This is related to 2020-2022 GASP Goal 4. 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 2020-2022 GASP requiring all States to achieve a positive safety oversight margin, and an effective SSP, to actively lead RASGs' safety risk management activities, by 2022.

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 Strategy as follows:

- Goal 1: Achieve a continuous reduction of operational safety risks;
- Goal 2: Strengthen States' safety oversight capabilities/Progressively increase the USOAP-CMA EI scores/results;
- Goal 3: Ensure the appropriate infrastructure is available to support safe operations;
- Goal 4: Expand the use of Industry Programmes;
- Goal 5: Implementation of effective SSPs and SMSs; and
- Goal 6: Increase Collaboration at the Regional Level to enhance safety

7.1 Organizational Challenges and Emerging Risks

7.1.1 Goal 2: Strengthen States' Safety Oversight Capabilities

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

Target: The safety targets of this goal are indicated in the MID Region safety strategy 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

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.

Actions to be taken: A1-A2-A3-
A1- Conduct Capacity Building Activities (Workshops, Training, Webinars, GSI Courses) to promote effective implementation of SARPs, with a focus on the following technical areas: ANS, AGA, and OPS.
A2- Conduct technical assistance and NCLB missions to States to provide assistance related to the preparation of USOAP-CMA activities
A3- Develop and implement a specific NCLB plan of actions for prioritized States according to established criteria

References: ICAO SARPs and guidance documents and 2020-2022 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: 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, and States.

Action 1: Conduct Capacity Building Activities (Workshops, Training, Webinars, GSI Courses) to promote effective implementation of SARPs, with a focus on the following technical areas: ANS, AGA, and OPS.

Owner: ICAO, ACAO

Priority: Medium

Completion date: 2022

Status: Ongoing

Action 2: Conduct technical assistance and NCLB missions to States to provide assistance

Owner: ICAO

Priority: High

Completion date: 2022

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:** 2022**Status:** Ongoing**EXPECTED OUTPUT****Deliverable(s)****Timeline**

MID States to improve their score for the effective implementation (EI):

2022

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 safety strategy 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 to be taken: A1-A2****A1-** Development and signature of the MOU among MENA ARCM States**A2-** Conduct AIG Capacity Building Activities.**References:** ICAO SARPs and guidance documents and 2020-2022 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

Action 1: Development and signature of the MOU among the ARCM States

Owner: ICAO, ACAO, and States (TBD)

Priority: High

Completion date: 2021

Status: Ongoing

Action 2: Conduct AIG Capacity Building Activities.

Owner: ICAO and ACAO. (Supported by Stakeholders TBD)

Priority: Medium

Completion date: 2022

Status: Ongoing

EXPECTED OUTPUT

Deliverable(s)	Timeline
MID States to improve their score for the effective implementation (EI) especially the area of AIG	2022

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 safety strategy 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 to be taken: A1

A1- Development of Questionnaire on Establishing a Platform for Sharing Safety Recommendations and be circulated to MENA States

References: ICAO SARPs and guidance documents and 2020-2022 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 questionnaire to be circulated to MENA States on sharing safety recommendations on dedicated platform

Owner: ICAO, ACAO, and States (KSA & UAE)

Priority: High

Completion date: 2022

Status: Ongoing

EXPECTED OUTPUT

Deliverable(s)	Timeline
Improve MID States the effective implementation (EI) in the area of AIG	2022

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 safety strategy 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 to be taken: A1-A2-A3

A1- Dangerous Goods (DG)workshop for States ‘inspectors

A2- Develop guidance material to support States’ inspectors for the conduct of the oversight for DG

A3- Develop guidance material and providing webinar on Lithium batteries

References: ICAO SARPs and guidance documents and 2020-2022 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

Action 1: Organize DG workshop for States’ inspectors in Casa Blanca

Owner: ICAO and ACAO. Supported by FAA

Priority: High

Completion date: 2021

Status: New

Action 2: Develop guidance material to support States’ inspectors for the conduct of the oversight for DG

Owner: States (TBD during the SEIG/1 Meeting)

Priority: Medium

Completion date: 2022

Status: New

Action 3: Develop guidance material and providing webinar on Lithium batteries

Owner: IATA

Priority: Medium

Completion Date: 2022

Status: New

EXPECTED OUTPUT

Deliverable(s)	Timeline
MID States to improve their score for the effective implementation (EI) especially the area of OPS	2022

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 safety strategy at Appendix C.

Rationale:

Human factors and competence of personnel are strategic priorities in the region. 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 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.

What we want to achieve:

Ensure continuous improvement of aviation personnel competence.

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.

Actions to be taken: A1-A2-A3-A4
A1- Advisory Circular: Crew Resource Management Training Programme (CRM). (Action addressed under G1-SEI-04:CFIT)
A2- Organize Crew Resource Management Training workshop to share experience and best practices on CRM practical implementation
A3- Conduct workshop/webinar on fatigue and mental Health best practices
A4- Organize Team Resource Management Training workshop to share experience and best practices on TRM practical implementation.

References: ICAO SARPs and guidance documents and 2020-2022 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

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

Action 2: Organize Crew Resource Management Training workshop to share experience and best practices on CRM practical implementation

Owner: ICAO, and ACAO. Supported by IATA and KSA, FAA to be confirmed

Priority: High

Completion date: 2022

Status: New

Action 3: conduct workshop/webinar on fatigue and mental Health best practices

Owner: ACAO and IATA. Supported by IFALPA, CANSO, KSA and Jordan

Priority: High

Completion date: 2022

Status: New

Action 4: Organize Team Resource Management Training workshop to share experience and best practices on TRM practical implementation

Owner: ICAO, ACAO, IATA, CANSO, FAA, and States (TBD)

Priority: Medium

Completion Date: 2022

Status: New

EXPECTED OUTPUT

Deliverable(s)

Timeline

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

2022

7.1.1.6 G2-SEI-06: Impact of security on safety

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

Actions to be taken: A1-A2-A3

A1- Circulate ICAO Doc 10084 Risk Assessment Manual for Civil Aircraft Operations Over or Near Conflict Zones

A2- 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

A3- A3- Encourage States to issue NOTAMs to share threats information emanated from conflict zones within their airspaces.

References: ICAO SARPs and guidance documents and 2020-2022 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	
A1- Circulate ICAO Doc 10084 Risk Assessment Manual for Civil Aircraft Operations Over or Near Conflict Zones	
Owner:	ICAO
Priority:	High
Completion date:	2021
Status:	New
A2- Organize seminar/Symposium 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	
Owner:	ACAO and ICAO. Supported by IATA, CANSO, and States (TBD)
Priority:	High
Completion date:	2022
Status:	New
A3- Encourage States to issue NOTAMs to share threats information emanated from conflict zones within their airspaces	
Owner:	ICAO
Priority:	High
Completion date:	2021
Status:	New

EXPECTED OUTPUT

Deliverable(s)	Timeline
mitigate contributing factors to accidents and incidents	2022

7.1.2 Goal 3: Ensure the Appropriate Infrastructure is available to Support Safe Operations

7.1.2.1 G3-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.

Actions to be taken:	A1-A2-A3-A4
A1-	Support States on the implementation of the ICAO Annex 14 requirements to achieve compliance with regards to Aerodrome Design and Operations, through Workshops/Training
A2-	Enhance capacity building for States CAAs and Airport operators related to aerodromes certification through Workshops/Training
A3-	Develop guidance material on Apron Management
A4 –	Deployment of iPack on Aerodrome Re-Start

References: ICAO SARPs and guidance documents and 2020-2022 GASP. This is related to 2020-2022 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 Workshops/Training

Owner: ICAO and ACI. Supported by ACAO

Priority: High

Completion Date: 2022

Status: Ongoing (Training conducted on implementing Annex 14, 8-12 Nov2020)

Action 2: Enhance capacity building for States CAAs and Airport operators related to aerodromes certification through Workshops/Training

Owner: ICAO and ACI

Priority: High

Completion date: 2022

Status: New

Action 3- Develop guidance material on Apron Management

Owner: States (UAE and Egypt)

Priority: High

Completion Date: 2021

Status: New

Action 4 – Deployment of iPack on Aerodrome Re-Start

Owner: ICAO

Priority: High

Completion Date: 2021

Status: New

EXPECTED OUTPUT

Deliverable(s)	Timeline
Increase the number of Certificated International Aerodromes	2022

7.1.2.2 G3-SEI-02: Establish Runway Safety Team (RST) at International Aerodromes

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

Actions to be taken:	A1-A2
A1- Conduct of assistance missions by the Runway Safety Go-Team (RST)	
A2- Support States to implement the Global Reporting Format Methodology through workshops/trainings: (Action addressed under G1-SEI-02: Runway Excursion)	

References: ICAO SARPs and guidance documents and 2020-2022 GASP. This is related to 2020-2022 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/associations

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

Owner: ICAO, RSP (Runway Safety Programme Partners)

Priority: High

Completion date: 2022

Status: Ongoing

Action 2: Support States to implement the Global Reporting Format Methodology through Webinar/workshops/training. (Action addressed under G1-SEI-02: Runway Excursion)

Owner: ICAO, ACI, CANSO, IATA, FAA and Aircraft Manufactures

Priority:	High
Completion Date:	2022
Status:	Ongoing (Webinar has been conducted on 27 Oct 20)

EXPECTED OUTPUT

Deliverable(s)	Timeline
Increase the number of establishment RST at international aerodromes	2022

7.1.3 Goal 4: Expand the Use of Industry Programmes

7.1.3.1 G4-SEI-01: Promote the Use of industry Programmes

Target: The safety targets of this goal are indicated in the MID Region safety strategy 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 and IATA will give feedback on the effectiveness of the activities.

How we want to achieve it:

Action to be taken: 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 2020-2022 GASP Goal 5 "Expand the use of industry Programmes"

Component 1 — State Safety Oversight (SSO) System

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

Stakeholders: RASG-MID, States, industry, international organizations/associations	
Action 1: - Encourage IATA's IOSA and ISAGO registrations through safety promotion	
Owner:	IATA
Priority:	Medium
Completion Date:	2022
Status:	Ongoing
Action 2: Encourage the implementation of ACI Airport Excellence (APEX) in Safety Programme	
Owner:	ICAO and ACI
Priority:	High
Completion Date:	2022
Status:	New

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:	2022

7.1.4 Goal 5: Implementation of Effective SSPs and SMSs
7.1.4.1 G5-SEI-01: Implement an effective Safety Management

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

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

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

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.

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.

The Regional safety risk areas in the current MID-RASP edition are as follows: aircraft upset in flight, runway safety, airborne conflict, and terrain collision. In addition to this, main safety issues and their potential accident outcomes at **Appendix B** have been identified.

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;
- include series of SEIs to address safety issues; and
- reflect the MID-RASP SEIs as applicable to the State.

Actions : A1-A2-A3-A4-A5-A6-A7-A8
A1- Conduct SSP training course in Cairo
A2- Conduct SSP Workshop in coordination with ACAO in Casablanca, Morocco
A3- Provide SSP/SMS workshops for MID States personnel
A4- Develop guidance material on occurrence reporting for the CAA personnel on establishing an effective operation of the mandatory and voluntary reporting systems
A5- Support and guide States in the development of NASPs through workshops and sharing of best practices.
A6- Development of guidance for the processes and procedures for oversight of SMS
A7- Deployment of the Aviation Safety Risk Management iPack
A8- Conduct assistance missions by SMIT to support States with SSP implementation

References: ICAO Annex 19 and GASP 2020-2022 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/associations	
Action 1- Conduct SSP training course in Cairo	
Owner:	ICAO
Priority:	High
Completion Date:	2021
Status:	New
Action 2- Conduct SSP Workshop in coordination with ACAO in Casablanca, Morocco	
Owner:	ICAO and ACAO
Priority:	High
Completion Date:	2021
Status:	New
Action 3- Provide SSP/SMS workshops	
Owner:	ICAO. Supported by IATA, CANSO, ACI, and States (UAE)
Priority:	High
Completion Date:	2022
Status:	Ongoing (SSP Workshop conducted during March 2020 In Kuwait)
Action 4: Develop guidance material on occurrence reporting for the CAA personnel on establishing an effective operation of the mandatory and voluntary reporting systems	
Owner:	States (UAE))
Priority:	High
Completion Date:	2022
Status:	New

Action 5: Support and guide States in the development of NASPs through Workshops (Assistance Missions) and sharing of best practices.

Owner of Action: ICAO, and States (UAE),

Priority: Medium

Completion Date: 2022

Status : New

Action 6: Development of guidance for the processes and procedures for oversight of SMS

Owner: States (UAE),

Priority: Medium

Completion Date: 2022

Status: New

Action 7: Deployment of the Aviation Safety Risk Management iPack for OMAN

Owner: ICAO

Priority: High

Completion Date: 2022

Status: New

Action 8: Conduct assistance missions by SMIT to support States with SSP implementation

Owner: SMIT Team. ICAO, Egypt, Saudi Arabia, Qatar and UAE. Supported by CANSO and IATA

Priority: High

Completion Date: 2022

Status: New

EXPECTED OUTPUT

Deliverable(s)	Timeline
MID States to implement the foundation of an SSP	2022
MID States to implement an effective SSP	2025

7.1.5 Goal 6: Increase Collaboration at the Regional Level to Enhance Safety

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

Rationale:

What we want to achieve:

MID Region States to increase collaboration at the level so that to enhance safety.

How we monitor improvement:

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

How we want to achieve it: Actions to be developed in the future.

References: GASP 2020-2024 Goal 4 "Increase collaboration at the Regional level "

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.

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 2015-2019 Aircraft upset or Loss of control contributed to two accidents and counted for around 66% of fatalities. During the years 2016 and 2018, the LOC-I occurred respectively during go around (GOA) and En-route phases 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

Actions:	A1-A2-A3-A4-A5
A1-	Guidance material on flight crew proficiency
A2-	Advisory Circular: Mode Awareness and Energy State Management Aspects of Flight Deck Automation
A3-	Conduct Upset Recovery Workshop
A4-	Develop guidance material on Ground Handling Service Provider Certification Process
A5-	Conduct a Ground Handling Workshop

References:

- GASP 2020-2024 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.

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

Action 1: Guidance material on flight crew proficiency

Owner: IATA and Aircraft manufacturers

Priority: Medium

Completion Date: 2022

Status: New

Action 2: Advisory Circular: Mode Awareness and Energy State Management Aspects of Flight Deck Automation

Owner: IATA and Aircraft manufacturers. Supported by KSA

Priority: High

Completion Date: 2022

Status: New

A3- Conduct Upset Recovery workshop

Owner: ACAO, IATA, and ICAO. Supported by FAA, and States (Host State to be confirmed later)

Priority: High

Completion Date: 2022

Status: Ongoing (ICAO, KSA, and FAA UPRT Feb 20)

Action 4- Develop guidance material on Ground Handling Service Provider Certification Process

Owner: IATA and State (KSA)

Priority: Medium

Completion Date: 2021

Status: New

Action 5- Conduct a Ground Handling workshop

Owner:	ACAO and ICAO. Supported by IATA
Priority:	High
Completion Date:	2021
Status:	New

EXPECTED OUTPUT

Deliverable(s)	Timeline
Mitigate contributing factors to LOC-I accidents and incidents	2022

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

Target: The safety targets of this goal are indicated in the MID Region safety strategy 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 2015-2019, Runway Excursions and abnormal runway contact accidents and serious incidents mainly occurred in the landing phase of flight and counted for approximately 1% of fatality.

What we want to achieve:

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

How we monitor improvement:

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

How we want to achieve it:

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

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

Actions:	A1-A2-A3
A1-	Support States to implement the Global Reporting Format (GRF) Methodology through Webinar/ Workshops/Training
A2-	Guidance material on un-Stabilized Approach
A3:	MID Region Action Plan/Milestones on the Global Reporting Format (GRF) Implementation

References:

- GASP 2020-2024 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 Webinar/Workshops/Training (Reference: G3-SEI-02)

Owner: ICAO, ACI, CANSO, IATA, FAA and Aircraft Manufactures

Priority: High

Completion Date: 2021

Status: Ongoing (GRF webinar conducted on 27 Oct 2020)

Action 2: Guidance material on un-Stabilized Approach

Owner: IATA. Supported by CANSO and IFALPA

Priority: Medium

Completion Date: 2022

Status: New

Action 3: MID Region Action Plan/Milestones on the Global Reporting Format (GRF) Implementation

Owner: ICAO

Priority: High

Completion Date: 2021

Status: New

EXPECTED OUTPUT

Deliverable(s)	Timeline
Mitigate contributing factors to RE accidents and incidents	2022

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

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

Rationale:

Runway incursion refers to the incorrect presence of an aircraft, vehicle or person on an active runway or in its areas of protection, which can potentially lead to runway collision as the most credible accident outcome. 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.

Actions: A1

A1- Support States to implement aerodrome inspection through workshops/trainings/Webinars

References:

- GASP 2020-2024 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/associations

Action 1: Support States to implement aerodrome inspection procedures by providing workshops/training/Webinars

Owner: ICAO. Supported by FAA and UAE

Priority: High

Completion Date: 2022

Status: New

EXPECTED OUTPUT

Deliverable(s)	Timeline
Mitigate contributing factors to RI accidents and incidents	2022

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

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

Actions: A1-A2-A3-A4
A1- Advisory Circular: Guidance for Operators to Ensure Effectiveness of GPWS Equipment
A2- Advisory Circular: Instrument Approach Procedures Using Continuous Descent Final Approach Techniques
A3- Guidance on the Establishment of a Flight Data Analysis Programme (FDAP)
A4- Advisory Circular: Crew Resource Management Training Programme (CRM)

References:

- GASP 2020-2024 Goal 1 “Achieve a Continuous Reduction of Operational Safety Risks”.
- GASP SEIs (States, Region, and industry) – Mitigate contributing factors to CFIT accidents and incidents.

Stakeholders: ICAO, RASG-MID, MIDANPIRG States, industry, international organizations/associations	
Action 1: Advisory Circular: Guidance for Operators to ensure effectiveness of GPWS Equipment	
Owner:	IATA and Aircraft manufacturers
Priority:	Medium
Completion Date:	2022
Status:	New
Action 2: Advisory Circular: Guidance for Operators on Training Programme on the use of GPWS	
Owner:	IATA and Aircraft manufacturers
Priority:	Medium
Completion Date:	2022
Status:	New
Action 3: Circulate ICAO Guidance Doc 10000 on Flight Data Analysis Programme (FDAP) to support States providing oversight to air operators	
Owner:	ICAO
Priority:	Medium
Completion Date:	2021
Status:	New
Action 4: Advisory Circular: Crew Resource Management Training Programme (CRM)	
Owner:	IATA, Aircraft manufacturers
Priority:	High
Completion Date:	2022
Status:	New

EXPECTED OUTPUT

Deliverable(s)	Timeline
Mitigate contributing factors to CFIT accidents and incidents	2022

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

7.2.1.5.1 G1-SEI-05A: Loss of separation between civil and military aircraft

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

Rationale:

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 aeroplane mid-air collision accident 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.

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.

Actions: A1-A2

A1- States and regional organizations to share occurrences and/or safety analysis/information related to Near Mid Air Collisions (NMACs) including to the “Loss of separation between civil and military aircraft” and ATM-SG to perform a technical analysis of the reported occurrences and and/or safety analysis/information and then come out with recommendations. The technical analysis of the reported occurrences and recommendations be shared with ASRG.

A2- Guidance/raising awareness/coordination related to the civil and military cooperation in particular about aircraft operating over high seas

References:

- GASP 2020-2024 Goal 1 “Achieve a Continuous Reduction of Operational Safety Risks”.
- GASP SEIs (States, Region, and industry) – Mitigate contributing factors to MAC accidents and incidents.

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

Action 1: States and regional organizations to share occurrences and/or safety analysis/information related to Near Mid Air Collisions (NMACs) including the “Loss of separation between civil and military aircraft” and ATM-SG to perform a technical analysis of the reported occurrences and come out with recommendations.

Owner: ICAO, IATA, CANSO, and States

Priority: High

Completion Date: 2022

Status: New

Action 2: Guidance/raising awareness/ coordination related to the civil and military cooperation in particular about aircraft operating over high seas

Owner: ACAO, ICAO, States

Priority: High

Completion Date: 2022

Status: Ongoing

EXPECTED OUTPUT

Deliverable(s)	Timeline
Mitigate contributing factors to MAC accidents and NMAC incidents	2022

7.2.1.5.2 G1-SEI-05B: Ensure the Safe Operations of UAS (drones)

Target: The safety targets of this goal are indicated in the MID Region safety strategy 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 to be taken:	A1-A2-A3
A1- Circulate ICAO developed guidance and advisory circulars: Regulatory framework for the operation of drones to support states' CAA personnel in the implementation and oversight of UAS operations	
A2- Organize symposium	
A3- States and regional organizations to share occurrences and/or safety analysis/information involving drones to ASRG to perform a technical analysis of the reported occurrences and come out with recommendations.	

References: ICAO SARPs and guidance documents and 2020-2022 GASP. This is related to 2020-2022 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.

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

Action 1: Circulate ICAO developed guidance and advisory circulars: Regulatory framework for the operation of drones

Owner: ICAO

Priority: High

Completion date: 2021

Status: New

Action 2: Organize symposium related to drones subjects

Owner: ICAO, ACAO. Supported by FAA

Priority: Medium

Completion date: 2021

Status: New

Actions 3: - States and regional organizations to share occurrences and/or safety analysis/information involving drones to ASRG to perform a technical analysis of the reported occurrences and come out with recommendations

Owner: ICAO, IATA, ACI, CANSO, and States

Priority: Medium

Completion date: 2022

Status: New

EXPECTED OUTPUT

Deliverable(s)	Timeline
Ensure the safe operations of UAS to mitigate the risk of MID Air Collision (MAC)	2022

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 9th ASR

Safety Issues	Accident Severity	Potential Accident Outcome						
		CFIT	LOC-I	MAC	GCOL	RE/ARC	Injury Damage inflight	Injury Damage on Ground
Monitoring of flight parameters and automation modes	Catastrophic		x			x	x	x
Convective weather	Catastrophic	x	x			x		
Flight planning and preparation	Catastrophic	x	x			x		
Crew Resource Management	Catastrophic	x	x	x	x	x		
Handling of technical failure	Catastrophic	x	x			x		
Handling and execution of GOA	Catastrophic	x	x			x		
Loss of separation in flight/ and or airspace/TCAS RA	Catastrophic			x			x	
Experience, training and competence of Flight Crews	Catastrophic	x	x	x		x		
De-confliction between IFR and VFR traffic	Catastrophic			x			x	
Inappropriate flight control inputs	Catastrophic		x			x		
Contained engine Failure/Power Plant Malfunctions	Catastrophic	x	x			x	x	
Birdstrike/Engine Bird ingestion	Catastrophic		x			x		
Fire/Smoke-non impact	Catastrophic		x				x	x
Wake Vortex	Catastrophic		x				x	
Deviation from pitch or roll attitude	Catastrophic	x	x			x		
Security Risks with impact on Safety	Catastrophic		x					
Tail/Cross wind/Windshear	Catastrophic		x			x		x
Runway Incursion	Catastrophic				x	x		x
Maintenance events	Catastrophic	x	x			x	x	x
Contaminated runway/Poor braking action	Major					x		x
Clear Air Turbulence (CAT) and Mountain Waves	Catastrophic		x				x	

Appendix C-MID Region Safety Strategy

REGIONAL AVIATION SAFETY GROUP – MIDDLE EAST

(RASG-MID)

**MID REGION
SAFETY STRATEGY**

EDITION 7, SEPTEMBER 2020

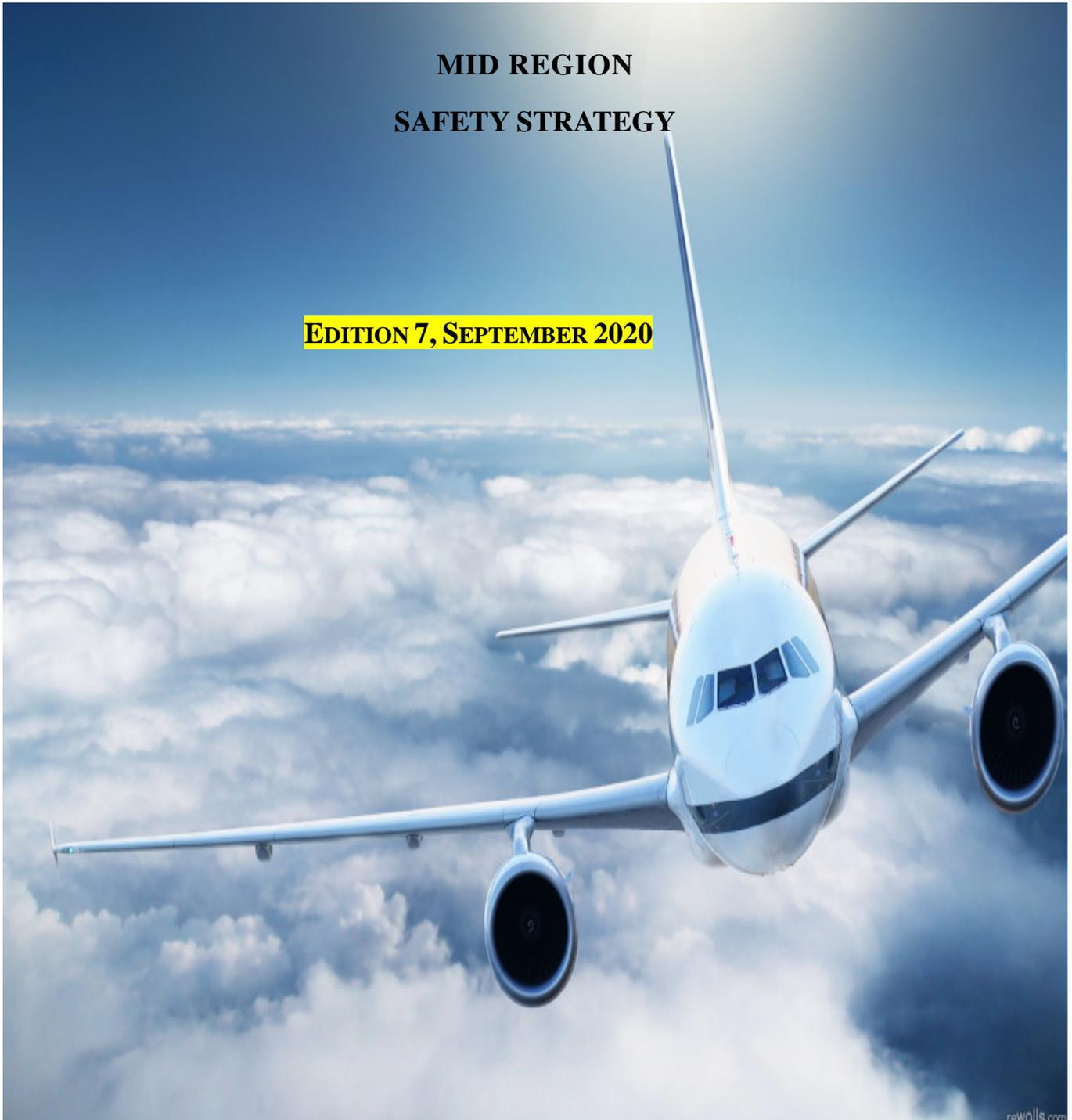


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MID Region Safety Strategy

1. Strategic Safety Objective

1.1 Continuous improvement of aviation safety through a progressive reduction of the number of accidents and related fatalities in the MID Region to be in line with the global average, based on reactive, proactive and predictive safety management practices.

2. Safety Objectives

2.1 The purpose of ICAO Global Aviation Safety Plan (GASP) is to continually reduce fatalities, and the risk of accident, by guiding the development of a harmonized aviation safety strategy and the development and implementation of regional and national aviation safety plans. A safe aviation system contributes to the economic development of States and their industries. GASP promotes the implementation of a State's safety oversight system, a risk-based approach to managing safety as well as a coordinated approach to collaboration between States, regions and industry.

2.2 States and Regions must focus on their safety priorities as they continue to foster expansion of their air transport sectors.

2.3 The ICAO GASP establishes targeted safety objectives and initiatives while ensuring the efficient and effective coordination of complementary safety activities between all stakeholders.

2.4 The GASP provides a collaborative framework for States, regions and industry to support the management of organizational challenges and operational safety risks.

2.5 The 2020-2022 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.

2.6 The 2020-2022 Edition of the GASP includes a new set of goals, targets and indicators, in line with the United Nations' 2030 Agenda for Sustainable Development.

2.7 The global aviation safety roadmap, presented in the 2020-2022 Edition of the GASP, would serve as an action plan to assist the aviation community in achieving the GASP goals.

2.8 The MID Region safety objectives are in line with the GASP objectives and address specific safety risks identified within the framework of the Regional Aviation Safety Group-Middle East (RASG-MID), based on the analysis of available safety data.

2.9 The enhancement of communication and information exchange between aviation Stakeholders and their active collaboration under the framework of RASG-MID would help achieving the MID Region safety objectives in an expeditious manner.

3. Measuring and Monitoring Safety Performance

3.1 The first version of the MID Region Safety Strategy was developed by the First MID Region Safety Summit (Bahrain, 28-29 April 2013) and endorsed by the DGCA-MID/2 meeting (Jeddah, Saudi Arabia, 20 -22 May 2013).

3.2 The monitoring of safety performance and its enhancement is achieved through identification of relevant Goals and Safety Indicators, taking into consideration the GASP 2020-2022 and regional specific objectives and priorities, as well as the adoption and attainment of Safety Targets with a specific timeframe.

3.3 The MID Region Safety Strategy includes the following Goals:

- Aspirational Goal: Zero fatality by 2030
- Goal 1: Achieve a continuous reduction of operational safety risks
- Goal 2: Strengthen States' safety oversight capabilities/Progressively increase the USOAP-CMA EI scores/results
- Goal 3: Ensure the appropriate infrastructure is available to support safe operations
- Goal 4: Expand the use of Industry Programmes
- Goal 5: Implementation of effective SSPs and SMSs
- Goal 6: Increase Collaboration at the Regional Level to enhance safety

3.4 The MID Region Safety Goals, Indicators and Targets are detailed in the Table below:

MID Region Safety Targets

Aspirational Goal: Zero Fatality by 2030

Goal 1: Achieve a Continuous Reduction of Operational Safety Risks

Safety Indicator	Safety Target	Timeline	Links to GASP
Number of accidents per million departures	Regional average rate of accidents to be in line with the global average rate (baseline 2016)	2022	<i>Linked to Goal 1 and Target 1.1 of the GASP</i>
Number of fatal accidents per million departures	Regional average rate of fatal accidents to be in line with the global average rate (baseline 2016)	2022	
Number of fatalities per million departures	Number of fatalities per billion passengers carried (fatality rate) to be in line with the global average rate (baseline 2018)	2022	
Number of Runway Excursion accidents per million departures	Regional average rate of Runway Excursion accidents to be below the global average rate (baseline 2016)	2022	
Number of Runway Incursion accidents per million departures	Regional average rate of Runway Incursion accidents to be below the global average rate (baseline 2018)	2022	
Number of LOC-I related accidents per million departures	Regional average rate of LOC-I related accidents to be below the global rate (baseline 2016)	2022	
Number of CFIT related accidents per million departures	Regional average rate of CFIT related accidents to be below the global rate-(baseline 2016)	2022	
Number of Mid Air Collision (accidents)	Zero Mid Air Collision accident (baseline 2018)	2022	

Safety Indicator	Safety Target	Timeline	Links to GASP
Number of Near Mid Air Collision (serious incidents)	Regional average rate of Near Mid Air Collision (serious incidents per million departures) to be less than 0.1 All States to reduce the rate of Near Mid Air Collision (AIRPROX) within their airspace	2022	

Goal 2: Strengthen States' Safety Oversight Capabilities/Progressively Increase the USOAP-CMA EI Scores/Results

Safety Indicator	Safety Target	Timeline	Links to GASP
USOAP-CMA Effective Implementation (EI) results: a. Regional average EI b. Number of States with an overall EI over 60% c. Regional average EI by area d. Regional average EI by CE	a. Regional average EI to be above 70% b. 11 MID States to have at least 60% EI c. Regional average EI for each area to be above 70% d. Regional average EI for each CE to be above 70%	a. 2020-2022 b. 2020-2022 c. 2020-2022 d. 2020-2022	<i>Linked to Goal 2 and Target 2.1 of the GASP</i>
Number of Significant Safety Concerns (SSC)	a. No Significant Safety Concern (SSC) b. SSC, if identified, to be resolved as a matter of urgency, and in any case within 12 months from its identification	2016	

Goal 3: Ensure Appropriate Infrastructure is available to Support Safe Operations

Safety Indicator	Safety Target	Timeline	
Number of certified International Aerodrome as a percentage of all International Aerodromes in the MID Region	75% of the International Aerodromes certified (baseline 2017)	2020-2022	<i>Linked to Goal 6 and Target 6.1 of the GASP</i>
Number of established Runway Safety Team (RST) at MID International Aerodromes.	50% of the International Aerodromes having established a RST	2020-2022	

Goal 4: Expand the use of Industry Programmes

Safety Indicator	Safety Target	Timeline	Links to GASP
Use of the IATA Operational Safety Audit (IOSA), to complement safety oversight activities.	a. Maintain at least 60% of eligible MID airlines to be certified IATA-IOSA at all times.	a. N/A	<i>Linked to Goal 5 and Target 5.2 of the GASP</i>
	b. All MID States with an EI of at least 60% use the IATA Operational Safety Audit (IOSA) to complement their safety oversight activities (baseline 2018).	b. 2020-2022	
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 50% increase in ISAGO registration (baseline 2017).	2020-2022	
Coordinate the ACI Airport Excellence (APEX) in Safety programme	At least 1 ACI APEX in Safety to be conducted in 1 Airport of the Region per year	2021-2022	

Goal 5: Implementation of Effective SSPs and SMSs:

Safety Indicator	Safety Target	Timeline	Links to GASP
MID States to implement the foundation of an SSP			<i>Linked to Goal 3 and Target 3.1 of the GASP</i>
Number of States that have completed the SSP Gap Analysis on iSTARS	13 States	2020-2022	
Number of States that have developed an SSP implementation plan	13 States	2020-2022	
Regional Average SSP Foundation (in %)	70%	2020- 2022	
Number of States that have fully implemented the SSP Foundation	10 States	2020- 2022	
Number of States that have established Safety data collection and processing system (SDCPS)	12 States	2020-2022	
MID States to implement an effective SSP			<i>Linked to Goal 3 and Target 3.2 of the GASP</i>
Number of States that have implemented an effective SSP	7 States	2025	
Number of States that have established a process for acceptance of individual service providers' SMS	2 States	2020-2022	
Number of States that have published a national aviation safety plan	13 States	2025	
Number of States providing information on safety risks, including SSP SPIs, to the RASG-MID	7 States	2020-2022	
Establishment of a Regional mechanism for regional data collection, sharing and analysis	Regional Mechanism established (baseline 2018)	2022	

Goal 6: Increase Collaboration at the Regional Level to Enhance Safety:

Safety Indicator	Safety Target	Timeline	Links to GASP
Number of States attending the RASG-MID meetings	At least 12 States from the MID Region (baseline 2019)	2020-2022	<i>Linked to Goal 4 and Target 4.1 and 4.2 of the GASP</i>
Number of States providing required data related to accidents, serious incidents and incidents to the MID-ASRG	All States from the MID Region	2020-2022	
Number of States requiring and actively seeking assistance/support	All States having an EI below 60% to be member of the MENA RSOO	2020-2022	
Number of States that received assistance/support through the RASG-MID, MENA RSOO and/or other NCLB mechanisms	All States having an EI below 60% to have an approved NCLB Plan of Actions for safety (agreed upon with the ICAO MID Office) (baseline 2019) SEI or Technical Assistance Mission/Project implemented for each assistance need identified by the RASG-MID (baseline 2019)	2020-2022	
Number of States, having an EI below 60% in some areas, delegating certain safety oversight functions to the MENA RSOO or other State(s)	Percentage of States, having an EI below 60% in some areas, delegating certain safety oversight functions to the MENA RSOO or other State(s), to be at least 50%	2022	
Number of States that contribute to the implementation of SEIs and Technical Assistance Missions/Projects	7 States	2020-2022	
Percentage of SEIs implemented in accordance with the agreed timeframe	80% of the SEIs	N/A	

4. Governance

4.1 The MID Region Safety Strategy will guide the work of RASG-MID and all its member States and partners.

4.2 The RASG-MID will be the governing body responsible for the review and update of the Strategy, as deemed necessary.

4.3 Progress on the implementation of the MID Region Safety Strategy and the achievement of the agreed Safety Targets will be reported to the ICAO Air Navigation Commission (ANC), through the review of the RASG-MID reports; and to the stakeholders in the Region during the MID Region Safety Summits.

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
Organizational Challenges and Emerging Risks					
Goal 2: Strengthen States' Safety Oversight Capabilities					
G2-SEI-01:	Strengthening of States' Safety Oversight Capabilities	A1- Conduct Capacity Building Activities (Workshops, Training, Webinars, GSI Courses) to promote effective implementation of SARPs, with a focus on the following technical areas: ANS, AGA, and OPS	ICAO		2022
		A2- Conduct technical assistance and NCLB missions to States	ICAO		2022
		A3- Develop and implement a specific NCLB plan of actions	ICAO and concerned States		2022
G2-SEI-02:	Improve Regional Cooperation for the Provision of Accident & Incident Investigation	A1- Development and signature of the MOU among MENA ARCM States	ICAO, ACAO, and States (TBD)		2022
		A2- Conduct AIG Capacity Building Activities	ICAO and ACAO		2022
G2-SEI-03:	Sharing of Safety Recommendations related to Accidents and Serious Incidents	A1- Development of questionnaire to be circulated to MENA States on sharing safety recommendations on dedicated platform	ICAO, ACAO, and States (KSA & UAE)		2021

G2-SEI-04:	Enhance State Oversight on Dangerous Goods	A1- Dangerous Goods (DG)workshop for States ‘inspectors	ICAO and ACAO. Supported by FAA		2021
		A2- Develop guidance material to support States’ inspectors for the conduct of the oversight for DG	States (TBD)		2022
		A3- Develop guidance material and providing webinar on Lithium batteries	IATA		2022
G2-SEI-05:	Human factors and Competence of Personnel	A1- Advisory Circular: Crew Resource Management Training Programme (CRM). (Action addressed under G1-SEI-04:CFIT)	IATA		2022
		A2- Organize Crew Resource Management Training workshop to share experience and best practices on CRM practical implementation	ICAO and ACAO. Supported by IATA and KSA. KSA: presentation/case study to be delivered by a subject matter expert (HF Investigator). FAA to be confirmed		2022
		A3- Conduct workshop/webinar on fatigue risk management and mental Health best practices	IATA and ACAO. Supported by CANSO, IFALPA, Jordan, and KSA.		2022
		A4- Organize Team Resource Management Training workshop to share experience and best practices on TRM practical implementation	ICAO, ACAO, IATA, CANSO, FAA, and States (TBD)		2022

G2-SEI-06:	Impact of security on safety	A1- Circulate ICAO Doc 10084 Risk Assessment Manual for Civil Aircraft Operations Over or Near Conflict Zones	ICAO		2021
		A2- 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	ICAO and ACAO. Supported by IATA, CANSO, States (TBD)		2022
		A3- Encourage States to issue NOTAMs to share threats information emanated from conflict zones within their airspaces	ICAO		2021
Goal 3: Ensure the Appropriate Infrastructure is available to Support Safe Operations					
G3-SEI-01:	Certification of International Aerodromes	A1- Support States on the implementation of the ICAO Annex 14 requirements to achieve compliance with regards to Aerodrome Design and Operations, through Workshops/Training	ICAO and ACI. Supported by ACAO	Training course conducted on implementing Annex 14, during period of 8-12 Nov2020	2022
		A2- Enhance capacity building for States CAAs and Airport operators related to aerodromes certification through Workshops/Training	ICAO and ACI		2022
		A3- Develop guidance material on Apron Management	States (UAE and Egypt)		2021
		A4 – Deployment of iPack on Aerodrome Re-Start	ICAO		2021

G3-SEI-02:	Establish Runway Safety Team (RST) at International Aerodromes	A1- Conduct of assistance missions by the Runway Safety Go-Team (RST)	ICAO. Supported RSP (Runway Safety Programme Partners)		2022
		A2: Support States to implement the Global Reporting Format Methodology through workshops/trainings: (Action addressed under G1-SEI-02: Runway Excursion)	ICAO and ACI. Supported CANSO, IATA, FAA and Aircraft Manufactures	Webinar has been conducted on 27 Oct 20	2022
Goal 4: Expand the Use of Industry Programmes					
G4-SEI-01:	Promote the Use of industry Programmes	A1- Encourage IATA's IOSA and ISAGO registrations through safety promotion	IATA		2022
		A2- Encourage the implementation of ACI Airport Excellence (APEX) in Safety Programme	ICAO and ACI		2022
Goal 5: Implementation of Effective SSPs and SMSs					
G5-SEI-01:	Implement an effective Safety Management	A1- Conduct SSP training course in Cairo	ICAO		2021
		A2- Conduct SSP Workshop in coordination with ACAO in Casablanca, Morocco	ICAO and ACAO		2021
		A3- Provide SSP/SMS workshops for MID States personnel	ICAO. Supported by IATA, CANSO, ACI, and States (UAE)	SSP workshop conducted in Kuwait in March 20	2022
		A4- Develop guidance material on occurrence reporting for the CAA personnel on establishing an effective operation of the mandatory and voluntary reporting systems	States (UAE)		2022
		A5- Support and guide States in the development of NASPs through workshops and sharing of best practices	ICAO and States (UAE)		2022

		A6- Development of guidance for the processes and procedures for oversight of SMS	States (UAE)		2022
		A7- Deployment of the Aviation Safety Risk Management iPack	ICAO		2020
		A8- Conduct assistance missions by SMIT to support States with SSP implementation	SMIT. Egypt, Saudi Arabia, Qatar and UAE. Supported by CANSO and IATA		2022
Goal 6: Increase Collaboration at the Regional Level to Enhance Safety					
	To be developed in the future				
Regional Operational Safety Risks					
Goal 1: Achieve a continuous reduction in Operational Risks					
G1-SEI-01:	Aircraft upset in flight (LOC-I)	A1- Guidance material on flight crew proficiency	IATA and Aircraft manufacturers		2022
		A2- Advisory Circular: Mode Awareness and Energy State Management Aspects of Flight Deck Automation	IATA and Aircraft manufacturers. Supported by KSA		2022
		A3- Conduct Upset Recovery Workshop	ACAO, IATA, and ICAO. Supported by FAA to be confirmed. Host State to be confirmed	ICAO, KSA, and FAA UPRT Feb 20	2022
		A4- Develop guidance material on Ground Handling Service Provider Certification Process	IATA and KSA		2021
		A5- Conduct a Ground Handling workshop	ACAO and ICAO. Supported by IATA		2021

G1-SEI-02:	Runway Safety- Runway Excursion	A1- Support States to implement the Global Reporting Format (GRF) Methodology through Webinar/ Workshops/Training	ICAO and ACI. Supported by CANSO, IATA, FAA and Aircraft Manufactures		2021
		A2- Guidance material on un-Stabilized Approach	IATA. Supported by CANSO and IFALPA		2022
		A3- MID Region Action Plan/Milestones on the Global Reporting Format (GRF) Implementation	ICAO		2021
G1-SEI-03:	Runway Safety- Runway Incursion	A1- Support States to implement aerodrome inspection through workshops/trainings/Webinars	ICAO. Supported by FAA and UAE		2022
G1-SEI-4:	Controlled Flight into Terrain (CFIT)	A1- Advisory Circular: Guidance for Operators to Ensure Effectiveness of GPWS Equipment	IATA and Aircraft manufacturers		2022
		A2- Advisory Circular: Instrument Approach Procedures Using Continuous Descent Final Approach Techniques	IATA and Aircraft manufacturers		2022
		A3- Circulate ICAO Guidance Doc 10000 on Flight Data Analysis Programme (FDAP) to support States providing oversight to air operators	ICAO		2022
		A4- Advisory Circular: Crew Resource Management Training Programme (CRM)	IATA, Aircraft manufacturers		2022

G1-SEI-05A:	Loss of separation between civil and military aircraft”	A1- States and regional organizations to share occurrences and/or safety analysis/information related to Near Mid Air Collisions (NMACs) including to the “Loss of separation between civil and military aircraft” and ATM-SG to perform a technical analysis of the reported occurrences and and/or safety analysis/information and then come out with recommendations. The technical analysis of the reported occurrences and recommendations be shared with ASRG.	ICAO. Supported by IATA, CANSO, and States		2022
		A2: Guidance/raising awareness/ coordination related to the civil and military cooperation in particular over high seas	ACAO and ICAO. Supported by States		
G1-SEI-05B:	Ensure the Safe Operations of UAS (drones)	A1- Circulate ICAO developed guidance and advisory circulars: Regulatory framework for the operation of drones to support states’ CAA personnel in the implementation and oversight of UAS operations	ICAO		2021
		A2- Organize symposium on Drones related subjects	ICAO, ACAO. Supported FAA		2021
		A3- States and regional organizations to share occurrences and/or safety analysis/information involving drones to ASRG to perform a technical analysis of the reported occurrences and come out with recommendations.	ICAO, IATA, ACI, CANSO, and States (TBD)		2022

Appendix E:

SEIs identified in MID-RASP and recommended to States for inclusion in their NASPs as appropriate

SEI Code	SEI name
Organizational Challenges and Emerging Risks	
Goal 2: Strengthen States' Safety Oversight Capabilities	
G2-SEI-01:	Strengthening of States' Safety Oversight Capabilities
G2-SEI-04:	Enhance State Oversight on Dangerous Goods
G2-SEI-05:	Human factors and Competence of Personnel
G2-SEI-06:	Impact of security on safety
Goal 3: Ensure the Appropriate Infrastructure is available to Support Safe Operations	
G3-SEI-01:	Certification of International Aerodromes
G3-SEI-02:	Establish Runway Safety Team (RST) at International Aerodromes
Goal 5: Implementation of Effective SSPs and SMSs	
G5-SEI-01:	Implement an effective Safety Management
Regional Operational Safety Risks	
Goal 1: Achieve a continuous reduction in Operational Risks	
G1-SEI-01:	Aircraft upset in flight (LOC-I)
G1-SEI-02:	Runway Excursion (RE)
G1-SEI-03:	Runway Incursion (RI)
G1-SEI-04:	Controlled Flight Into Terrain (CFIT)
G1-SEI-05:	Airborne Conflict (Mid-Air Collisions)- Loss of separation between civil and military aircraft” and 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

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

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

-END-



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