EGYPTIAN CIVIL AVIATION AUTHORITY

NASP 2024 - 2025

National Aviation Safety Plan
Arab Republic of Egypt

Egypt works to enable aviation safety by implementing the Egyptian civil aviation policy, setting the strategic aviation safety objectives, and striving to the achievement of the objectives by following up the safety performance indicators (SPIs), setting the primary legislation and regulations, and implementing an effective system to monitor the performance of all providers of civil aviation activities in the country, and solving Related problems and enhancing safety culture.

As part of safety risk management, Egypt can identify and share safety priorities through oversight of several organizations operating within the Egyptian civil aviation sector. The primary goal is to identify risks in a timely manner and prioritize the actions required to mitigate these risks. In addition to learning from past experiences, safety risk management includes processes to identify future risks posed by the increasing complexity and continued growth in civil aviation activities, with new business models and emerging technologies, as well as regulatory challenges.

Furthermore, the National Aviation Safety Plan considers other initiatives that serve existing and future national plans such as the Air Navigation Plan (NANP) with attention to modernization, infrastructure and air traffic management systems - constructive cooperation with security programs and plans in preventing unlawful interference in civil aviation activities, as well as environmental aspects, and this requires a coordinated and collaborative approach involving various stakeholders to ensure that our plans take into account compliance with international standards and the needs of all parties.

Egypt is committed to enhancing civil aviation safety and to the resourcing of supporting activities. Starting with myself, I urge all national aviation stakeholders and organizations to foster, support and implement the NASP as the strategy for the continuous improvement of civil aviation safety in Egypt.

AMR ELSHARKAWY
President of Egyptian Civil Aviation Authority

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Section I
INTRODUCTION

1.1 Overview of the NASP

The National Aviation Safety Plan of EGYPT is built upon a proactive approach to managing the safety of civil aviation activities in EGYPT, to continually reduce fatalities, and the risk of fatalities, by guiding the development of a harmonized aviation safety strategy, specific safety enhancement initiatives (SEIs) and actions, to establish and maintain a safe, resilient and sustainable aviation system that is contributing to the economic development of EGYPT.

The main driver for the NASP of EGYPT is the International Civil Aviation Organization (ICAO) Global Aviation Safety Plan (GASP) and the MID-Regional Aviation Safety Plan (MID-RASP). The current GASP and MID-RASP are taking place from 2023 to 2025.

The NASP of EGYPT is addressing the periods 2024 and 2025 cycle, then it will be revised every 3 years on a regular basis to be in alignment with the ICAO GASP and MID-RASP cycles, or whenever it is deemed necessary for updates.

The Global Aviation Safety Plan is a high-level document containing the global safety strategy, and the Global Aviation Safety Roadmap contains detailed guidance for the development of an action plan, with specific safety enhancement initiatives (SEIs) and actions, for inclusion in regional and national aviation safety plans (RASPs and NASPs). The use of the global aviation safety roadmap, as the basis for regional and national safety action plans, enhances coordination, thus reducing inconsistencies and duplication of effort.

ICAO Annex 19 (Safety Management) and ICAO Document 9859 (Safety Management Manual) require States and organizations to implement a systematic approach to safety management. This approach is being implemented by Egypt through - coordinated selection of Safety Enhancement Initiatives (SEIs) and actions from the ICAO Global Aviation Safety Roadmap and the Middle East Regional Aviation Safety Plan, and those SEIs and actions developed by Egypt according to the needs; Striving to establish the State Safety Program (SSP); establishing the National Aviation Safety Plan (NASP); And the performance of national organizations working and contributing in the field of Egyptian civil aviation, through the implementation of the Safety Management System (SMS) in accordance with Egyptian civil aviation Regulations (ECAR Part 19) and the relevant Egyptian Advisory Circulars (EACs).

1.2 Structure of the NASP

The NASP presents the strategic direction for managing and enhancing aviation safety for the 2024 and 2025 cycle initially, then the NASP will be issued in a -3year cycle. The NASP comprises six sections as follows:

Section 1: Introduction.
Section 2: The purpose of the NASP.
Section 3: EGYPT's strategic direction for the management of aviation safety.
Section 4: The national operational safety risks.
Section 5: Organizational challenges addressed by the NASP.
Section 6: Monitoring implementation of the safety Enhancement Initiatives (SEIs) listed in the NASP.
APPENDIX A: Detailed SEIs - Operational Safety Risks, Risk Interdependences, and Emerging Risks.
APPENDIX B: Detailed SEIs - Organizational Challenges.
APPENDIX C: Definitions.
APPENDIX D: Abbreviations and Acronyms.

1.3 Relationship between the National Aviation Safety Plan (NASP) and the State Safety Program (SSP)

The NASP addresses operational safety risks presented in the ICAO GASP and MID-RASP, in addition to the national safety risks resulting from the Safety Data Collection and Processing System (SDCPS), which was recently activated in Egypt, the (SDCPS) will evolve over time to manage the whole profile of the national safety risks. Moreover, the initiatives listed in the NASP address organizational challenges and aim to enhance and strengthen organizational capabilities related to effective safety oversight.

The NASP establishes the national safety framework and direction, while the SSP operationalizes this framework by outlining specific safety management processes and actions to achieve the safety goals set at the national level. The relationship between the NASP and SSP is crucial for promoting a robust safety culture and ensuring the effective management of safety risks in the aviation industry at both the national and state levels.

1.4 Responsibilities for the NASP Development, Implementation and Monitoring

The Egyptian Civil Aviation Authority (ECAA) through the Safety Management System General Directorate (SMSGD) handles the development of the NASP.
The SSP Steering Committee handles the implementation of the NASP, through coordination and collaboration between ECAA, the SSP Safety Action Groups (OPS, PEL, AIR, AGA and ANS) and Egyptian Aircraft Accident Investigation Directorate (EAAID).

Monitoring and reviewing of the NASP will be through the SSP High-Level Safety Committee in-coordination and collaboration with the Ministry of Civil Aviation in EGYPT. The committee

is chaired by the Minister of Civil Aviation. The committee shall meet at least once a year in February, to review the progress of the previous cycle of the Safety Performance Indicators (SPIs) in achieving the goals and objectives, determine the ALOSP, setting and/or updating the goals and objectives if necessary. However, it is preferable that the committee meet twice per year in February and August or whenever deemed necessary depending on the situation.

The NASP has been developed in alignment with the (2023 to 2025) edition of the GASP and the MID-RASP, and in consultation with relevant national aviation organizations and operators as well as, other stakeholders.

1.5 Aviation safety issues, goals, and objectives
1.5.1 Global and national aviation safety issues
The NASP addresses the following global and national aviation safety issues:
Operational Safety Risks
1. Loss of Control - In Flight (LOC-I).
2. Runway Excursion (RE), Abnormal Runway Contact (ARC) including hard landing and tail strike.
3. Controlled Flight Into Terrain (CFIT).
4. Runway Incursion (RI).
5. Mid-Air Collision (MAC).
6. RAMP - Aircraft's ground damage while being serviced on ground.
7. Bird/Wildlife Strike (WS) on and in the vicinity of the Aerodrome.
8. Manned passenger-carrying balloon operations
9. Risk interdependencies:
    a) GNSS Interference/spoofing.
    b) Deployment of 5G network within EGYPT and its effect on aircraft radio altimeter.
    c) Lithium batteries fire on board.
    d) Aircraft operation over or near conflict zones.
    e) Unruly/Disruptive passenger.
    f) Impact of aviation health safety on human performance (AHS).
    g) Cyber security in the civil aviation field.
10. Emerging Risks:
    a) Civil Drones (UAS/RPAS).
    b) Digitalization and Artificial Intelligence (AI) in the civil aviation field.

Organizational challenges
1. State Safety Oversight Capabilities.
2. Safety Management.
3. Competence of personnel.
4. Collaboration and sharing of safety information.
5. Ensuring the proper infrastructure to support safe civil aviation operations.

1.5.2 National strategic objectives
In order to address the issues listed beforehand, and to enhance safety at the national level, the 2024 to 2025 NASP of EGYPT contains the National strategic objectives that are serving the goals and targets of ICAO GASP and MID-RASP, as follows:

NATIONAL OBJECTIVES	GOALS	TARGET
Maintaining high levels of Aviation Safety Standards and continuous reduction of aviation safety risks.	**Goal 1:** Achieve a continuous reduction of operational safety risks.	**Target 1.1:** Maintaining a decreasing trend of National accident rate.
	Goal 2: Strengthen safety oversight capabilities.	**Target 2.1:** Improving the score of effective implementations (EI) of the ICAO's Universal Safety Oversight Audit Program (USOAP) Critical Elements (CEs) of EGYPT's safety oversight system (with a focus on priority PQs), future improvement as follows: a) By 2024 > 2016 EI score. b) By 2026 > 2024 EI score. c) By 2030 > 2026 EI score.
	Goal 3: Implement an effective State Safety Program (SSP).	**Target 3.1:** Implementing the foundation of SSP in 2024. **Target 3.2:** Working towards an effective SSP as follows: a) by 2025 – Present b) by 2028 – Present and effective
Assuring Resilient, efficient and Sustainable Collaboration in Civil Aviation activities and safety data sharing.	**Goal 4:** Increase collaboration at the regional level.	**Target 4.1:** Achieving a positive safety oversight margin, and an effective SSP through active participation in ICAO iSTARS & USOAP-CMA (OLF), or if deemed necessary by seeking assistance from another State or MID-Regional office to strengthen the safety oversight capabilities or SSP implementation by the beginning of 4th quarter 2025. **Target 4.2:** Contributing to the MID- Regional Aviation Safety Group (MID- RASG) by 2024 in operational safety risks, including SSP safety performance indicators (SPIs), issues related to risk interdependencies and emerging risks.
	Goal 5: Expand the use of industry Programs & safety information sharing.	**Target 5.1:** Maintain an increasing trend in the industry's contribution to safety information-sharing networks to EGYPT and the MID-Region to assist in the development and update of the NASP and RASP in 2024 and on-going.
Ensuring sustainable infrastructure to support safe operations and protect the Environment.	**Goal 6:** Ensure the appropriate infrastructure is available to support safety operations.	**Target 6.1:** To maintain an increasing trend with air navigation and aerodrome infrastructure that meets relevant ICAO Standards by 2025

1.6 Operational context

The airspace of EGYPT is classified into Classes (A, B and D), there were (1,028,571) movements in EGYPT from 2020 until the end of 2023.

There are 23 aerodromes in EGYPT, including (7) international aerodromes.

There are 17 domestic approved Aviation Maintenance Organizations (AMOs) of which (15 combined AMO/AOC and 2 AMOs).

There are 16 national Air Operator Certificate holders (AOCs), conducting international Commercial Air Transport operations (CAT).

There are 2 Aviation Training Organizations (ATOs).

EGYPT also has (1) civilian helicopter operator. As well as General Aviation, air-taxi, balloon operators, and ground handling service providers.

1.7 EGYPT'S Aviation History in Brief

On January 26, 1930 – **Pilot Mohamed Sedqi**, the first Egyptian pilot, landed his plane at Heliopolis Airport in EGYPT, after a fifteen-day trip from Berlin to Cairo. 26th of January is the National Memorial for Egyptian Civil Aviation.

On May 7, 1932, **"Misr Airwork,"** the first Egyptian national airline, was officially established. It held the distinction of being the first airline in both the Middle East and Africa, as well as the seventh airline worldwide. Presently, it operates under the name "EGYPTAIR."

On June 2, 1932, **Almaza** Airport was the first Egyptian airport officially established.

On June 7, 1932, Misr Flying institute was established at Almaza Airport, It was the first flying institute for aviation training in the Middle East and Africa to train Egyptians and foreigners. It currently operates under the name "Egyptian Academy of Aviation Sciences"

Captain Pilot Kamal Alawi allocated his private plane to the institute, which carried the first Egyptian call sign

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In 1933, **Lotfia Elnadi** achieved a significant milestone by obtaining her pilot's license. She held the distinction of being the first female pilot in EGYPT, Middle East and Africa. Her achievement made headlines all over the world. This extraordinary woman's achievements paved the way for women in the whole Arab region to enter the world of aviation. Arab female pilots look up to Lotfia Elnadi until this day as an **Icon of gender equality**.

In 1935, the **first** Egyptian decree for air navigation was issued.

On April 22, 1945, the **Egyptian Civil Aviation Authority** was established by a decree and was given the responsibility of overseeing the management of Egyptian Civil Aviation Facilities. Since then, **ECAA** has been operational and performing its duties effectively.

Egypt has been a member of the Council of the International Civil Aviation Organization ICAO since its inception.

On March 13, 1947, **Egypt** had deposited **ratification** of adherence to the Chicago Convention.

In 1953, the **ICAO MID Office** was established in **Cairo, Egypt** which encompasses 15 member States.

Egypt holds a position as a member state among the 36 countries forming the ICAO Council.It occupies a seat in the "second category," which represents nations with significant contributions to the provision of civil aviation and air navigation facilities. The "first category" is reserved for countries engaged in aircraft manufacturing and aviation technology, while the distribution of seats in the "third category" is based on geographical regions.

Section II
PURPOSE OF THE NATIONAL AVIATION SAFETY PLAN (NASP)

The NASP is the master planning document that contains EGYPT's strategic direction for civil aviation safety management for the period 2025-2024 cycle. This plan lists national aviation safety issues, presents a series of Safety Enhancement Initiatives (SEIs) to address safety deficiencies, and to achieve the identified national safety objectives, goals and targets.

The NASP has been developed using the concept of (PDCA) continuous cycle: PLAN – DO – CHECK – ACT.

PLAN: Address the problem/issue, select/develop Safety Enhancement Initiatives (SEIs), develop the proper actions considering the resources required, define the implementation timeframe, responsibilities, and stakeholders.

DO: Implementation of the actions by the responsible entities within the specified timeframe as much as possible;

CHECK: Monitoring verification of achievement, through the specific performance metrics/ indicators; and

ACT: If it is drifting or not achieving the desired results, it is necessary to determine the root cause that led to this, and then develop and implement a corrective action plan to return to the desired path to achieve the desired results and goals and maintain this cycle for continuous improvement.

The NASP of EGYPT has been developed using safety goals, targets, and High-Risk Categories of occurrences (H-RCs) referenced in both the GASP and the MID-RASP. And SEIs that support the improvement of safety at the wider regional and international levels and include several actions to address specific safety risks and recommended SEIs. EGYPT has adapted the SEIs suitable to its needs and has included them in this plan to avoid duplication of efforts.

EGYPT'S STRATEGIC DIRECTION FOR THE MANAGEMENT OF AVIATION SAFETY

The NASP presents the SEIs that are developed based on the organizational challenges (ORG) and operational safety risks (OPS) roadmaps, as presented in the ICAO Global Aviation Safety Roadmap (Doc 10161), Region specific issues identified by MID-RASP in addition to the specific issues facing Egypt that were identified through the recently activated Safety Data Collection and Processing System (SDCPS). This plan is developed by the Safety Management System General Directorate (SMSGD) within the Egyptian Civil Aviation Authority (ECAA), in coordination and cooperation with the Egyptian Ministry of Civil Aviation and key aviation stakeholders.

The NASP includes the following national safety objectives, goals and targets, for the management of aviation safety in EGYPT, as well as a series of indicators to monitor the

OBJECTIVE 1: Maintaining high levels of Aviation Safety Standards and continuous reduction of aviation safety risks				
Goal 1: Achieve a continuous reduction of operational safety risk				
Target 1.1: Maintain a decreasing trend/number of national accidents/fatalities/serious incidents to be inline with the Global Average				
Concerning Issue	Serial of SEIs and/or indicator number	Indicator	Timeline	Relation to GASP and MID-RASP
Accidents and fatalities.	Ind.0A	Number of accidents	2024-2025	Linked to GASP and MID-RASP GOAL 1
	Ind.0B	Rate of accidents per 100,000 departures		
	Ind.0C	Number of Fatal accidents		
	Ind.0D	Fatalities per 10,000 passengers		
High-Risk Categories (H-RCs)				
Loss Of Control In Flight (LOC-I).	OBJ-1/G1/OPS/SEI-1/ Ind.1.1	Rate of accidents/serious incidents related to High-Risk Categories (H-RCs) LOC-I per 10,000 departures	2024-2025	Linked to GASP and MID-RASP GOAL 1
Runway Excursion (RE) and Abnormal Runway Contact (ARC).	OBJ-1/G1/OPS/SEI-2/ Ind.2.1	Rate of accidents/serious incidents related to High-Risk Categories (H-RCs) RE per 10,000 departures	2024-2025	
	OBJ-1/G1/OPS/SEI-2/ Ind.2.2	Rate of accidents/serious incidents related to High-Risk Categories (H-RCs) ARC per 10,000 departures	2024-2025	Linked to GASP and MID-RASP GOAL 1
Controlled Flight Into Terrain (CFIT).	OBJ-1/G1/OPS/SEI-3/ Ind.3.1	Rate of accidents/serious incidents related to High-Risk Categories (H-RCs) CFIT per 10,000 departures	2024-2025	
Runway Incursion (RI).	OBJ-1/G1/OPS/SEI-4/ Ind.4.1	Rate of accidents/serious incidents related to High-Risk Categories (H-RCs) RI per 10,000 departures	2024-2025	Linked to GASP and MID-RASP GOAL 1
Mid Air Collision (MAC).	OBJ-1/G1/OPS/SEI-5/ Ind.5.1	Rate of accidents/serious incidents related to High-Risk Categories (H-RCs) MAC per 10,000 departures.	2024-2025	

Concerning Issue	Serial of SEIs and/or indicator number	Indicator	Timeline	Relation to GASP and MID-RASP
RAMP ground damage to aircraft.	OBJ-1/G1/OPS/SEI-6/Ind.6.1	Rate of RAMP-Ground Handling related accidents/serious incidents per 10,000 departures.	2024-2025	National safety concern and linked to GASP and MID-RASP GOAL 1
Bird/Wildlife strike (WS).	OBJ-1/G1/OPS/SEI-7/Ind.7.1	Number of received reports per year concerning birds strikes within Cairo FIR	2024-2025	
	OBJ-1/G1/OPS/SEI-7/Ind.7.2	Rate of engine IFSD following bird strike per 10,000 departures within Cairo FIR	2024-2025	
Manned passenger carrying balloon operations.	OBJ-1/G1/OPS/SEI-8/Ind.8.1	Number of received reports per year concerning the safe conduct of balloon operations.	2024-2025	
Risk Interdependencies				
GNSS Interference/Spoofing.	OBJ-1/G1/OPS/SEI-9a/Ind.9a1.1	Rate of GNSS interference/jamming per 100,000 departures within Cairo FIR.	2024-2025	Linked to GASP and MID-RASP GOAL 1
	OBJ-1/G1/OPS/SEI-9a/Ind.9a1.2	Rate of GNSS spoofing per 100,000 departures within Cairo FIR.	2024-2025	
	OBJ-1/G1/OPS/SEI-9a/Ind.9a1.3	Rate of GNSS interference/jamming per 10,000 departures per airport within Cairo FIR.	2024-2025	
	OBJ-1/G1/OPS/SEI-9a/Ind.9a1.4	Rate of GNSS spoofing per 10,000 departures per airport within Cairo FIR	2024-2025	
Deployment of 5G network in EGYPT.	OBJ-1/G1/OPS/SEI-9b/Ind.9b1.2	Number of received reports of aircraft automation misbehavior per national airport.	2024-2025	Linked to GASP and MID-RASP GOAL 1
Lithium batteries fire on-board.	OBJ-1/G1/OPS/SEI-9c/Ind.9c1.1	Rate of received reports from national air-operators concerning lithium batteries fire on-board per 10,000 departures	2024-2025	Linked to GASP and MID-RASP GOAL 1

Concerning Issue	Serial of SEIs and/or indicator number	Indicator	Timeline	Relation to GASP and MID-RASP
Aircraft operation over or near conflict zone.	OBJ-1/G1/OPS/SEI-9d/ Ind.9d1.1	Number of received reports per year from national air-operators with negative impact on the safe conduct of a flight due to aircraft operation over or near conflict zone	2024-2025	Linked to GASP and MID-RASP GOAL 1
Unruly/ Disruptive passenger.	OBJ-1/G1/OPS/SEI-9e/ Ind9e1.1	Number of received reports per year from national air-operators of unruly/disruptive passenger.	2024-2025	Linked to GASP and MID-RASP GOAL 1
	OBJ-1/G1/OPS/SEI-9e/ Ind9e1.2	Rate of received reports from national air-operators of unruly/disruptive passenger per 10,000 departures	2024-2025	
Impact of aviation health safety on human performance – AHS.	OBJ-1/G1/OPS/SEI-9f / Ind.9f1.1	Number of promotion/ awareness workshops concerning Aviation Health carried out per year.	2024-2025	
cybersecurity in the civil aviation field.	OBJ-1/G1/OPS/SEI-9g / Ind.9g1.1	Number of national airlines conducting international operations, documented and implemented an effective cyber security program per year.	2024-2025	Linked to GASP and MID-RASP GOAL 1
Emerging Risks				
Civil drones' operation (UAS/ RPAS)	OBJ-1/G1/OPS/SEI-10a/ Ind.10a1.1	Number of received reports per year concerning observation of civil drones affecting the safe conduct of aircraft operation within Cairo FIR.	2024-2025	Linked to GASP and MID-RASP GOAL 1
Digitalization and (AI) in the civil aviation field.	OBJ-1/G1/OPS/SEI-10b/ Ind.10b1.1	Number of workshops/trainings provided in collaborations with (international organizations/ states) concerning (AI) in civil aviation field.	2025	

OBJECTIVE 1 Maintaining high levels of Aviation Safety Standards and continuous reduction of aviation safety risks				
Goal 2 Strengthen states' safety oversight and compliance				
Target 2.1 Improving EGYPT's score of Effective Implementations (EI) of the USOAP-CMA, and the 8 critical elements of Egypt's aviation safety oversight system (with an emphasis on priority protocol questions- PPQ) and future improvement as follows: A) **By the end of 2024 > 2016 EI score.** B) **By the end of 2026 > 2024 EI score.** C) **By the end of 2030 > 2026 EI score**				
Concerning Issue	Serial of SEIs and/or indicator number	Indicator	Timeline	Relation to GASP and MID-RASP
Consistent implementation of ICAO SARPs at the national level.	OBJ-1 /G2/ORG/SEI-11/ Ind.11.1	State Safety Index (Average overall EI score).	2024-2025	Linked to GASP and MID-RASP GOAL 2
	OBJ-1/G2/ORG/SEI-11/ Ind.11.2	EI score per Critical Element (CE).	2024-2025	
	OBJ-1/G2/ORG/SEI-11/ Ind.11.3	EI score per area.	2024-2025	Linked to GASP and MID-RASP GOAL 2
	OBJ-1/G2/ORG/SEI-11/ Ind.11.4	Average (EI) of (PPQs).	2024-2025	
	OBJ-1/G2/ORG/SEI-11/ Ind.11.5	Number of submitted (CAPs) by EGYPT (using OLF).	1st quarter 2025	
	OBJ-1/G2/ORG/SEI-11/ Ind.11.6	Percentage of completed (CAPs) (using OLF)	2025	Linked to GASP and MID-RASP GOAL 2
Qualified technical personnel to support effective	OBJ-1/G2/ORG/SEI-12/ Ind.12.1	EI (CE-4).	2024-2025	

OBJECTIVE 1				
Maintaining high levels of Aviation Safety Standards and continuous reduction of aviation safety risks				
Goal 3 **Implement an effective State Safety Program (SSP).**				
Target 3.1 **Implementing the foundation of SSP**				
Concerning Issue	**Serial of SEIs and/or indicator number**	**Indicator**	**Timeline**	**Relation to GASP and MID-RASP**
Start of SSP implementation at the national level.	OBJ-1/G3/ORG/SEI-13/ Ind.13.1	% of SMS implementation in each area at the national level.	2024	Linked to GASP and MID-RASP GOAL 3
Target 3.2 **Publish the National Aviation Safety Plan (NASP) in 2024**				
Start of SSP implementation at the national level	OBJ-1/G3/ORG/SEI-13/ Ind.13.4	Develop and publish the National Aviation Safety Plan (NASP).	3rd quarter 2024	Linked to GASP and MID-RASP GOAL 3
Target 3.3 **Working towards an effective SSP (by 2025 SSP present) and by (2028 SSP present and effective)**				
Strategic allocation of resources to start SSP implementation.	OBJ-1/G3/ORG/SEI-14/ Ind.14.1	Number of received assistance in SSP training/implementation from States/ICAO MID-office/ RSOO (if required).	2024-2025	Linked to GASP and MID-RASP GOAL 3
Availability of safety data and safety information to support safety management activities at the national level – step 1.	OBJ-1/G3/ORG/SEI-15/ Ind.15.1	% of national civil aviation organizations participating in ECAAs' Safety Data Collection and Processing System (SDCPS).	2025	

Concerning Issue	Serial of SEIs and/or indicator number	Indicator	Timeline	Relation to GASP and MID-RASP
Availability of safety data and safety information to support safety management activities at the national level – step 2.	OBJ-1/G3/ORG/SEI-16/ Ind.16.1	% of national civil aviation organizations sharing with ECAA the agreed upon SPIs	2024-2025	Linked to GASP and MID-RASP GOAL 3
Acquisition of resources to increase the proactive use of risk modeling capabilities.	OBJ-1/G3/ORG/SEI-17/ Ind.17.1	Number of SSP/SMS training and workshops conducted per year.	On-going process	Linked to GASP and MID-RASP GOAL 3
Strategic collaboration with key aviation stakeholders to support the proactive use of risk modeling capabilities.	OBJ-1/G3/ORG/SEI-18/ Ind.18.1	Number of conducted meetings by ECAA serving the SSP and NASP per year.	On-going process	
Advancement of safety risk management at the national level.	OBJ-1/G3/ORG/SEI-19/ Ind.19.1	% of applicable national aviation organizations implementing SMS per area per year.	On-going process	
	OBJ-1/G3/ORG/SEI-19/ Ind.19.2	Level of SSP implementation (present).	2025	

Objective 2 Assuring Resilient, efficient and Sustainable Collaboration in Civil Aviation activities and safety data sharing				
Goal 4 Increase collaboration at the regional level				
Target 4.1 Contributing on operational safety risks, including SSP safety performance indicators (SPIs), and emerging issues, through reporting to the ICAO MID-office.				
Concerning Issue	Serial of SEIs and/or indicator number	Indicator	Timeline	Relation to GASP and MID-RASP
Strategic collaboration with key aviation stakeholders to enhance safety in a coordinated manner.	OBJ-2/G4/ORG/SEI-20/Ind.20.1	Number of provided assistance to other States for the development of national regulations (CE2).	Upon request	Linked to GASP and MID-RASP GOAL 4
	OBJ-2/G4/ORG/SEI-20/Ind.20.2	• EI of CE-4	2024-2025	
	OBJ-2/G4/ORG/SEI-20/Ind.20.3	• Number of reports reported to ICAO-MID office upon request, on Operational Safety Risks and Emerging Issues.	Upon request	
	OBJ-2/G4/ORG/SEI-20/Ind.20.4	Number of assistances requested by EGYPT regarding safety oversight capability or SSP implementation. (*This indicator is to be applied only in case of necessity if Egypt is not expected to meet GASP Goals 2 and 3 by 4th quarter 2025*).	4th quarter 2025	Linked to GASP and MID-RASP GOAL 4
Strategic collaboration with key aviation stakeholders to start SSP implementation.	OBJ-2/G4/ORG/SEI-21/ind.21.1	Level of SSP implementation.	2025	
	OBJ-2/G4/ORG/SEI-21/ind.21.2	State Safety Index.	2024-2025	Linked to GASP and MID-
	OBJ-2/G4/ORG/SEI-21/ind.21.3	The number of SSP SPIs shared with ICAO-MID office.	2024-2025	

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Target 4.2
Achieving a positive safety oversight margin, and an effective SSP through active participation in ICAO iSTARS & USOAP-CMA (OLF), or if deemed necessary by seeking assistance from another State or MID-Regional office to strengthen the safety oversight capabilities or SSP implementation by the beginning of 4ᵗʰ quarter 2025.

Concerning Issue	Serial of SEIs and/or indicator number	Indicator	Timeline	Relation to GASP and MID-RASP
Strategic collaboration with key aviation stakeholders to enhance safety in a coordinated manner.	OBJ-2/G4/ORG/SEI-20/Ind.20.4	Number of assistances requested by EGYPT regarding safety oversight capability or SSP implementation. (*This indicator is to be applied only in case of necessity, if Egypt is not expected to meet GASP Goals 2 and 3*).	4ᵗʰ quarter 2025	Linked to GASP and MID-RASP GOAL 4

Objective 2
Assuring Resilient, efficient and Sustainable Collaboration in Civil Aviation activities and safety data sharing

Goal 5
Expand the use of industry programs and safety information sharing

Target 5.1
Maintain an increasing trend in industry's contribution to safety information-sharing networks to EGYPT and the region to assist in the development and update of NASP and RASP by 2025

Concerning Issue	Serial of SEIs and/or indicator number	Indicator	Timeline	Relation to GASP and MID-RASP
Harmonization in safety data sharing and participation in recognized aviation industry assessment programs.	OBJ-2/G5/ORG/SEI-22/Ind.22.1	Maintaining a positive reporting trend of safety information by national aviation organizations.	On-going process	Linked to GASP and MID-RASP GOAL 5
	OBJ-2/G5/ORG/SEI-22/Ind.22.2	% of national aviation organizations per area contributing to the Egyptian Civil Aviation Authority SDCPS.	On-going process	
	OBJ-2/G5/ORG/SEI-22/Ind.22.3	Number of notional (AOC holders and service providers) contributing to safety information sharing networks (IATA "IDX, FDX, etc…	2024-2025	

Target 5.2 Expand the use of industry programs (IOSA & ISAGO)				
Harmonization in safety data sharing and participation in recognized aviation industry assessment programs.	OBJ-2/G5/ORG/SEI-22/Ind.22.4	Number of IOSA registered national air-operators.	2024-2025	Linked to GASP and MID-RASP GOAL 5
	OBJ-2/G5/ORG/SEI-22/Ind.22.5	Number of ISAGO registered national ground service provider.	2024-2025	

Objective 3
Ensuring sustainable infrastructure to support safe operations and protect the Environment.

Goal 6
Ensure the appropriate infrastructure is available to support safety operations.

Target 6.1
To maintain an increasing trend with air navigation and aerodrome infrastructure that meets relevant ICAO Standards by 2025.

Concerning Issue	Serial of SEIs and/or indicator number	Indicator	Timeline	Relation to GASP and MID-RASP
Implement the air navigation and airport core infrastructure and improve the EI percentage.	OBJ-3/G6/ORG/SEI-23/Ind.23.1	EI of ANS area	2024-2025	Linked to GASP and MID-RASP GOAL 6
	OBJ-3/G6/ORG/SEI-23/Ind.23.2	EI of AGA area	2024-2025	
	OBJ-3/G6/ORG/SEI-23/Ind.23.3	Number of certified international aerodromes.	2024-2025	
	OBJ-3/G6/ORG/SEI-23/Ind.23.4	Number of established runway safety teams.	2024-2025	Linked to GASP and MID-RASP GOAL 6
	OBJ-3/G6/ORG/SEI-23/Ind.23.5	% of implementation of GRF plan.	2024-2025	
	OBJ-3/G6/ORG/SEI-23/Ind.23.6	% of implemented infrastructure-related PQs linked to the Basic Building Blocks (BBB).	2025	

The SEIs included in the NASP are implemented by utilizing EGYPT's existing safety oversight capabilities through the Egyptian Civil Aviation Authority (ECAA) and the service providers' SMS. SEIs derived from the ICAO global aviation safety roadmap were identified to achieve the national safety goals and targets presented in the NASP. Some of the national SEIs are linked to overarching SEIs at the regional and international levels and help to enhance safety globally. The full list of the SEIs addressing the operational risks and risk interdependencies is presented in Appendix A to the NASP.

The NASP also addresses emerging issues. Emerging issues include concepts of operations, technologies, public policies, business models or ideas that might impact safety in the future, for which the existing data is insufficient to complete typical data-driven analysis. It is important that EGYPT remains vigilant on emerging issues to identify potential safety risks, collect relevant data and proactively develop mitigations to address them. The identified emerging risks are as follows:

a) Civil Drones (UAS/RPAS).
b) Digitalization and Artificial Intelligence (AI) in the civil aviation field.

Section IV

NATIONAL OPERATIONAL SAFETY RISKS

The NASP includes SEIs that address national operational safety risks, derived from lessons learned from operational occurrences and a data-driven approach using the newly developed Safety Data Collection and Processing System (SDCPS). As well as SEIs driven from the ICAO GASP and MID-RASP. These SEIs may include actions such as rule making, policy development, targeted safety oversight activities, safety data analysis, and safety promotion.

The Egyptian Aircraft Accident Investigation Directorate – EAAID publishes an Annual Safety Report, available on the Egyptian Ministry of Civil Aviation website, Includes a summary of accidents and serious incidents that occurred in EGYPT, as shown in the tables below.

Commercial air transport occurrences in EGYPT			
YEAR	Fatal accidents	Non-fatal accidents	Serious incidents
2020	None	1	1
2021	None	None	2
2022	None	None	None
2023	None	None	None

The aviation occurrence categories developed by the CAST/ICAO Common Taxonomy Team (CICTT) were utilized to assess risk categories in the process of determining national operational safety risks. Common taxonomies and definitions establish a standard industry language thereby improving the quality of information and communication. With this common language, the aviation community's capacity to focus on common safety issues is greatly enhanced. The CICTT Taxonomy is found on the ICAO website.

EGYPT is addressing the main H-RCs identified at the global and regional levels, which are (LOC-I, RE/ARC, CFIT, RI, MAC), in-addition to what we have identified at the national level, based on the data we have collected (RAMP, Bird/wildlife strikes, manned passenger carrying balloon operations). As well as those identified as risk interdependencies which may affect the safe operations and may lead to any of the main identified H-RCs (GNSS jamming/spoofing, deployment of 5G network in EGYPT, lithium batteries fire on-board, aircraft operation over or near conflict zones, unruly/disruptive passenger, Impact of aviation health safety on human performance (AHS), and cybersecurity). Moreover, we are addressing the emerging risks (Civil Drones (UAS/RAPS), and Digitalization and Artificial Intelligence (AI) in the aviation field).

In order to address the national operational safety risks, ECAA identified the following contributing factors including (Global, Regional and National) points of view, leading to High-Risk Category events (H-RCs). Some of the Safety Enhancement Initiatives-SEIs are derived from the ICAO OPS roadmap (Doc. 10161), contained in the GASP and MID-RASP, other SEIs are developed at the national level in a manner that allows EGYPT to participate in reducing the occurrences and accidents globally. For the full list of the Safety Enhancement Initiatives and actions refer to Appendices A of the NASP.

1. **Loss of Control - In Flight (LOC-I)**
LOC-I refers to accidents in which the flight crew was unable to maintain control of the aircraft in flight, resulting in an unrecoverable deviation from the intended flight path.
It is one of the most complex accident categories, involving many contributing factors that act individually or, more often, in combination.
It is a relatively rare event, but globally it has the highest proportion of fatal accidents, that's why the Prevention of loss of control is a Global strategic priority.

The following are some globally identified precursors/contributing factors:

- Environmental factors:
    - Operating in adverse meteorological conditions, operating in Icing conditions, Turbulence encountered (wake turbulence, CAT, wind shear),
    - Bird/wildlife strikes.
    - Operations near volcanic ash

- Organizational factors:
    - Inadequate pre-flight planning.
    - Inadequate pilot training requirements relating to engine malfunction and up-set recovery.
    - Absence of CRM/TEM training.
    - Inadequate training related to proper loading of aircraft by ground personnel.
    - Insufficient Quality Assurance/ Quality Management System (QMS) within the organizations especially in the field of periodic checks of load sheets.
    - Insufficient birds/wildlife control program in airports.

- Equipment failures: Engine failure, autopilot and auto flight system failure, Pitot tube blockage, configuration asymmetry, flight control or flight control computer malfunction, fight instruments loss or malfunction.

- Human factors:
    - Inadequate monitoring, cross-checking and leadership behaviour.
    - Late or lack of decision-making.
    - Incorrect response to the scenario faced, which puts the aircraft in a position that is either at the limits of »recoverable« or »beyond« recovery.
    - SOP non-compliance by (pilots) and (baggage handling personnel, passengers handling personnel while preparing load and trim sheet).

- On-board fire:
    - Lithium batteries fire.
    - Lavatory fire.
    - Galley oven smoke/fire.

2. **Runway Excursion (RE), and Abnormal Runway Contact (ARC)**
   - **Runway Excursion (RE)**

A runway excursion is defined as a veer off or overrun off the runway surface, it occurs when an aircraft departs the runway in use during the takeoff or landing roll. The excursion may be intentional (for example: in a manner to avoid collision with another aircraft or vehicle entered the active runway by mistake) or unintentional.

Types of Runway Excursion:
A departing aircraft fails to (become airborne or successfully reject the takeoff) before reaching the end of the designated runway.
A landing aircraft is unable to stop before the end of the designated runway is reached.
An aircraft taking off, rejecting takeoff or landing departs the side of the designated runway.

The following are some globally identified precursors/contributing factors:
- Environmental factors: operation in adverse meteorological conditions, wind shear, contaminated runway, and crosswind/tailwind landing.
- Organizational factors:
    - Inadequate pre-flight planning (for example – assigning an aircraft with an inoperative braking unit to a destination with adverse weather conditions).
    - Inadequate pilot training requirements related to (takeoff / landing performance calculations / long flare or deep landing leading to landing beyond the touchdown zone / runway markings and lighting knowledge),
    - Inadequate internal Quality Assurance activities concerning SOPs non-compliance for (unstabilized approach and continue to land/ long flare and touchdown/high across threshold/hard landing) and inefficient remedial actions.
    - Inadequate usage of Global Reporting Format (GRF) for runway assessment and condition reporting.
    - Lack of runway markings/lighting.
    - Air operators not adapting A/C manufacturers' modern technologies.
    - Airport operators not adapting modern technologies.

- Equipment failures: Engine failure, braking asymmetry and braking deficiency, on-ground steering problems, and flight controls/spoilers malfunction.

- Human factors:
  - Inadequate monitoring/cross-checking and leadership behaviour.
  - Late or lack of decision-making.
  - Incorrect response to the scenario faced.
  - SOP non-compliance.
  - Complacency.
  - Omitting reporting/requesting Global Reporting Format (GRF) for runway assessment and condition reporting.

- **Abnormal Runway Contact (ARC)**

ARC is defined as any landing or takeoff involving abnormal runway or landing surface contact, including:
- Hard/heavy landings.
- Nose wheel's first touchdown.
- Tail strikes.
- Wingtip/nacelle strikes.
- Gear-up landings
- Off-centre landings
- Long/fast landings

The following are some globally identified precursors/contributing factors:
- Environmental factors: operation in severe weather such as wind shear.
- Organizational factors:
  - Inadequate SOPs,
  - Inadequate crew training and absence of CRM/TEM training.
  - Inadequate pilot training requirements related to landing techniques in different situations.
  - Inadequate crew pairing process.
  - Inadequate aircraft maintenance inspections.

- Equipment failure: flight control problems, HYD failure,
- Human factor:
  - SOPs non-compliance.
  - Incorrect crew response to EGPWS/GPWS sink rate alert.
  - Inadequate monitoring, cross-checking and leadership behaviour.

3. **Controlled Flight Into Terrain (CFIT)**

Is defined as when an aircraft collides during flight with a terrain, water, or an obstacle without indication of loss of control.
The Ground Proximity Warning System (GPWS) is the system which provides warnings to pilots when the aircraft is in potentially hazardous proximity to terrain. This system was introduced in the 1970s to reduce the high number of Controlled Flight into Terrain (CFIT) accidents and incidents. The functionality of GPWS was limited. To overcome the limitations of GPWS, a modern technology named Enhanced Ground Proximity Warning System (EGWPS), also known as Terrain Awareness and Warning System (TAWS), was introduced, which combines a worldwide digital terrain database with an accurate navigation system, ideally using the Global Positioning System (GPS), EGPWS or TAWS, provides a warning in advance of steeply rising ground, and extends the warning area to the runway threshold, overcoming the limitations of GPWS.

EGPWS is not a solution for stopping CFIT accidents, but it can help interrupt a flight path which is likely to lead to an accident. EGPWS or TAWS,

The following are some globally identified precursors/contributing factors:

- Environmental factors: weather conditions including poor visibility and flying into instrument meteorological conditions (IMC)
- Organizational factor:
    - Deficient database update procedures,
    - Absent or deficient flight operations SOPs and checking,
    - Inadequate crew training and absence of CRM/TEM training,
    - Uncleared Minimum Equipment List (MEL) requirements.

- Equipment failure: EGPWS/TAWS software and terrain database out of date, GNSS/GPS interference/jamming.
- Human factor:
    - Loss of situational awareness "descending below Minimum Safe Altitude (MSA) and/ or Minimum Radar Vectoring Altitude (MRVA)".
    - Incorrect altimeter setting error - barometric Baro VNAV approaches.
    - Inadequate monitoring/cross-checking and leadership behaviour.

4. **Runway Incursion (RI)**
A Runway Incursion is defined as any occurrence at an aerodrome involving the incorrect presence of an aircraft, vehicle or person on the protected area of a surface designated for landing and takeoff of aircraft.

The following are some globally identified precursors/contributing factors:

- Environmental factors: Low visibility.

- Organizational factor:
    - Inadequate pilot training requirements related to (taxiway/runway) markings/signage and lighting.
    - Inappropriate Use of ICAO Standard Phraseology.
    - Inadequate/missing SOPs.
    - Inadequate crew training and absence of CRM/TEM training.
    - Lack of or inefficient inspections of taxiway/runway.
    - Unavailability of (red) stop bars.
    - Undeclared hot spots on the airport diagram.
    - Unclear/misleading airport diagram.
    - Inadequate ground personnel training on ramp safety.
    - Inadequate process for AIP updates.
    - Air operators not adapting A/C manufacturers' new technologies.
    - Airport operators not adapting new technologies.

- Equipment failure: Inoperable (red) stop bars/runway lighting, defective runway signage, inoperative aircraft lights, and aircraft braking/HYD failure.

- Human factor:
  - Loss of situational awareness.
  - Inadequate monitoring, cross-checking and leadership behaviour.
  - SOPs non-compliance.

5. **Mid Air Collision (MAC)**
Is defined as loss of separation as well as near collisions or collisions between aircraft in flight, it includes:
- All aircraft collisions occur when both aircrafts are already airborne.
- Both air traffic control and cockpit crew separation-related occurrences.

TCAS/ACAS technology development aids a lot in reducing the risk of collision, but the occurrences still happen worldwide.

The following are some globally identified precursors/contributing factors:
- Environmental factors: operation near severe weather.
- Organizational factor:
  - Inadequate pre-flight planning, and inadequate civil and military traffic coordination at the same airport/flying into or near conflict zone.
  - Inadequate pilot training requirements related to TCAS/ACAS.
  - Inadequate SOPs.
  - Inadequate crew training and absence of CRM/TEM training.
  - Unclear Minimum Equipment List (MEL) requirements.
  - Not adopting modern technologies by (air operators for aircraft equipment/systems) and by ATC infrastructure.

- Equipment failure: TCAS/ACAS Failure, ATC Alerting equipment failure.
- Human factor:
  - Incorrect crew response to TCAS/ ACAS.
  - SOPs non-compliance.
  - Altimeter error.
  - Inadequate monitoring, cross-checking and leadership behaviour.
  - Loss of situational awareness.

6. **RAMP – Aircraft's ground damage while being serviced on ground**

RAMP- is defined as occurrences during, or as a result of ground handling operations at aerodromes, heliports, heli decks, and unprepared operating sites including parking areas (ramp, gate, tie downs), it includes the following collisions and occurrences:
- Collisions that occur while servicing, boarding, loading, and deplaning the aircraft also during boarding and disembarking while the helicopter is hovering.
- Pushback / towing events.
- Aircraft external preflight configuration errors (examples: improper loading and improperly secured doors and latches) that lead to subsequent events.

The following are some globally identified precursors/contributing factors:

- Environmental factors:
    - Operation in poor visibility.
    - Slippery aprons and inefficient drainage.

- Organizational factors:
    - Inadequate ground personnel training related to proper airside ramp safety.
    - Inadequate SOPs.
    - Insufficient Quality Assurance within the organizations and/or oversight activities by the regulator.
    - Absence of inspections and checking of ground equipment serviceability before dispatch.
    - Inefficient follow-me personnel rules and responsibilities.
    - Inadequate selection of newly hired ground personnel.
    - Ground handling organizations not adapting ground equipment new technologies.

- Human factors:
    - SOPs non-compliance.
    - Inadequate monitoring and supervision.
    - Inefficient shift handover.

7. **Bird/Wildlife Strike (WS) on and in the vicinity of the Aerodrome**

A bird strike is defined as a collision between a bird and an aircraft which is in flight or on a takeoff or landing roll. The term is often expanded to cover other strikes with bats or ground animals.

The following are some globally identified precursors/contributing factors:

- Environmental factors:
    - Habitat features, including open areas of grass and water as well as shrubs and trees, provide food and roosting sites for birds. Even transient water accumulation on uneven pavements can be a significant bird attractant.
    - Landfill and other waste disposal sites often attract large numbers of birds if they are not carefully managed.
    - Migrating birds often follow well-defined flight paths in considerable numbers. This can create a hazard if the flight paths are near an airport.
    - Airports in coastal locations often have a much higher level of unmanaged bird activity than do inland airports.

- Organizational factors:
    - Insufficient birds/wildlife control programme in Aerodrome.
    - Violation of regulations governing activities and areas around/near the airports while lack of oversight and enforcement.
    - Lack of study on migratory bird seasons, species, flight routes and altitude.
    - Lack of study on wildlife habitat management near aerodromes.
    - Lack of SOPs for pilots.

8. **Manned passenger-carrying balloon operations**

Manned passenger-carrying balloon accidents are relatively rare, however, when they do occur, they are likely to result in fatalities or serious injuries. As we work together as a community to fly safely and prevent accidents, it is important to understand where to focus our efforts.

The following are some globally identified precursors/contributing factors:

- Lack of or poor regulations and guidelines in safe balloon operations and training.

- Poor safety culture, violations and non-compliance.

- Obstacle collision in flight, mainly power line collision

- Balloon landings.

- Poor maintenance.

9. **Risk Interdependence**

a) **GNSS Interference/spoofing**

Satellite navigation signals are weak and can easily be compromised by a range of growing threats, including intentional or unintentional signal interference, jamming, spoofing, and/or manipulating position and timing information. The effects of such threats vary greatly. Satellite signal jamming and spoofing can have a serious impact on the accuracy of navigation systems and, in some cases, result in unusual system behaviour.
Recently, the region has experienced an increasing number of GNSS interference and spoofing occurrences. Because of its importance and effects on the safety of aviation, this kind of risk has been upgraded from emerging to operational risk.

GNSS interference/spoofing may result in aircraft navigation and surveillance performance degradation. Consequently, it may lead to the following scenarios:
- Mid Air Collision (MAC) – inability to maintain the required separation.
- Controlled Flight Into Terrain (CFIT) – close proximity to high terrain.
- Runway Excursion (RE) – loss of runway overrun prevention system (if installed).

b) **Deployment of 5G network within EGYPT and its effect on aircraft radio altimeter.**

Radio altimeters are critical sensors used to enable and enhance several different safety and navigation functions throughout all phases of flight on all commercial aircraft and a wide range of other aircraft.

The radio altimeter operates in the frequency band 4.2 - 4.4 GHz. It is a mandated critical aircraft safety system used to determine an aircraft's height above terrain and obstacles. Its information is essential to enable safety-related aircraft flight operations and navigation functions. Such functions and systems include terrain awareness, aircraft collision avoidance, wind shear detection, flight controls, and functions to automatically land an aircraft. If not properly mitigated, harmful interference to the function of the radio altimeter during any phase of flight may pose a serious safety risk to passengers, crew and people on the ground.

Radio altimeters will not operate as required if new cellular broadband technologies (5G) are deployed in frequency bands close to the radio altimeter's frequencies of operation (4.2 - 4.4 GHz). There are a variety of temporary technical, regulatory, and operational mitigations on new 5G systems to protect aircraft radio altimeters, including runway safety zones where no antenna installation is allowed and performance buffer zones, while the aviation industry is working on long-term solutions to update and retrofit altimeters in order to ensure compatibility between cellular broadband technologies (5G) and aviation systems.

c) **Lithium batteries fire on-board**

Lithium batteries power the lives of millions of people each day. From laptops and cell phones to hybrids and electric cars, as well as electrified aviation and hybrid-electric aircraft in the market. This technology is growing in popularity due to its lightweight, high-energy density, ability to recharge and long lifespans.

As identified globally, lithium batteries cause an increasing number of Fire or smoke in or on the aircraft, in flight or on the ground, taking into consideration the following:

- **Overhead compartment fire.** The source of these fires is often to be found in passengers' hand luggage, e.g. Lithium batteries in Personal Electronic Devices (PEDs).
- **Passenger PED Fire.** PEDs are more likely to be a source of fire when in use or being charged than when in an overhead locker, or due to crushed PED by the moving seat mechanism when PED is dropped in the seat by a passenger.
- **Cargo compartment fire.** The source of these fires is often checked baggage or cargo containing lithium batteries that accidentally had a thermal runaway and caught fire with other loaded cargo or baggage. Although, the design standards of lower deck cargo compartments were revised globally across the air transport industry, with Class C type compartments and cargo compartment panel fireproofing improvements being mandated and equipping the commercial fleet with key features, such as:
  a. Air-tight & fire-proof cargo holds.
  b. Cargo fire detection systems.
  c. Cargo fire suppression systems.
  These three features are all necessary and must all work together in order to ensure that the aircraft and its occupants are protected from a cargo fire. Also, freighter aircraft and the main deck cargo compartment which is a Class E mostly, must be taken into consideration.

The following are some globally identified precursors/contributing factors:

- Lack of procedures and policies concerning all kinds of cargo potential risks.
- Insufficient capability of the operator and unidentified supply chain.
- Lack of training and competency of crewmembers in DGR.
- Lack of dangerous goods training provided to employees responsible for accepting and handling cargo and mail.
- Missing signage at cargo acceptance areas giving information about the transport of dangerous goods to alert shippers/agents.
- Lack of dangerous goods training for employees responsible for passenger check-in and passenger boarding.

- Missing signage at passenger check-in and boarding areas to alert passengers about dangerous goods that may be contained in their baggage.
- Incorrect application of the procedure in cabin firefighting related to lithium battery fire.
- Ineffective communication between cabin crew and flight crew members in case of cabin fire.

d) **Aircraft operations over or near conflict zones.**

This topic is of utmost importance due to the increased tension in the region. The responsibility for deciding whether a civil aircraft should be flown over or near conflict zones lies with the concerned parties, including the State(s), the regional civil aviation authority or authorities (if applicable) where the conflict zone is located and their ANSPs, the State of the Operator, the aircraft operator, and other relevant stakeholders.

The State of the Operator holds responsibility for ensuring that aircraft operators registered to their State conduct a risk assessment, and that appropriate risk mitigation measures are taken when intending to operate over or near conflict zones. In planning the conduct of operations through areas of armed conflict, or with the potential for armed conflict, operators should give due regard, but not be limited to:

- Any additional fuel required for in-flight diversion out of the conflict area;
- Any deferred item in accordance with the Minimum Equipment list (MEL), if applicable, for takeoff and departure from the conflict zone.
- Consideration of emergency and non-normal procedures, such as depressurization and engine failure;
- Alternate communication and navigation methodologies to account for the potential of conflict-associated jamming or electric interference that disrupts normal aircraft communications and navigation;
- Availability and serviceability of aircraft equipment required to facilitate identification of the aircraft by military units;
- Use of procedures and means to ensure that the pertinent authorities are advised of the flight plan; and
- Ensuring monitoring of the appropriate frequencies.

The Egyptian Civil Aviation Authority (ECAA) takes several actions to ensure the safety of aircraft operations over or near conflict zones, minimizing risks to passengers, crew, and aviation personnel.

e) **Unruly/Disruptive passenger**

A disruptive passenger is a passenger who fails to respect the rules of conduct at an airport or on board an aircraft, or to follow the instructions of the airport staff or crew members and thereby disturbs the good order and discipline at an airport or on board the aircraft.

Unruly passenger behaviour is one of the biggest issues identified globally, this problem grows/increases from year to year. There are different reasons for this: alcohol and drug intoxication, mental illness, fear of flying, stress due to flight delays and strict security check/screening, long flights, smoking bans, crowded conditions, loud passengers or crying babies and so on.

Unruly and disruptive conduct on board aircraft undermines good order and discipline and may pose a threat to the safety and security of the aircraft as well as its crew and passengers. Moreover, it may bring about costly disruption to air travel when aircraft is diverted to disembark unruly/disruptive passenger.

The following are some globally identified precursors/contributing factors:

- Lack of legal aspects of unruly/disruptive passengers.
- Lack of passenger awareness of the unacceptability and possible legal consequences of unruly or disruptive behaviour in aviation facilities and onboard aircraft.
- Lack of or poor training of aviation personnel to identify and manage unruly passenger situations.

The following is a non-exhaustive list of examples of "unruly/disruptive" behaviours on board:

- Illegal consumption of narcotics;
- Sexual abuse/harassment;
- Verbal confrontation with crew members or other passengers;
- Physical confrontation with crew members or other passengers;
- Refusal to comply with safety instructions; (examples include not following Cabin Crew requests, e.g., instructions to fasten a seat belt, not to smoke, turn off a portable electronic device or disrupt the safety announcements)
- Uncooperative passenger (examples include interfering with the crew's duties, refusing to follow instructions to board or leave the aircraft);
- Making threats (includes all types of threats, whether directed against a person, e.g., the threat to injure someone, or intended to cause confusion and chaos, such as statements referring to a bomb threat, or simply any threatening behaviour that could affect the safety of the crew, passengers and aircraft); and
- Other types of riotous behaviour. (examples include: screaming, annoying behaviour, kicking and banging heads on seat backs/tray tables)

f) **Impact of aviation health safety on human performance (AHS)**

Aviation Health Safety (AHS) and well-being are deeply interconnected with human factors and human performance. This relationship is vital for ensuring the continuity of safe and efficient operations, as well as the preparedness within the civil aviation sector for any public health emergency.

Human factors play a critical role in aviation safety by considering how individuals interact with the aviation environment, equipment, procedures, and other people while performing their tasks.

Human performance is key to ensuring safety and efficiency within the aviation industry. Factors such as workload, stress, fatigue, and situational awareness all impact how individuals perform their roles. Addressing these human performance factors, could enhance operational safety and reduce the likelihood of accidents or incidents.

Additionally, preparedness for public health emergencies, such as outbreaks of infectious diseases,

is essential in the aviation industry to prevent the spread of illnesses among passengers and crew members

The most recent public health emergency of international concern is the pandemic of COVID-19 as declared by the World Health Organization (WHO). The pandemic of COVID-19 dramatically affected the state of well-being of all concerned personnel in the aviation sector and travelers all over the world. Thus, it is of utmost importance to address the well-being and preparedness to help ensure that the response to the next public health emergency is prompt and appropriate, to reduce the likelihood of inappropriate reactions to the situation and minimize the negative effects on human performance, and to promote a prompt return to normal operations when the threat to health has passed. This includes having protocols in place for identifying and managing potential health risks, as well as ensuring that proper measures are taken to protect the health and safety of everyone on board.

Aviation Medicine is a medical speciality which combines aspects of preventive, occupational, environmental, and clinical medicine with the physiology and psychology of people in flight. It is concerned with the health and safety of those who fly, both crew and passengers.

The World Health Organization (WHO) defines well-being as "a state of complete physical, mental and social well-being, and not merely the absence of disease or infirmity"

The overall well-being is affected by the "Bio-psycho-social" model of Health, as follows:

1) Biological
   - Sleep
   - Exercise
   - Diet
2) Psychological
   - Personal reflection
   - Meditation
   - Attitude to life
   - Stress management
   - Coping techniques
3) Social
   - Increased social support
   - Decreased social pressure
   - Support network

By addressing these factors – well-being, integrating human factors principles, optimizing human performance, and enhancing preparedness for public health emergencies. The aviation sector in EGYPT can create a safer and more resilient environment for all individuals involved in air travel.

g) **Cyber Security**

The world has been witnessing a steady increase in cyber-attacks against all sectors. Aviation has been no exception, being characterized by its extensive interconnectivity and complexity, its high level of media exposure, and its critical role in the socio-economic development of States.

The Aviation Cyber Security Strategy underpins ICAO's cyber security vision for the global civil aviation sector to be resilient to cyber-attacks, safe and secure while continuing to innovate and grow. The Strategy is a framework built over the following seven pillars:
- International cooperation;
- Governance;
- Effective legislation and regulations;
- Cyber Security policy;
- Information sharing;
- Incident management and emergency planning; and
- Capacity building, training and cyber security culture.

Cyber Security culture in civil aviation builds upon the sector's experience, efforts, and success in implementing robust aviation safety and security cultures, and shares with them many core elements.

The core elements of a robust and effective cyber security culture in civil aviation are:

a) Leadership;
b) Cross-domain links;
c) Communication;
d) Awareness, training and education;
e) Reporting systems;
f) Continuous review and improvement; and
g) Positive work environment.

10. **Emerging Risks**

a) Civil Drones (UAS/RAPS).

Civil drones in aviation refer to unmanned aerial vehicles (UAVs) that are used for non-military purposes such as commercial photography, delivery services, surveillance, and environmental monitoring. These drones play a significant role in various industries and are subject to regulations set by aviation authorities to ensure safety and compliance with airspace rules.

Globally the contributing factors to civil drone accidents and incidents can include technical malfunctions, human error, weather conditions, interference with other aircraft, and regulatory violations. It is important for operators to follow safety guidelines, maintain their drones properly, conduct thorough risk assessments, and comply with local aviation regulations to minimize the risk of accidents.

Civil Aviation Authorities, typically take various actions to regulate and oversee the use of civil drones. This can include establishing and enforcing safety regulations, issuing permits and licenses for drone operators, conducting inspections and investigations to ensure compliance, providing guidance and information to the public, and collaborating with other authorities to address emerging issues related to drone use. This is what the Egyptian Civil Aviation Authority (ECAA) seeks.

b) Digitalization and Artificial Intelligence (AI) in the aviation field.

When it comes to digitalization in civil aviation, there are several potential risks and hazards to consider. Some of these include:

1. Cyber security threats: As aviation systems become more digitalized, they also become more vulnerable to cyber-attacks. This could lead to breaches of sensitive data, disruption of flight operations, and even potential safety risks.
2. Software failures: The reliance on digital systems in aviation means that any software malfunctions or bugs could have serious consequences for flight safety and efficiency.
3. Data integrity issues: Errors or corruption in digital data used for crucial functions in aviation could lead to incorrect decision-making or communication, posing a risk to flights.
4. Dependency on technology: Over-reliance on digital systems could reduce the ability of pilots and aviation personnel to handle unexpected situations manually, potentially leading to safety issues in case of system failures.

It is crucial for aviation industry stakeholders to address these risks through robust cyber security measures, thorough testing of digital systems, on-going training for personnel, and contingency plans for handling digital system failures.

ECAA aims to promote the safe and effective digitalization of civil aviation, ensuring that the industry harnesses the benefits of digital technologies while mitigating potential risks.

Artificial Intelligence, often abbreviated as AI, is like a super-smart computer program that can think and learn on its own. It's designed to mimic the human brain's problem-solving abilities. AI can do all sorts of stuff, like recognizing pictures, understanding speech, and making decisions. It learns from data, which means the more information it gets, the better it gets at its tasks.

Artificial Intelligence has transformed modern aviation, AI can provide a streamlining of passenger check-ins, security processes, and baggage handling, making air travel more efficient and convenient. It helps optimize runway traffic, reduce delays, and enhance safety with advanced surveillance systems. AI-driven customer service and personalized experiences are making airports more passenger-friendly, ensuring that the future of air travel is smarter and more enjoyable. Furthermore, AI can help airlines optimize their pricing strategies, predict and prevent maintenance issues, and enhance flight operations. AI can also benefit the air traffic management.

All aviation areas are concerned (aircraft/ATM/airports/drones, etc.). That is why, the alignment of AI industrial and regulatory roadmaps is essential for the successful and rapid deployment of industrial products.

The examination of aviation as a safety-critical industry has important implications for policymakers, regulators, and firms concerned about AI accident risks. To unlock the benefits of AI, recommendations for further investment in methods for testing, evaluating, verifying, and validating the safety, security, and reliability of AI systems; encouraging inter-regulator collaboration on tackling the unique challenges posed by AI.

The scale below describes an inversely proportionate relationship between human control and computer control of a task. By increasing the automation of the task, the degree of human oversight and control decreases, and so the autonomy of the system increases. This was developed by the Joint Authorities for Rule-making on Unmanned Systems (JARUS), a collaboration between global regulators who generate concept rule-making frameworks. While JARUS' primary focus is on remotely piloted aircraft systems, the scale provides a set of generic descriptions which can be applied to any system.

Level 0 - MANUAL OPERATION Human is fully responsible.
Level 1 - ASSISTED OPERATION The Machine operates in an out-of-the-loop supporting role.
Level 2 - TASK REDUCTION Machine operates in-the-loop, reducing human workload.
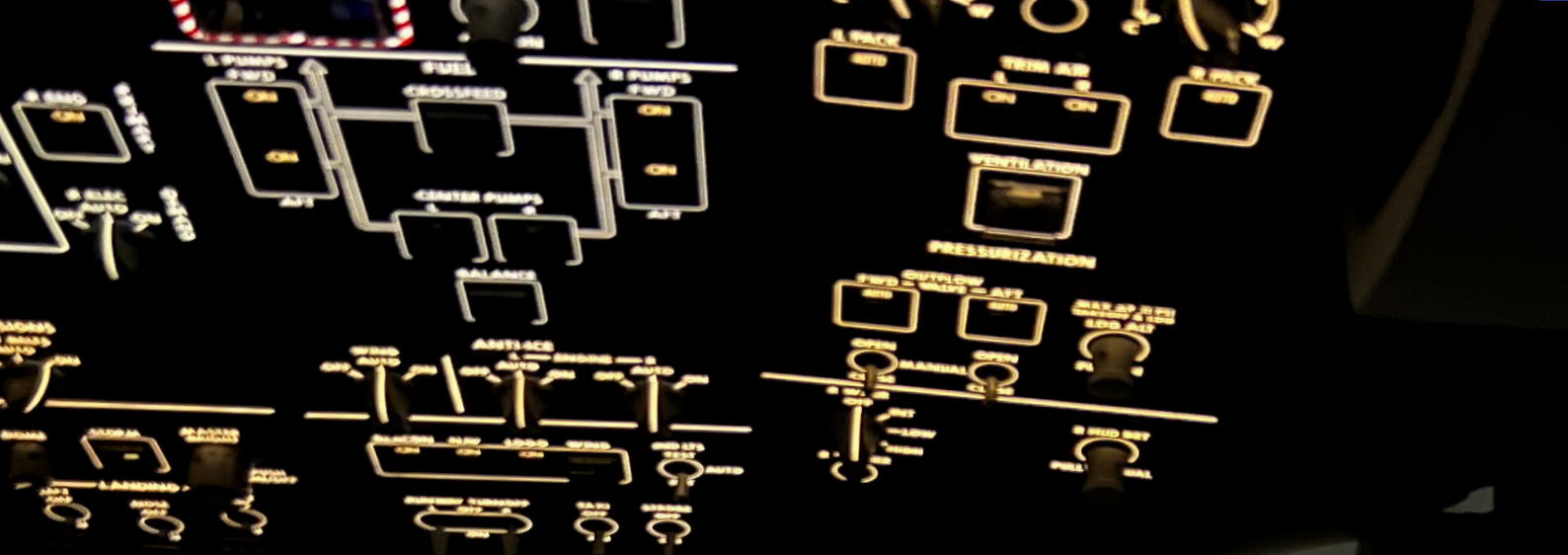Level 3 - SUPERVISED AUTOMATION The Machine executes functions under human supervision.
Level 4 - MANAGE BY EXCEPTION Machine executes functions, and alerts humans to issues.
Level 5 - FULL AUTOMATION Machine fully responsible for functions. Humans cannot intervene.

Fundamental understanding of the terminology:
- Automation: The application of technology to perform tasks and operations in a way that reduces the need for human intervention. It can be used to increase the system, with or without AI.
- Autonomy: A characteristic of a system. It is represented by a scale that describes the level of human oversight and control of a system. It can be achieved with or without AI - The Autonomy of a system, brought about by utilizing AI, can make it difficult to assign responsibility for outcomes - Some AI systems can make decisions without the express intent or on-going control of a human.
- Artificial Intelligence: The development of computer systems that can perform tasks which typically require human intelligence. It's used to automate autonomy. The adaptability of AI can make it difficult to explain the intent or logic of the system's outcomes. Some AI systems are 'trained' once or continually and operate by inferring patterns and connections in data which are often not easily discernible to humans. Through such training, AI systems often develop the ability to perform inferences not explicitly programmed by their human designers.

As a regulator of aviation safety and security, these characteristics pose a big concern. The challenges are regulatory, technical and ethical, but thankfully this is a well-known complexity and work is on-going around the world to overcome these challenges collaboratively.

Section V
ORGANIZATIONAL CHALLENGES

In addition to the national operational safety risks listed in the NASP, ECAA has identified other safety issues and initiatives selected for the National Aviation Safety Plan. These are given priority in the NASP since they are aiming at enhancing and strengthening ECAA's safety oversight capabilities and the management of aviation safety at the national level.

The 8 Critical Elements (CEs) of a safety oversight system are defined by ICAO. ECAA is committed to the effective implementation of these 8 CEs, as part of its overall safety oversight responsibilities, which emphasize EGYPT's commitment to safety in respect of its aviation activities. The 8 CEs are presented in the figure below.
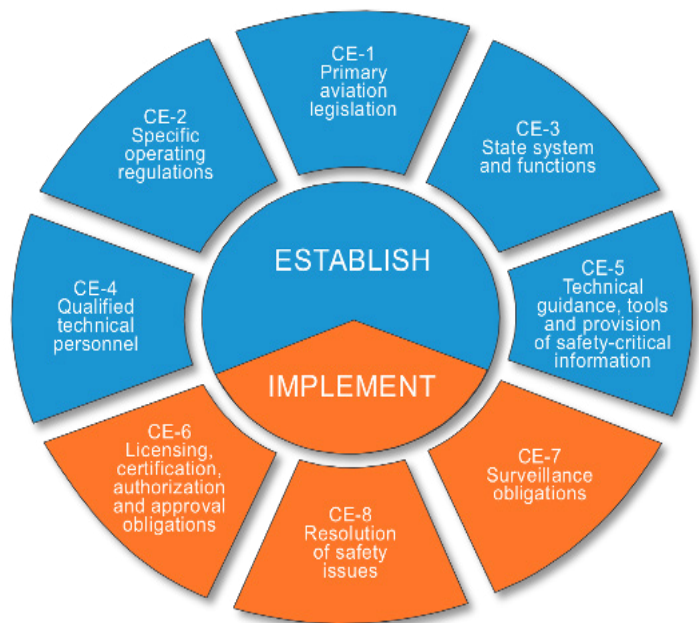

Figure 1- ICAO 8 Critical Elements (CE)

The latest ICAO activities in 2016, which aim to measure the effective implementation of the eight CEs of EGYPT's safety oversight system, as part of the ICAO Universal Safety Oversight Audit Program (USOAP-CMA), have resulted in the following scores. The overall Effective Implementation (EI) of EGYPT is 82.5 %

EI Score by CE							
CE-1	CE-2	CE-3	CE-4	CE-5	CE-6	CE-7	CE-8
58.62%	94.44%	90.63%	70.83%	91.96%	84.13%	70.83%	69.05%

EI Score by Audit area							
LEG	ORG	PEL	OPS	AIR	AIG	ANS	AGA
86.36%	90.00%	84.52%	75.86%	98.45%	75.95%	71.56%	83.47%

The following Critical Elements (CEs) and Areas, represent the organizational challenges in the EGYPTIAN context and are considered of the utmost priority, because these CEs affect the

effectiveness of safety risk controls. They are identified based on analysis from the USOAP-CMA data (as a priority, EGYPT is targeting the CEs which scored less than 80 %). These issues are typically systemic in nature and related to challenges associated with the conduct of States' safety oversight functions, implementation of SSP at the national level and the level of SMS implementation by national service providers. Taking into consideration organizational culture, policies, and procedures within ECAA, Ministry of Civil Aviation and those of service providers. These organizational challenges are in line with those listed in the 2023 to 2025 of the GASP, as well as the MID-RASP:

Targeted Critical Elements (CE) and how we are dealing with them:

1. Primary Aviation Legislation (CE-1) – through the establishment of a dedicated committee in collaboration with the Ministry of Civil Aviation, for reviewing and when considered necessary revising the primary aviation legislative (Law 28 and amendments), in-coordination and consultation with the stakeholders to present it to the parliament.

2. Qualified Technical Personnel (CE-4) – through applying capacity building and improving the competency of regulatory personnel.

3. Surveillance Obligations (CE-7) – through:
   a) Improving safety management at the State level by:
      - The development of safety objectives and setting the national safety performance indicators (SPIs), to gain the chance to set the ALoSP by the end of the first cycle after 15th January 2025.
      - The establishment of the national SDCPS based on various sources of hazard identification, including but not limited to (FDA – SPIs – MORs – SAFA & RAMP Inspections – Safety Investigation recommendations - etc...).
      - The development of an enhanced (MOR) reporting system, using a web-based portal developed in collaboration with the IT Department, based on Event Risk Classification (ERC).
      - The formalization of the State Safety Program Committees (SSP High-Level Safety Committee – SSP Safety Steering Committee – SSP Action Groups "OPS – AIR – PEL – AGA – ANS). And providing specialized training addressing the State Safety Program (SSP).
      - Publishing advisory circulars and guidance materials for understanding SMS, taking into consideration human factors/human performance. And emphasizing on human acts within a system and supervisory managerial level of influence.
   b) Generating periodical risk profiling/modeling reports for national - civil aviation organizations and civil aviation sectors. And the development of an enhanced Risk-Based Oversight (RBO) methodology applied to national airlines running international operations, to target the areas requiring more attention while utilizing our resources efficiently. ECAA will progressively expand the use of the RBO when it reaches enough maturity to other areas of the national civil aviation activities.

4. Resolution of Safety Issues (CE-8) – by ensuring the effectiveness of actions taken, safety recommendations and enforcement obligations.

Areas: the previously mentioned actions taken regarding the Critical Elements (CE) are used in addressing all national civil aviation areas, to maintain the continuous improvement, and reach the highest levels of aviation safety performance in EGYPT.

To address the organizational challenges listed beforehand, ECAA, EAAID are working collaboratively with the Ministry of Civil Aviation in EGYPT and Stakeholders, to implement a series of SEIs that have been developed by EGYPT and based on selection according to the needs from ICAO ORG roadmap (Doc 10161). The full list of the SEIs is presented in Appendix B to the NASP.

Section VI

MONITORING IMPLEMENTATION

ECAA will continuously monitor the implementation of the SEIs listed in the NASP (refer to item 1.4) and measure safety performance of the national civil aviation system, to ensure the intended results are achieved, using the mechanisms presented in appendices A and B to the NASP.

In addition, ECAA will review and update the NASP by the end of 2025 then every 3 years or earlier, if required, to keep the identified operational safety risks, safety issues and selected SEIs updated and relevant. ECAA will periodically review the safety performance of the initiatives and actions listed in the NASP to ensure the achievement of national safety objectives as well as our participation in achieving the ICAO GASP and MID-RASP goals and targets. If required, ECAA will seek the support of RASG, RSOO and industry to ensure the timely implementation of SEIs to address safety deficiencies and mitigate risks. Through close monitoring of the SEIs, ECAA will make adjustments to the NASP and its initiatives (if required), and update the NASP accordingly.

ECAA will use the main indicators listed for publicly in Section 3 of this plan, to measure safety performance of the civil aviation system and monitor each national safety target. By February each year, a safety report will be published to provide stakeholders with relevant up-to-date information on the progress made in achieving the safety goals and targets, as well as the implementation status of the SEIs.

In the event that the national safety goals and targets are not met, the root causes will be presented. If EGYPT identifies critical safety risks, reasonable measures will be taken to mitigate them as soon as practicable, possibly leading to an unscheduled revision of the NASP.

EGYPT adopted a standardized approach to provide information at the regional level, for reporting to the MID-RASG through ICAO MID-office (EGYPT's safety information is shared with ICAO MID-office through the designated focal point, Safety Management System General Directorate - SMSGD). This allows the region to receive information and assess safety risks using common methodologies.

Any questions regarding the NASP and further requests for information may be addressed to the following:

Safety Management System General Directorate
Egyptian Civil Aviation Authority
Email: safety@civilaviation.gov.eg

OPERATIONAL RISKS, RISKS IDEPENDENCIES AND EMERGING RISKS

Egypt is aiming to mitigate the Operational Risks, Risk Interdependencies, and Emerging Risks by taking the following Safety Enhancement Initiatives and actions.

OBJECTIVE 1: Maintaining high levels of aviation safety standards and continuous reduction of aviation safety risks. Goal 1: Achieve a continuous reduction of operational safety risks.				
OBJ-1/G1/OPS/SEI-1 Mitigating the risks of - Loss Of Control-In Flight (LOC-I).				
Indicator(s): · Rate of accidents/serious incidents related to High-Risk Categories (H-RCs) LOC-I per 10,000 departures				
Stakeholders: · National (air-operators / pilots / civil aviation organizations) · National and international civil aviation communities				
Actions	**Responsible**	**Timeline**	**Priority**	**Monitoring**
OBJ-1/G1/OPS/SEI-1A1 Develop Advisory Circular on (Air-operators Standard Operating Procedures (SOP) for Flight Deck Crewmembers.	· Coordination between OPS & PEL Central Administrations.	Implemented EAC 00-12	Low	SSP High-Level Safety Committee.
OBJ-1/G1/OPS/SEI-1A2 Ensure CRM/TEM training for pilots.	· Coordination between OPS & PEL Central Administrations in collaboration with SSP (OPS and PEL) Action Groups.	Implemented -EAC 00-3 -EAC 00-10 -EAC 00-18	Med	SSP High-Level Safety Committee.
OBJ-1/G1/OPS/SEI-1A3 Promote and participate in capacity building activities, concerning (Upset Recovery) provided by RASG and industry groups/experts). *As stated in MID-RASP (UPRT Workshop, responsibility is on RASG and industry groups/ experts).	· Coordination between OPS & PEL Central Administrations.	3rd quarter 2024	High	SSP High-Level Safety Committee.

Actions	Responsible		Timeline	Priority	Monitoring
OBJ-1/G1/OPS/SEI-1A4 Review (revise if required according to the needs) and deploy the MID-RASG (Guidance material on flight crew proficiency) which is supposed to be developed in 2025. *As stated in MID-RASP, the development is by IATA and Aircraft manufacturers/industry "to be supported by Airbus"	·	PEL Central Administration in coordination and collaboration with SSP PEL Action Group.	2025	Low	SSP High-Level Safety Committee.
OBJ-1/G1/OPS/SEI-1A5 Review (revise if required according to the needs) and deploy the MID-RASG Advisory Circular (Mode Awareness and Energy State Management Aspects of Flight Deck Automation) which is supposed to be developed in 2025. * As stated in MID-RASP, the development is by IATA and Aircraft manufacturers/industry "to be supported by Airbus"	·	Coordination between PEL & OPS Central Administrations in coordination and collaboration with SSP (PEL & OPS) Action Groups.	2025	Low	SSP High-Level Safety Committee.

OBJ-1/G1/OPS/SEI-2 **Mitigating the risks of – Runway Excursion (RE), and Abnormal Runway Contact (ARC).**				
Indicator(s): · Rate of accidents/serious incidents related to High-Risk Categories (H-RCs) RE per 10,000 departures · Rate of accidents/serious incidents related to High-Risk Categories (H-RCs) ARC per 10,000 departures				
Stakeholders: · National (Air-operators / pilots / civil aviation organizations) · National and International civil aviation communities				
Actions	**Responsible**	**Timeline**	**Priority**	**Monitoring**
OBJ-1/G1/OPS/SEI-2A1 Ensure that procedures to systematically reduce the rate of un-stabilized approaches to runways are developed and used.	· Coordination between OPS & PEL Central Administrations in coordination and collaboration with SSP OPS & PEL & ANS Action Groups.	Implemented EAC 00-12 SOP	High	SSP High-Level Safety Committee.
OBJ-1/G1/OPS/SEI-2A2 Promote the establishment of a policy, procedure, and training on rejected landing (close to runway surface below 50 feet AGL).	· Coordination between SSP OPS & PEL Action Groups. · OPS & PEL Central Administrations.	2nd half 2024	High	SSP High-Level Safety Committee.
OBJ-1/G1/OPS/SEI-2A3 Promote air-operators to include a procedure for the flight crew members concerning the prevention of hard landings and values of (g-load) in landing and how to retrieve these values from aircraft systems – if the aircraft is equipped with this function (ex. G. load report auto generation by the aircraft or any other functions).	· Coordination between SSP OPS/AIR/PEL action groups. · Coordination between OPS & PLE Central Administrations.	1st quarter 2025	Med	SSP High-Level Safety Committee.

<table>
<tr><td colspan="5">OBJ-1/G1/OPS/SEI-3
Mitigating the risks of – Controlled Flight Into Terrain (CFIT).</td></tr>
<tr><td colspan="5">Indicator(s):
·   Rate of accidents/serious incidents related to High-Risk Categories (H-RCs) CFIT per 10,000 departures</td></tr>
<tr><td colspan="5">Stakeholders:
·   National (Air-operators / pilots / civil aviation organizations)
·   National and International civil aviation communities</td></tr>
<tr><td>Actions</td><td>Responsible</td><td>Timeline</td><td>Priority</td><td>Monitoring</td></tr>
<tr><td>OBJ-1/G1/OPS/SEI-3A1
Ensure the timeliness of updates and accuracy of Electronic Terrain and Obstacle Data (eTOD).</td><td>·   Coordination between AIR & OPS Central Administrations in coordination and collaboration with SSP (AIR and OPS Action Groups)</td><td>Implemented ECAR 121.135</td><td>Med</td><td>SSP High-Level Safety Committee.</td></tr>
<tr><td>OBJ-1/G1/OPS/SEI-3A2
Review (revise if required according to the needs) and deploy the MID-RASG (Advisory Circular – Instrument Approach Procedures Using Continuous Descent Final Approach Techniques), which is supposed to be developed in 2025.
* As stated in MID-RASP, the development is by (IATA and Aircraft Manufacturers)</td><td>·   Coordination between PEL & OPS & ANS Central Administrations in coordination and collaboration with SSP (PEL & OPS & ANS) Action Groups.</td><td>2025</td><td>Low</td><td>SSP High-Level Safety Committee.</td></tr>
</table>

OBJ-1/G1/OPS/SEI-4 Mitigating the risks of – Runway Incursion (RI).				

Indicator(s):
- Rate of accidents/serious incidents related to High-Risk Categories (H-RCs) RI per 10,000 departures
- Rate of accidents/serious incidents related to GROUND per 10,000 departures per aerodrome.

Stakeholders:
- National (Air-operators / pilots / civil aviation organizations)
- National and International civil aviation communities
- ECAA's inspectors

Actions	Responsible	Timeline	Priority	Monitoring
OBJ-1/G1/OPS/SEI-4A1 Ensure effective use of suitable technologies to assist the improvement of flight crew members situational awareness, such as Electronic Flight Bag (EFB) and/or Airport Moving Maps (AMM).	· OPS Central Administration in coordination and collaboration with SSP OPS Action Group.	Implemented EAC 121.15	Med	SSP High-Level Safety Committee.
OBJ-1/G1/OPS/SEI-4A2 Ensure the identification and publication in the aeronautical information publication (AIP) of hot spots at national aerodromes.	· Coordination between AGA & ANS Central Administrations through the outputs of Runway Safety Teams (RSTs).	Implemented ECAR 139 and related EACs 139 series. & Revise ECAR 172.130 in 4th quarter 2024.	Med	SSP High-Level Safety Committee.

OBJ-1/G1/OPS/SEI-5 **Mitigating the risks of – Mid Air Collision (MAC).**				
Indicator(s): · Rate of accidents/serious incidents related to High-Risk Categories (H-RCs) MAC per 10,000 departures				
Stakeholders: · National (Air-operators / pilots / civil aviation organizations) · National and International civil aviation communities · ECAA's inspectors				
Actions	**Responsible**	**Timeline**	**Priority**	**Monitoring**
OBJ-1/G1/OPS/SEI-5A1 Ensure the clarity of Minimum Equipment List (MEL) requirements.	· Coordination between AIR & OPS Central Administrations	Implemented	Med	SSP High-Level Safety Committee.
OBJ-1/G1/OPS/SEI-5A2 Promote for a new SOP to be adopted by national air operators – call out 2000 feet to level-off to check the rate of climb/descent is reduced to 1500 feet per minute, in addition to the traditional call out of 1000 feet to level-off.	· Coordination between SSP OPS & PEL Action Groups. · Coordination between OPS & PEL Central Administrations	3rd quarter 2024	High	SSP High-Level Safety Committee.

OBJ-1/G1/OPS/SEI-6
Mitigating the risks of – (RAMP) Aircraft's ground damage while being serviced on ground.

Indicator(s):
· Rate of RAMP-Ground Handling related accidents/serious incidents per 10,000 departures.

Stakeholders:
· National (Air-operator /ground personnel/aviation organizations and ground handling service providers)
· National and International civil aviation communities
· ECAA's inspectors

Actions	Responsible	Timeline	Priority	Monitoring
OBJ-1/G1/OPS/SEI-6A1 Promote for awareness campaigns/workshops/promotions concerning ramp safety and damage to aircraft by ground equipment.	· Coordination between SSP AIR & OPS Action Groups, (ensure ground handling service providers representatives are included).	2nd half 2024	High	SSP High-Level Safety Committee.
OBJ-1/G1/OPS/SEI-6A2 Introduction of IATA ISAGO program in ECAA's oversight surveillance activities on ground handling organizations and aerodrome apron activities.	· AIR Central Administration (fixed and mobile equipment General Directorate) in coordination and collaboration with SSP OPS & AIR & AGA Action Groups, (ensure ground handling service providers representatives are included)	1st quarter 2025	Med	SSP High-Level Safety Committee.

OBJ-1/G1/OPS/SEI-7
Mitigating the risks of – Birds / Wildlife strike (WS) on and in the vicinity of aerodrome.

Indicator(s):
· Number of birds strikes per year within Cairo FIR.
· Rate of engine IFSD following bird strike per 10,000 departures within Cairo FIR.

Stakeholders:
· Air-operators / pilots / aviation organizations / aerodrome operators / ECAA's inspectors
· National and International civil aviation communities

Actions	Responsible	Timeline	Priority	Monitoring
OBJ-1/G1/OPS/SEI-7A1 Collecting and analyzing data of bird strike locations.	· SMSGD	Continuous process.	High	SSP High-Level Safety Committee.
OBJ-1/G1/OPS/SEI-7A2 Establish and maintain a National Committee for birds/wildlife strike prevention and control, composed of (Ministry of Civil aviation-ECAA-birds migration and wildlife Dept. in the Ministry of Environmental Affairs and other concerned sectors) to work on and promote for birds/wildlife control program through continuous communication, coordination, and collaboration. *update ATM/ATC with bird migration tracks/sights accordingly.	· SSP High-Level Safety Committee.	2nd half 2024	High	SSP High-Level Safety Committee.
OBJ-1/G1/OPS/SEI-7A3 Promote for bird/wildlife in civil aviation activities awareness.	· National Committee for birds/wildlife strikes prevention and control in coordination and collaboration with SSP (OPS & ANS & AGA & AIR) Action Groups.	3rd quarter 2024	High	SSP High-Level Safety Committee.
OBJ-1/G1/OPS/SEI-7A4 Ensure issuance of NOTAMs indicating birds' observation locations.	· ANS Central Administration. · AGA Central Administration	When required	High	SSP High-Level Safety Committee
OBJ-1/G1/OPS/SEI-7A5 Ensure the implementation of effective bird distracting mechanisms at the airports, and the implementation of bird management activities around airports, in collaboration with local communities and other government agencies.	· AGA Central Administration.	Implemented ECAR 139 and related EACs 139 series	High	SSP High-Level Safety Committee.

OBJ-1/G1/OPS/SEI-8				
Mitigating the risks of – Manned passenger carrying balloon operations.				

Indicator(s):
Number of received reports concerning the safe conduct of balloon operations per year.

Stakeholders:
· National balloon operators / pilots / aviation organizations
· National and International civil aviation communities
· ECAA's inspectors.

Actions	Responsible	Timeline	Priority	Monitoring
OBJ-1/G1/OPS/SEI-8A1 Conduct workshop on balloon operations for ECAA's Inspectors and ballon operators in collaboration with (Euro-Med Transport Aviation Project- ETAP).	· ECAA with the collaboration of ETAP training program.	Implemented	High	SSP High-Level Safety Committee.
OBJ-1/G1/OPS/SEI-8A2 Update (manned passenger carrying balloon operations) regulations (if required) and develop guidance materials.	· Coordination between OPS, PEL and AIR Central Administrations.	2nd quarter 2025	Med	SSP High-Level Safety Committee.

OBJ-1/G1/OPS/SEI-9a				
Addressing the risk interdependence of – GNSS interference/spoofing				

Indicator(s):
· Rate of GNSS interference/jamming per 100,000 departures within Cairo FIR.
· Rate of GNSS spoofing per 100,000 departures within Cairo FIR.
· Rate of GNSS interference/jamming per 10,000 departures per airport within Cairo FIR.
· Rate of GNSS spoofing per 10,000 departures per airport within Cairo FIR.

Stakeholders:
· National Air-operators / pilots / aviation organizations
· National and International civil aviation communities

Actions	Responsible	Timeline	Priority	Monitoring
OBJ-1/G1/OPS/SEI-9aA1 Collecting and analyzing data of GNSS Interference locations.	· SMSGD.	Continuous process.	High	SSP High-Level Safety Committee.
OBJ-1/G1/OPS/SEI-9aA2 Maintain high level of continuous communication with the National Armed Forces Operation Authority concerning GNSS interference/ spoofing and impact on aviation safety.	· ECAA's Vice President. · SSP High Level Safety Committee	Continuous process.	High	SSP High-Level Safety Committee.
OBJ-1/G1/OPS/SEI-9aA3 Share information with ICAO.	· SMSGD	Continuous process.	High	SSP High-Level Safety Committee.

OBJ-1/G1/OPS/SEI-9b Addressing the risk interdependence of – Deployment of 5G network within EGYPT and effect on aircraft RA				
Indicator(s): · Number of received reports of aircraft automation misbehavior per national airport.				
Stakeholders: · National Air-operators / pilots / aviation organizations · National and International civil aviation communities · ECAA's inspectors				
Actions	**Responsible**	**Timeline**	**Priority**	**Monitoring**
OBJ-1/G1/OPS/SEI-9bA1 Conduct workshop addressing the effects of 5G networks on aircraft operations.	· ECAA in-collaboration with international and national bodies.	Implemented	High	SSP High-Level Safety Committee.
OBJ-1/G1/OPS/SEI-9bA2 Invite the National Telecom Regulatory Authority (NTRA) to attend the SSP High-Level Safety Committee (for continuous cooperation, collaboration and coordination) to increase the level of awareness of the effects of the deployment of 5G at the national level.	· SSP High Level Safety Committee.	Implemented	High	SSP High-Level Safety Committee.
OBJ-1/G1/OPS/SEI-9bA3 Maintain high level of communication between ECAA and NTRA for the safe deployment of 5G networks within EGYPT to include but not limited to: · The protection of (4.2 – 4.4 GHz) frequency band used by existing radio altimeters · Enforce the maximum power limit for 5G C-band transmission and downward tilting (electronically or mechanically) of 5G C-band antenna. · Establishment of sufficient 5G C-band prohibition and precautionary zones around aerodromes.	· Establish a committee chaired by ECAA's Vice President and membership of (AGA/ANS/ OPS/ AIR) Central Administrations & SMSGD & ECAA'S Civil Aviation Regulations General Directorate (to maintain coordination and collaboration with SSP (AGA/ANA/ OPS/AIR) Action Groups	Continuous process.	High.	SSP High-Level Safety Committee.

OBJ-1/G1/OPS/SEI-9c Addressing the risk interdependence of – Lithium batteries fire on-board.				
Indicator(s): · Rate of received reports from national air-operators concerning lithium batteries fire on-board per 10,000 departures				
Stakeholders: · National Air-operators / pilots / cabin crew members / aviation organizations / ground handling service providers · National and International civil aviation communities · ECAA's inspectors				

Actions	Responsible	Timeline	Priority	Monitoring
OBJ-1/G1/OPS/SEI-9cA1 National air-operators to develop a safety risk assessment addressing the safe carriage of cargo, mail and baggage and focus on the safe transport of lithium batteries by air.	· OPS Central Administration in-coordination and collaboration with SSP OPS & AIR Action Groups and SMSGD.	2nd half 2024	High	SSP High-Level Safety Committee.
OBJ-1/G1/OPS/SEI-9cA2 Develop guidance materials on the safe carriage of cargo, mail and baggage taking into consideration lithium batteries.	· ECAA'S OPS Central Administrations in-coordination and collaboration with (OPS & PEL & AIR) SSP Action Groups.	1st quarter 2025	Med	SSP High-Level Safety Committee.
OBJ-1/G1/OPS/SEI-9cA3 Review and (update if required) the regulations and guidance materials concerning cargo service providers and freight forwarders.	· OPS Central Administration.	2nd quarter 2025	Low	SSP High-Level Safety Committee.

OBJ-1/G1/OPS/SEI-9d Addressing the risk interdependence of – Aircraft operation over or near conflict zones.				
Indicator(s): · Number of received reports from national air-operators with negative impact on the safe conduct of a flight due to aircraft operation over or near conflict zone per year.				
Stakeholders: · National Air-operators / pilots / ECAA's inspectors · National and International civil aviation communities				
Actions	**Responsible**	**Timeline**	**Priority**	**Monitoring**
OBJ-1/G1/OPS/SEI-9dA1 Review and (update if required) regulations and guidance material for aircraft operation over or near conflict zones and conduct awareness/workshop about risk management on conflict zone.	· Establish a committee chaired by ECAA's Vice President and composed of the following Central Administrations and Directorate (Security /OPS / Air Transport and Facilitation / SMSGD) in coordination and collaboration with the SSP OPS Action Group.	4th quarter 2024	High	SSP High-Level Safety Committee.
OBJ-1/G1/OPS/SEI-9dA2 Continuously monitoring the updates of conflict zones situation and communicate with national airlines to ensure they are aware of any relevant information or updates regarding conflict zones to adjust their operations accordingly.	· Coordination between Security & OPS Central Administrations.	Continuous process.	High	SSP High-Level Safety Committee.

OBJ-1/G1/OPS/SEI-9e Addressing the risk interdependence of – Unruly/Disruptive passenger.				
Indicator(s): · Number of received reports per year from national air-operators concerning unruly/disruptive passenger. · Rare of received reports from national air-operators concerning unruly/disruptive passenger per 10,000 departures				
Stakeholders: · National Air-operators / pilots / cabin crew members / aviation organizations and personnel / ECAA's inspectors · National and International civil aviation communities				
Actions	**Responsible**	**Timeline**	**Priority**	**Monitoring**
OBJ-1/G1/OPS/SEI-9eA1 Inviting representatives of the Ministry of Interior and Airport Security heads to attend the SSP High-Level Safety Committee in August 2024, to address the issue of dealing with unruly passenger from an international perspective in the field of civil aviation, especially when crew members are affected by the actions of the unruly passenger. And prepare to deal with this issue starting in the first quarter of 2025, by providing effective communication channels with representatives of the Ministry of Interior and Airport Security heads, through the formation of a committee in the Egyptian Civil Aviation Authority chaired by the ECAA's Vice President to handle this matter.	· SSP High-level safety committee.	August 2024	High	SSP High-Level Safety Committee.

Actions	Responsible	Timeline	Priority	Monitoring
OBJ-1/G1/OPS/SEI-9eA2 Review and (update if required) regulations and guidance materials addressing unruly/disruptive passenger.	· Establish a committee chaired by ECAA's Vice President and membership of Central Administrations and Directorate of (Security / OPS / PEL/ Transportation and facilitation / Civil aviation regulations/ SMSGD), in-coordination and collaboration with SSP OPS action group.	2nd quarter 2025	Low	SSP High-Level Safety Committee.
OBJ-1/G1/OPS/SEI-9eA3 Ensure that national air operators have documented procedures that are compatible with all their manuals to address the issue of dealing with an unruly passenger, as well as ensuring that employees of national civil aviation companies are aware and trained on dealing with an unruly passenger.	· Coordination between Security / OPS / PEL and Security Central Administrations in coordination and collaboration with the SSP OPS action group.	3rd quarter 2025	Low	SSP High-Level Safety Committee.
OBJ-1/G1/OPS/SEI-9eA4 Promote for awareness campaigns addressing the passenger's obligation, using air operator offices/websites while booking – airport banners – etc…	· ECAA'S OPS/AGA/ Security Central Administrations and SSP OPS/AGA action groups.	3rd quarter 2025	Low	SSP High-Level Safety Committee.

OBJ-1/G1/OPS/SEI-9f
Addressing the risk interdependence of – Impact of aviation health safety on human performance (AHS).

Indicator(s):
· Number of promotion/awareness workshops concerning Aviation Health carried out per year.

Stakeholders:
· National Air-operators / civil aviation organizations / civil aviation personnel
· National and International civil aviation communities

Actions	Responsible	Timeline	Priority	Monitoring
OBJ-1/G1/OPS/SEI-9fA1 Promote awareness of and education about "well-being and its relation to human factors & human performance". *By 2nd quarter 2025-Promote for IATA Health Safety Checklist and other related materials	· Establish a committee chaired by ECAA's Vice President and membership of (the medical assessor of ECAA & all Central Administrations & Civil Aviation Regulations General Directorate &SMSGD as well as the (the Aero-Medical Council and the Occupational Safety and Health), in coordination and collaboration with all SSP Action Groups.	4th quarter 2024 and maintain it continuously.	High	SSP High-Level Safety Committee.
OBJ-1/G1/OPS/SEI-9fA2 Promote for the development of Fatigue Risk Management System (FRMS) in AOC holder's domain.	· Establish a committee chaired by ECAA's Vice President and membership of (the medical assessor of ECAA & SMSGD & Civil Aviation Regulations General Directorate & ECAA's Central Administrations OPS and PEL) & Aeromedical Council) in-coordination and collaboration with SSP (OPS & PEL) Action Groups.	4th quarter 2025	Low	SSP High-Level Safety Committee.

OBJ-1/G1/OPS/SEI-9g Addressing the risk interdependence of - cybersecurity in the civil aviation field.

Indicator(s):
· Number of national airlines conducting international operations documented and implemented an effective cyber security program per year.

Stakeholders:
· National aviation organizations / civil aviation personnel
· National and International civil aviation communities

Actions	Responsible	Timeline	Priority	Monitoring
OBJ-1/G1/OPS/SEI-9gA1 Ensure continuous reviews of new cyber standards, assurance and cyber management activities for aviation entities.	· Establish a committee chaired by ECAA's Vice President and membership of (ECAAs' Security Central Administration & All ECAA's Central Administrations & Civil Aviation Regulations General Directorate & SMSGD. · Outputs of the committee to be coordinated with all SSP Action Groups. * Regarding the promotion of IATA Cybersecurity for Aircraft Operators - consider the committee's composition specializations as well as coordinating the outputs with the SSP OPS and AIR Action Groups.	1st quarter 2025	Med	SSP High-Level Safety Committee.

OBJ-1/G1/OPS/SEI-10a Addressing the emerging risks of – Civil drones' operation.				
Indicator(s): · Number of received reports concerning observation of civil drones affecting the safe conduct of aircraft operation within Cairo FIR.				
Stakeholders: · National civil aviation organizations / civil aviation personnel · National and International civil aviation communities				
Actions	**Responsible**	**Timeline**	**Priority**	**Monitoring**
OBJ-1/G1/OPS/SEI-10aA1 Engage with (international organizations/states) for collaboration in specific training and workshops in the field of civil drones' operation.	· President of ECAA. · ECAA's Civil Aviation Regulations General Directorate & Technical office GM.	4th quarter 2024	High	SSP High-Level Safety Committee.
OBJ-1/G1/OPS/SEI-10aA2 Develop specific regulations and guidance materials addressing civil drones' certification and operations.	· ECAA's Vice President through maintaining high Level of communication with Armed Forces Operations Authority and other concerned Governmental entities. And in-coordination with the following: · ECAA's Civil Aviation Regulations General Directorate. · ECAA's Security & all concerned Central Administrations within ECAA.	2rd quarter 2025	Med	SSP High-Level Safety Committee.

OBJ-1/G1/OPS/SEI-10b
Addressing the emerging risks of – Digitalization and (AI) in the civil aviation field.

Indicator(s):
· Number of workshops/trainings provided in collaborations with (international organizations/states) concerning (AI) in civil aviation field.

Stakeholders:
· National aviation organizations / civil aviation personnel
· National and International civil aviation communities

Actions	Responsible	Timeline	Priority	Monitoring
OBJ-1/G1/OPS/SEI-10bA1 Conduct in collaboration with (international organizations/ states) Artificial Intelligence (AI) workshops in aviation field.	· President of ECAA. · GM Technical Office and Civil Aviation Regulations General Directorate	3rd quarter 2025	Low	SSP High-Level Safety Committee.
OBJ-1/G1/OPS/SEI-10bA2 Regulatory framework – develop and enforce regulations related to digitalization in civil aviation, ensuring that all digital systems and technologies meet safety and security standards.	· Establish a committee chaired by ECAA's Vice President and membership of Civil Aviation Regulations General Directorate & Security Central Administration & all ECAA's Central Administrations & SMSGD. · Outputs of the committee to be coordinated with all SSP Action Groups.	4th quarter 2025	Low	SSP High-Level Safety Committee.
OBJ-1/G1/OPS/SEI-10bA3 Ensure compliance with cybersecurity measures: for protecting digital systems from cyber threats.	· ECAA's Security Central Administration and concerned ECAA's Central Administration.	1st quarter 2026	Low	SSP High-Level Safety Committee.

EGYPT is aiming to mitigate the Organizational Challenges by taking the following Safety Enhancement Initiatives and actions.

OBJECTIVE 1:
Maintaining high levels of aviation safety standards and continuous reduction of aviation safety risks. **Goal 2:** Strengthen safety oversight capabilities.
OBJ-1/G2/ORG/SEI-11 **Consistent implementation of ICAO SARPs at the national level**.
Indicator(s): · State Safety index (Average overall EI score). · EI score per Critical Element (CE). · EI score per area. · Average (EI) of (PPQs).
Stakeholders: · ECAA. · EAAID. · National aviation organizations. · National and international aviation communities.

Actions	Responsible	Timeline	Priority	Monitoring
OBJ-1/G2/ORG/SEI-11A1 Address all protocol questions (PQs) of the USOAP-CMA, emphasize on PPQs, and address Significant Safety Concerns as a priority.	· All Central Administrations and concerned General Directorates within ECAA, through the internal audit program conducted by SMSGD. · EAAID Central Administration.	Continuous process	High	SSP High-Level Safety Committee.

Actions	Responsible	Timeline	Priority	Monitoring
OBJ-1/G2/ORG/SEI-11A2 Increase the level of compliance with ICAO SARPs, emphasize on the EI of (CE-1, CE-4, CE-7, and CE-8) at the national level. *CEs scored below 80% in last USAOP-CMA.	· All ECAA's Central Administrations and concerned General Directorates. · EAAID Departments	Continuous process	High	SSP High-Level Safety Committee.
OBJ-1/G2/ORG/SEI-11A3 Establish a committee composed of ECAA and concerned aviation Stakeholders to review and propose amendments to the primary aviation legislative (Law 28) and draft the proposal to the parliament through the Ministry of Civil Aviation.	· Minister of Civil Aviation & President of ECAA	2024	High	SSP High-Level Safety Committee.
OBJ-1/G2/ORG/SEI-11A4 Develop Risk Based Oversight (RBO).	· ECAA's SMSGD	Implemented	High	SSP High-Level Safety Committee.

Actions	Responsible	Timeline	Priority	Monitoring
OBJ-1/G2/ORG/SEI-11A5 Utilize the (RBO) as a trial phase in 2024 in the oversight of national airlines, until the system reaches maturity stage and expand it progressively to other areas.	· ECAA's OPS Central Administration in coordination with SMSGD	2024	High	SSP High-Level Safety Committee
OBJ-1/G2/ORG/SEI-11A6 Revise the ramp inspection checklist and manual, conduct workshops, and provide presentation to inspectors and air operators (with the most captured findings either by national or SAFA ramp inspections), and promote for internal (task forces) to be in-place by each operator to ensure compliance, moreover, maintain an increasing trend of national ramp inspections.	· ECAA's OPS Central Administrations in-coordination and collaboration with SSP OPS & AIR Action Groups and in collaboration with SMSGD	2024	High	SSP High-Level Safety Committee
OBJ-1/G2/ORG/SEI-11A7 Update USOAP corrective action plan items.	· USOAP National Coordinator within ECAA in-coordination with concerned Central Administrations and General Directorates within ECAA via focal points. · EAAID focal point.	First quarter of 2025 then, maintain continues update to reflect the progress.	High	SSP High-Level Safety Committee
OBJ-1/G2/ORG/SEI-11A8 Complete and submit the self-assessment checklist based on USOAP CMA PQs.	· USOAP National Coordinator within ECAA in-coordination with the concerned Central Administrations and General Directorates within ECAA via focal points. · EAAID focal point.	December every year	High	SSP High-Level Safety Committee

Actions	Responsible	Timeline	Priority	Monitoring
OBJ-1/G2/ORG/SEI-11A9 Complete and submit the State aviation activity questionnaire.	· ECAA'S Technical Office General Manager in-coordination with the concerned Central Administrations and General Directorates within ECAA via focal points. · EAAID focal point.	Whenever a change relating to the questionnaire occurs.	High	SSP High-Level Safety Committee
OBJ-1/G2/ORG/SEI-11A10 Complete and submit the compliance checklists on electronic filing of differences system.	· ECAA's Civil Aviation Regulations General Directorate in-coordination with the concerned Central Administrations and General Directorates within ECAA via focal points. · EAAID focal point.	December every year or whenever an update to the differences is required	High	SSP High-Level Safety Committee
OBJ-1/G2/ORG/SEI-11A11 Update documents and records, as required, in a timely manner	· USOAP National Coordinator in ECAA. · ECAA's Technical Office General Manager. · ECAA's Civil Aviation Regulations General Directorate · All ECAA's concerned Central Administrations and General Directorates via focal points. · EAAID focal point.	Continuous process	High	SSP High-Level Safety Committee

OBJ-1/G2/ORG/SEI-12
Qualified technical personnel to support effective safety oversight.

Indicator(s):
· EI (CE-4)

Stakeholders:
· Regulatory technical personnel.
· National aviation organizations.
· National and international aviation communities .

Actions	Responsible	Timeline	Priority	Monitoring
OBJ-1/G2/ORG/SEI-12A1 Establish an effective system to identify and track qualifications and training of existing technical personnel (CE-4).	• President of ECAA through Technical office GM & ECAA's Central Administrations and concerned General Directorates. • EAAID Director.	Continuous process.	High	SSP High-Level Safety Committee.
OBJ-1/G2/ORG/SEI-12A2 Identify the gaps in qualified technical personnel and training requirements necessary to implement the oversight mandate (CE-4).	• President of ECAA through Technical office GM & ECAA's Central Administrations and concerned General Directorates. • EAAID Director.	Continuous process.	High	SSP High-Level Safety Committee.
OBJ-1/G2/ORG/SEI-12A3 Implement training policies and programs for technical personnel and verify that the type and frequency of training successfully completed (i.e. initial, recurrent, specialized and on-the-job training) are sufficient to acquire/maintain the required qualifications and level of competence corresponding to the assigned duties and responsibilities of technical personnel. (CE-4).	• ECAA's Technical office GM & ECAA's Central Administrations and concerned General Directorates. • EAAID Director.	Continuous process.	High	SSP High-Level Safety Committee.

OBJECTIVE 1
Maintaining high levels of aviation safety standards and continuous reduction of aviation safety risks.
Goal 3
Implement effective State Safety Program (SSP).

OBJ-1/G3/ORG/SEI-13
Start of SSP implementation at the national level.

Indicator(s):
- % of SMS implementation in each area at the national level.
- Develop and publish the NASP.

Stakeholders:
- ECAA and EAAID personnel.
- National aviation organizations.
- National and international aviation communities .

Actions	Responsible	Timeline	Priority	Monitoring
OBJ-1/G3/ORG/SEI-13A1 Secure State-level commitment to improve safety. *Safety Policy.	· President of ECAA	Implemented	High	SSP High-Level Safety Committee.
OBJ-1/G3/ORG/SEI-13A2 Conduct initial SSP gap analysis then the detailed SSP self assessment	· ECAA's SMSGD	2024	High	SSP High-Level Safety Committee.
OBJ-1/G3/ORG/SEI-13A3 Establish an SSP implementation team.	· Ministry of Civil Aviation & President of ECAA, the establishment of SSP committees (High-Level Safety Committee, Steering Committee, Action Groups "OPS-PEL-AIR-AGA-ANS").	Implemented	High	SSP High-Level Safety Committee.

Actions	Responsible	Timeline	Priority	Monitoring
OBJ-1/G3/ORG/SEI-13A4 Develop an implementation plan for the SSP.	· ECAA's SMSGD in-coordination and collaboration with SSP Committees	Implemented	High	SSP High-Level Safety Committee.
OBJ-1/G3/ORG/SEI-13A5 Issue SMS regulations for service providers and verify SMS implementation.	· ECAA's SMSGD in-coordination and collaboration with ECAA's central Administrations	Implemented	Med	SSP High-Level Safety Committee.
OBJ-1/G3/ORG/SEI-13A6 Identify and share safety management best practices.	· ECAA's SMSGD in-coordination and collaboration with ECAA's Central Administrations by publishing Advisory Circulars (EACs).	Implemented	Med	SSP High-Level Safety Committee.
OBJ-1/G3/ORG/SEI-13A7 Promote for the NASP and work collaboratively to develop and publish it.	· ECAA's SMSGD in- coordination and collaboration with ECAA's Central Administrations, and other stakeholders.	3rd quarter 2024 to publish the NASP.	High	SSP High-Level Safety Committee.

OBJ-1/G3/ORG/SEI-14 Strategic allocation of resources to start SSP implementation.				

Indicator(s):
- Number of received assistance in SSP training and implementation from States/ICAO MID-office/RSOO (if required).

Stakeholders:
- State of EGYPT.
- National aviation organizations.
- National and international aviation communities.

Actions	Responsible	Timeline	Priority	Monitoring
OBJ-1/G3/ORG/SEI-14A1 Obtain resources from national and appropriate authorities' leadership and stakeholders within the State to support SSP implementation.	· Ministry of Civil Aviation & President of ECAA	Continuous process	High	SSP High-Level Safety Committee.
OBJ-1/G3/ORG/SEI-14A2 Work with the ICAO Regional Office to make use of available means (e.g. Technical Cooperation Bureau) to acquire assistance required for SSP implementation.	· President of ECAA based on-information from SMSGD	If required	Med	SSP High-Level Safety Committee.
OBJ-1/G3/ORG/SEI-14A3 Work with RSOO, other States and other organizations, as appropriate to train qualified technical personnel to fulfill their duties and responsibilities regarding SSP implementation.	· President of ECAA through Technical Office GM	Continuous process	High	SSP High-Level Safety Committee.

OBJ-1/G3/ORG/SEI-15
Availability of safety data and safety information to support safety management activities at the national level (step 1).

Indicator(s):
· % of national civil aviation organizations participating in ECAAs' Safety Data Collection and Processing System (SDCPS).

Stakeholders:
· ECAA and EAAID personnel.
· National aviation organizations.
· National and international aviation communities.

Actions	Responsible	Timeline	Priority	Monitoring
OBJ-1/G3/ORG/SEI-15A1 Establish national laws, regulations and policies protecting safety data, safety information and related sources, in accordance with Appendix 3 of Annex 19 – Safety Management: · Ensure that the protection of safety data, safety information and related sources does not interfere with the proper administration of justice or with maintaining or improving safety. · Ensure that safety data, safety information and related sources are protected. · Specify the conditions under which safety data, safety information and related sources qualify for protection, including principles of exception and authoritative. · Ensure safeguards, such as de-identification of data. · Ensure that safety data and safety information remain available for the purpose of maintaining or improving aviation safety.	· Ministry of Civil Aviation & President of ECAA in-coordination and collaboration with the following entities: ← EAAID Central Administration ← ECAA's Central Administrations and General Directorates ← ECAA's SMSGD ← ECAA's Civil Aviation Regulations General Directorate	Implemented ECAR 13 ECAR 19	Med	SSP High-level Safety Committee

Actions	Responsible	Timeline	Priority	Monitoring
OBJ-1/G3/ORG/SEI-15A2 Enhance the State mandatory occurrence reporting system by the development and deployment of a web-based portal utilizing Event Risk Classification (ERC) in-collaboration with the IT Department	· ECAA's SMSGD in-collaboration with the IT Department	4th quarter 2024	Med	SSP High-level Safety Committee
OBJ-1/G3/ORG/SEI-15A3 Establish a State confidential voluntary safety reporting system providing data to the safety database.	· ECAA's SMSGD	Implemented	Low	SSP High-level Safety Committee
OBJ-1/G3/ORG/SEI-15A4 Revise and enhance the FDAP/ FOQA Advisory Circular (EAC).	· ECAA's SMSGD	3rd quarter 2024	High	SSP High-level Safety Committee
OBJ-1/G3/ORG/SEI-15A5 Revise and enhance SMS national regulations ECAR Part 19, EACs series 19 Advisory circulars, and SMSGD's PPM. *Keep them up to date to reflect the actual situation.	· ECAA's SMSGD in-coordination and collaboration with Central Administrations	2024-2025	High	SSP High-level Safety Committee
OBJ-1/G3/ORG/SEI-15A6 Develop and publish SSP document, and keep it updated to reflect the actual situation within EGYPT. *Initial SSP documentation including the establishment of SSP Committees and roles, have been developed.	· ECAA's SMSGD in-collaboration with SSP steering committee and SSP Action Groups	4th quarter 2024	High	SSP High-level Safety Committee

OBJ-1/G3/ORG/SEI-16
Availability of safety data and safety information to support safety management activities at the national level (step 2).

Indicator(s):
· % of national aviation organizations sharing with ECAA the agreed upon SPI's.

Stakeholders:
· Aviation personnel.
· National aviation organizations.
· ECAA's inspectors.
· National and international aviation communities.
· ICAO MID-RASG**.**

Actions	Responsible	Timeline	Priority	Monitoring
OBJ-1/G3/ORG/SEI-16A1 Establish the safety objectives to be achieved through the SSP.	· ECAA's SMSGD	Implemented	High	SSP High-level Safety Committee
OBJ-1/G3/ORG/SEI-16A2 Develop safety performance indicators. *ALoSP settings after one complete cycle (15 Jan 2025).	· ECAA's SMSGD	Implemented	High	SSP High-level Safety Committee
OBJ-1/G3/ORG/SEI-16A3 Promote safety awareness and encourage sharing of safety information with industry within EGYPT.	· ECAA's SMSGD	Continuous process	High	SSP High-level Safety Committee
OBJ-1/G3/ORG/SEI-16A4 Contribute information on operational safety risks, including SSP safety performance indicators and emerging issues to the RASG through communication with ICAO MID-office.	· President of ECAA through SMSGD	4th quarter 2024	High	SSP High-level Safety Committee

OBJ-1/G3/ORG/SEI-17
Acquisition of resources to increase the proactive use of risk modeling capabilities.

Indicator(s):
· Number of SSP/SMS training and workshops conducted per year.

Stakeholders:
· National aviation organizations.
· ECAA's inspectors.
· National and international aviation communities.

Actions	Responsible	Timeline	Priority	Monitoring
OBJ-1/G3/ORG/SEI-17A1 Identify required resources to support safety intelligence collection and processing, advanced data analysis, risk modeling and information-sharing capabilities	· President of ECAA through information from SMSGD	Continuous process	High	SSP High-level Safety Committee
OBJ-1/G3/ORG/SEI-17A3 Ensure that the Civil Aviation Safety Inspector workforce is trained to perform safety oversight of service providers that have implemented SMS.	· President of ECAA through Technical Office GM	Continuous process	High	SSP High-level Safety Committee

OBJ-1/G3/ORG/SEI-18
Strategic collaboration with key aviation stakeholders to support the proactive use of risk modeling capabilities.

Indicator(s):
· Number of conducted meetings by ECAA serving the SSP and NASP per year.

Stakeholders:
· National aviation organizations.
· ECAA's inspectors.
· National and international aviation communities.

Actions	Responsible	Timeline	Priority	Monitoring
OBJ-1/G3/ORG/SEI-18A1 Identify areas where collaboration/ support is required to ensure that stakeholders understand and foster a positive safety culture that creates a high degree of trust and respect between personnel and management and promotes safety reporting.	· SSP Steering Committee and SSP Action Groups based on information from ECAA's SMSGD	Continuous process	High	SSP High-level Safety Committee
OBJ-1/G3/ORG/SEI-18A2 Foster and participate in public-private partnerships similar to the commercial/general aviation safety teams' concept to identify and implement system safety enhancements.	· SSP Steering Committee	2nd quarter 2025	Med	SSP High-level Safety Committee
OBJ-1/G3/ORG/SEI-18A3 Collaborate with key aviation stakeholders to establish a mechanism for the regular sharing and exchange of safety information, analyses, safety risk discoveries/ lessons learned and best practices within a confidential and non-punitive environment.	· SSP Steering Committee and SSP Action Groups according to derived information from ECAA's SMSGD based on data received from national aviation organizations	Continuous process	High	SSP High-level Safety Committee

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<tr><td colspan="5" style="text-align:center">OBJ-1/G3/ORG/SEI-19
Advancement of safety risk management at the national level.</td></tr>
<tr><td colspan="5">Indicator(s):
·   % of applicable national aviation organizations implementing SMS per year.
·   Level of SSP implementation (present) in 2025.</td></tr>
<tr><td colspan="5">Stakeholders:
·   National aviation organizations.
·   ECAA's inspectors.
·   National and international aviation communities.</td></tr>
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Actions	Responsible	Timeline	Priority	Monitoring
OBJ-1/G3/ORG/SEI-19A1 Establish data sharing connectivity and integration among the aviation safety databases of the State, including the mandatory occurrences reporting system, voluntary safety reporting systems, safety audit reports and aviation system statistics (traffic volume, weather information, EI scores, etc.)	· ECAA's SMSGD	Implemented	High	SSP High-level Safety Committee
OBJ-1/G3/ORG/SEI-19A2 Develop risk modeling capabilities to support monitoring system safety issues and accident/incident prevention	· ECAA's SMSGD	Implemented	High	SSP High-level Safety Committee & Steering Committee
OBJ-1/G3/ORG/SEI-19A3 Encourage information-sharing with industry.	· ECAA's SMSGD	Implemented	High	SSP High-level Safety Committee
OBJ-1/G3/ORG/SEI-19A4 Mandate all applicable national aviation organizations to implement SMS.	· ECAA's Central Administrations and SMSGD.	Implemented	High	SSP High-level Safety Committee

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Objective 2
Assuring Resilient, efficient and Sustainable Collaboration in Civil Aviation activities and safety data sharing.
Goal 5
Expand the use of industry Programs & safety information sharing.

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OBJ-2/G4/ORG/SEI-20
Strategic collaboration with key aviation stakeholders to enhance safety in a coordinated manner.

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Indicator(s):
·   Number of assistances provided to other States for the development of national regulations (CE2).
·   EI of CE-4
·   Number of reports reported to ICAO-MID office upon request, on Operational Safety Risks and Emerging Issues.
·   Number of assistances requested by EGYPT regarding safety oversight capability or SSP implementation. (*This indicator is to be applied only in case of necessity, if Egypt is not expected to meet GASP Goals 2 and 3 by the beginning of 4th quarter 2025*).

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Stakeholder:
·   National aviation organizations.
·   ECAA's inspectors.
·   National and international aviation communities.

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OBJ-2/G4/ORG/SEI-20A1
Provide assistance to other States for the development of national regulations
(CE-2).

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·   President of ECAA through Civil Aviation Regulations General Directorate & ECAA's Concerned Central Administrations.

</td>
<td>Upon request.</td>
<td>Low</td>
<td>SSP High-Level Safety</td>
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Actions	Responsible	Timeline	Priority	Monitoring
OBJ-2/G4/ORG/SEI-20A2 Collaborate with RASG and/or RSOO, other States, ICAO, industry joint programs and/or technical school partnerships to train qualified and sufficient technical personnel (CE-4).	· President of ECAA through Technical office GM & ECAA's Central Administrations. · EAAID Director.	Continuous process.	High	SSP High-Level Safety Committee.
OBJ-2/G4/ORG/SEI-20A3 While working to improve safety oversight, work with RASG and/or RSOO to address national high-risk categories of occurrences. *Share Information with ICAO MID-office upon request, concerning national High-Risk Categories (H-RCs).	· ECAA's SMSGD.	Upon request from RASG and/or RSOO.	High	SSP High-Level Safety Committee.
OBJ-2/G4/ORG/SEI-20A4 Use a regional safety oversight mechanism, or the services of another competent State or organization to support Egypt if not expect to meet GASP Goals 2 and 3.	· President of ECAA	By the beginning 4th quarter 2025, if not expect to meet GASP Goals (2 and 3).	Low	SSP High-Level Safety Committee.

OBJ-2/G4/ORG/SEI-21
Strategic collaboration with key aviation stakeholders to start SSP implementation.

Indicator(s):
- Level of SSP implementation.
- State Safety Index..

Stakeholder:
- National aviation organizations.
- ECAA's inspectors.
- National and international aviation communities.

Actions	Responsible	Timeline	Priority	Monitoring
OBJ-2/G4/ORG/SEI-21A1 Identify areas where collaboration/ support is required as part of the SSP implementation plan.	· President of ECAA through information Presented by SMSGD	If required	Med	SSP High-level Safety Committee
OBJ-2/G4/ORG/SEI-21A2 Sharing of technical guidance, tools and safety-critical information related to SSP (e.g. advisory circulars, staff instructions, safety performance indicators). (if required, in collaboration with other States, RASG, RSOO, ICAO and/or other stakeholders).	· ECAA's SMSGD	2024 and keep it as a Continuous process	High	SSP High-level Safety Committee

Objective 3
Ensuring sustainable infrastructure to support safe operations and protect the Environment.
Goal 6
Ensure the appropriate infrastructure is available to support safety operations.

OBJ-2/G5/ORG/SEI-22
Harmonization in safety data sharing and participation in recognized aviation industry assessment programs.

Actions	Responsible	Timeline	Priority	Monitoring
OBJ-2/G5/ORG/SEI-22A1 Maintain an increasing trend in industry's contribution in safety information sharing networks within EGYPT and region to assist in the development and update of NASP and RASP by 2025.	· ECAA's SMSGD.	Continuous process.	High	SSP High-Level Safety Committee.
OBJ-2/G5/ORG/SEI-22A2 Establish a safety data collection and processing systems (SDCPS) to facilitate participation in safety information sharing network.	· ECAA's SMSGD.	Implemented	High	SSP High-Level Safety Committee.
OBJ-2/G5/ORG/SEI-22A3 Maintain an increasing trend of eligible Egyptian airlines and ground service providers to be certified by ICAO recognized industry assessment programs IATA (IOSA) and (ISAGO).	· President of ECAA through concerned Central Administrations.	Continuous process.	High	SSP High-Level Safety Committee.
OBJ-2/G5/ORG/SEI-22A4 Utilize the IATA programs (IOSA) and (ISAGO) to complement the safety oversight surveillance activities by ECAA.	· President of ECAA through concerned Central Administrations	2024-2025	Med	SSP High-Level Safety Committee.

Objective 3
Ensuring sustainable infrastructure to support safe operations and protect the Environment.
Goal 6
Ensure the appropriate infrastructure is available to support safety operations.

OBJ-3/G6/ORG/SEI-23
Implement the air navigation and airport core infrastructure and improve the EI percentage.

Indicator(s):
· EI of ANS area.
· EI of AGA area.
· Number of certified international aerodromes.
· Number of established runway safety teams.
· % of implementation of GRF plan.
· % of implemented infrastructure-related PQs linked to the Basic Building Blocks (BBB).

Stakeholders:
· ANSPs.
· Aerodrome operators.
· Air-operators.
· National and International aviation communities.

Actions	Responsible	Timeline	Priority	Monitoring
OBJ-3/G6/ORG/SEI-23A1 Conduct gap analysis to identify current ATS route networks gaps (routes layout/direction, airspace, proximity of military operational or training areas, traffic density, mixture of aircraft types and capabilities) to enable the proper structure of routes and/or the establishment (if required) of parallel unidirectional ATS routes (De- confliction).	· ECAA'S ANS Central Administration in-coordination and collaboration with SSP ANS & OPS Action Groups.	2024-2025	Med	SSP High-Level Safety Committee.
OBJ-3/G6/ORG/SEI-23A2 Ensure the structure of all missed approach altitudes, STARs and SIDs are clear of conflicting altitudes and reduced separation situations.	· ECAA's ANS Central Administration in-coordination and collaboration with Runway safety teams and SSP OPS & ANS Action Groups.	2024-2025	Med	SSP High-Level Safety Committee.

Actions	Responsible	Timeline	Priority	Monitoring
OBJ-3/G6/ORG/SEI-23A3 Consider the implementation of minimum safe altitude warning (MSAW) system by ANSP.	· ECAA's ANS Central Administration in coordination and collaboration with SSP ANS Action Group.	Implemented	Low	SSP High-Level Safety Committee.
OBJ-3/G6/ORG/SEI-23A4 Promote for ATC systems - short term conflict alert (STCA)	· ECAA's ANS Central Administration.	Implemented	Low	SSP High-Level Safety Committee.
OBJ-3/G6/ORG/SEI-23A5 Promote for human Factors and human performance influence in ATC.	· ECAA'S ANS Central Administration in-coordination and collaboration with SSP ANS Action Group.	2024-2025	High	SSP High-Level Safety Committee.
OBJ-3/G6/ORG/SEI-23A6 Establish and maintain high level of communication (Civil-Military) cooperation in (ATM and Airports).	· SSP High-Level Safety committee and Safety Steering Committee. · SSP ANS Action Group.	2024-2025	High	SSP High-Level Safety Committee.

Actions	Responsible	Timeline	Priority	Monitoring
OBJ-3/G6/ORG/SEI-23A7 Ensure certification of international aerodromes.	· ECAA's AGA Central Administration.	Implemented	Low	SSP High-Level Safety Committee.
OBJ-3/G6/ORG/SEI-23A8 Ensure the establishment and implementation of runway safety teams (RSTs). And communicate/ coordinate their outputs with other concerned ECAA's Central Administrations.	· ECAA's AGA Central Administration.	Implemented	Low	SSP High-Level Safety Committee.
OBJ-3/G6/ORG/SEI-23A9 Ensure the establishment of Global Reporting Format (GRF) of runway surface condition.	· Coordination between AGA and ANS Central Administrations.	Implemented	Low	SSP High-Level Safety Committee.
OBJ-3/G6/ORG/SEI-23A10 Encourage the implementation of ACI Airport Excellence (APEX) in Safety Programme**.**	· ECAA's AGA Central Administration in-coordination and collaboration with SSP AGA Action Group.	2025	Low	SSP High-Level Safety Committee.

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 ICAO's Universal Safety Oversight Audit Program (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.

Departure. Any flight sector/movement.

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

ICAO's Universal Safety Oversight Audit Program (USOAP) focuses on a State's capability in providing safety oversight by assessing whether the State has implemented the critical elements (CEs) of a safety oversight system effectively and consistently. This enables the State to ensure the implementation of ICAO's safety-related Standards and Recommended Practices (SARPs) and associated procedures and guidance material. In addition, it provides ICAO with a means to monitor continuously the States' fulfillment of their safety oversight obligations.

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 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 and/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;
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 operational safety risks and organizational challenges at the Global, Regional, and National 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.

ACAS	Airborne Collision Avoidance System
AGA	Aerodrome and Ground Aid
AHS	Aviation Health Safety
AI	Artificial Intelligence
AIP	Aeronautical Information Publication
AIR	Airworthiness
ANS	Air Navigation Services
ANSP	ANS Provider
AOC	Air Operators Certificate
ARC	Abnormal Runway Contact
ATC	Air Traffic Control
ATM	Air Traffic Management
ATO	Approved Training Organizations
BBB	BBB- Basic Building Blocks
CAP	Corrective Action Plan
CAT	Clear Air Turbulence
CEs	Critical Elements
CFIT	Controlled Flight Into Terrain
CICTT	CAST/ ICAO Common Taxonomy Team
CMA	Continuous Monitoring Approach
CRM	Crew Resource Management
DGR	Dangerous Goods Regulations
EAAID	Egyptian Aircraft Accident Investigation Directorate
ECAA	Egyptian Civil Aviation Authority
EGPWS	Enhanced Ground Proximity Warning System
EI	Effective Implementation
FDA	Flight Data Analysis

FDAP	Flight Data Analysis Program
FH	Flying Hours
FM	Flight Movement
GASP	Global Aviation Safety Plan
GPWS	Ground Proximity Warning System
GRF	Global Reporting Format
H-RCs	High Risks Categories
HYD	Hydraulic
IOSA	IATA Operational Safety Audit
IMC	Instrument Metrological Conditions
ISAGO	IATA- Safety Audit for Ground Operations
iSTARS	Integrated Safety Trend Analysis and Reporting System
LOC-I	Loss of Control In flight
MAC	Mid Air Collision
MEL	Minimum Equipment List
MID-RASG	*Middle East* Regional Aviation Safety Group
MID-RASP	*Middle East* Regional Aviation Safety Plan
MORs	Mandatory Occurrence Reports
MOU	Memorandum of Understanding
MRVA	Minimum Radar Vectoring Altitude
MSA	Minimum Safe Altitude
MSAW	Minimum Safety Altitude Warning
NASP	National Aviation Safety Plan
OLF	On Line Framework
OPS	Operations
ORG	Organization
P	Priority
PDCA	Plan Do Check Act
PED	Personal Electronic Devices
PEL	Personnel Licensing

PQs	Protocol Questions
QMS	Quality Management System
RAIO	Regional Accident and Investigation Organization
RAMP	Ramp Ground Operations
RASG	Regional Aviation Safety Group
RE	Runway Excursion
RI	Runway Incursion
RPAS	Remotely Piloted Aircraft System
RSOO	Regional Safety Oversight Organization
RSP	Runway Safety Programme
RST	Runway Safety Team
SDA	Safety Data Analysis
SEIs	Safety Enhancement Initiatives
SMSGD	Safety Management System General Directorate
SMS	Safety Management System
SOI	Safety Oversight Index
SOP	Standard Operating Procedure
SPI	Safety performance Indicator
SPT	Safety Performance Target
SRM	Safety Risk Management
SSCs	Significant Safety Concerns
SSP	State Safety Programme
STCA	Short Term Conflict Alert
TAWS	Terrain Awareness Warning System
TCAS	Traffic Collision Avoidance System
TEM	Threat and Error Management
UAS	Unmanned Aerial System
UAVs	Unmanned Aerial Vehicles
USOAP	Universal Safety Oversight Audit Programme
VNAV	Vertical Navigation
VORs	Voluntary Occurrence Reports
WHO	World Health Organization
WS	Wildlife Strike