International Civil Aviation Organization

MIDANPIRG/22 & RASG-MID/12 Meetings

(Doha, Qatar, 4 – 8 May 2025)

Agenda Item 4.2: Outcomes of the SEIG meetings

Safety Performance Management within the Egyptian State Safety Programme (SSP)

(Presented by Egypt/ECAA's Safety Management Directorate)

SUMMARY

This paper presents the Egyptian Civil Aviation Authority's structured and evolving Safety Performance Management framework in implementing ICAO Annex 19 requirements. It provides the foundation for continuous improvement in aviation safety through data-driven decision-making, stakeholder collaboration, and dynamic oversight strategies. ECAA remains committed to sharing its experience and supporting regional harmonization efforts through ICAO MID RASG.

Action by the meeting is at paragraph 4

REFERENCE

- **ICAO ANNEX 19**
- **ICAO DOC. 9859**
- **ISMCG DOCUMENTS**
- **ECAR PART 19**

1. INTRODUCTION

1.1 In alignment with ICAO Annex 19 – Safety Management, the Egyptian Civil Aviation Authority (ECAA) has implemented a robust framework for Safety Performance Management (SPM) as a core component of its State Safety Programme (SSP). This initiative is designed to ensure a data-driven, risk-based, and performance-oriented oversight approach across all aviation domains in Egypt.

1.2 ECAA's SPM efforts are built on ICAO's evolving guidance to move towards an integrated system that manages safety performance through Safety Performance Indicators (SPIs) and Safety Performance Targets (SPTs), to achieve a level of safety performance closely aligned with national safety objectives and industry performance.

2. DISCUSSION

2.1 Framework for Safety Performance Management (SPM)

ECAA's SPM is modeled on a Plan-Do-Check-Act (PDCA) cycle. It encompasses the following steps:

a) **Plan**:

- Designation of responsibility lies within the ECAA's Safety Management Directorate.
- Development of a national risk portfolio through comprehensive data collection and analysis (e.g., MORs, VORs, accident reports, ICAO USOAP CMA, and internal evaluation program).
- Establishment of Safety Objectives combined with defined sets of Safety Performance Indicators (SPIs) and targets. That are Specific, Measurable, Achievable, Realistic, and Time bound (SMART) being strategic and aligned with Egypt's civil aviation safety priorities.

b) **Do**:

- Identification and monitoring of both operational risks (e.g., incidents, precursors) and process implementation risks (e.g., SMS maturity, regulatory oversight).
- Use of SPIs and SPTs at State and aviation organizations (operators and service providers) levels, integrating both leading (proactive) indicators and lagging (reactive) of "Low Probability/High Severity" indicators and "High Probability/Low severity" precursors indicators.

c) **Check**:

- Assessment of whether targets are being met, using SPIs across all tiers and feedback from oversight, SMS assessments, and safety trends. With timely intervention according to alert levels.

d) **Act**:

- Implementation of safety actions based on data analysis and SPI trends.
- Update of sectoral risk profiles and the State's risk portfolio based on monitoring outputs.
- Communication of performance outcomes to stakeholders and the public, promoting transparency and fostering a positive safety culture.

2.2 Three-Tier Performance Measurement Model

ECAA has adopted a Three-Tier Safety Performance Measurement Matrix, structured as follows:

A. **Tier 1**: Measures safety outcomes at the national level (e.g., accident and fatality rates).

   Purpose: Public transparency, benchmarking, and strategic planning.

B. **Tier 2**: Focuses on behaviours and outputs of aviation organizations (operators and service

providers), including precursor events and systemic safety issues.

Purpose: Operational safety management and regulatory intervention.

C. **Tier 3**: Assesses the regulator's own performance.

Purpose: Continuous improvement of ECAA's safety oversight capabilities.

2.3 Integration of Risk-Based Oversight (RBO)

ECAA's SPM framework directly supports its Risk-Based Oversight (RBO) approach. This includes:

- Use of safety data to develop dynamic risk profiles across all sectors.
- Continuous updates to the National Aviation Safety Plan (NASP) based on SPI trend analysis and stakeholder input.

3. Output

3.1 As a result of its comprehensive SPM framework, ECAA has achieved the following:

- **Establishment of Safety Performance Oversight:**
  All safety oversight activities are now informed by a standardized set of SPIs and SPTs at State and service provider levels.

- **Enhanced Alignment with ICAO and MID Region Goals:**
  ECAA's SPM aligns with ICAO's direction towards managing safety performance to meet objectives, contributing to the safety priorities of the MID Region.

- **Integrated Feedback Mechanism:**
  Outputs from safety data analysis feed directly into SSP performance assessments, regulatory decisions, and updates to safety actions within the NASP.

- **Cross-Sectoral Engagement:**
  Active collaboration with stakeholders (industry, ANSP, airports, maintenance providers, etc.) through SSP Action Groups (AGs) and communication of safety performance data supports transparency and a just culture.

- **Dynamic Improvement Cycle:**
  Continuous monitoring and periodic revision of SPIs and SPTs based on operational trends, allowing timely interventions and strategic adjustments.

4. ACTION BY THE MEETING

4.1 The meeting is invited to note the information contained in this paper.

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