



*International Civil Aviation Organization*

**MIDANPIRG/23 & RASG-MID/13 Meetings**

*(Cairo, Egypt, 14 – 18 June 2026)*

**Agenda Item 4.3: Other Emerging Safety Matters**

**AVIATION RISK MANAGEMENT AND OPERATIONAL RESILIENCE**

*(Presented by Saudi Arabia)*

**SUMMARY**

This paper provides an overview on the application of a structured Aviation Risk Management and Operational Resilience framework utilizing the Safety Analytic Technique-led Scenario Risk Cycle (SAT/SRC) to support State aviation safety risk management. The framework constitutes a coordinated approach for risk identification, assessment, mitigation, monitoring, and oversight through collaboration among civil aviation authorities, military, and industry stakeholders.

Action by the meeting is at paragraph 3.

**REFERENCE**

- Annex 19 — Safety Management
- Doc 9859 — Safety Management Manual (SMM)
- Doc 10084 — Risk Assessment Manual for Civil Aircraft Operations Over or Near Conflict Zones
- KSA State Safety Programme (SSP)

**1. INTRODUCTION**

1.1 The effective aviation Risk Management requires the timely identification of emerging threats and the implementation of appropriate controls and mitigation measures to ensure the continued safety of aviation operations.

1.2 The ICAO guidance recognizes the importance of cooperation and collaboration among civil aviation authorities, military organizations, air navigation service providers, aircraft operators, and other stakeholders in managing risks that may affect civil aviation operations.

1.3 The SAT/SRC framework provides a structured method for assessing potential threats, coordinating between stakeholders, developing mitigation measures, and supporting informed decision-making through continuous monitoring and reassessment activities.

**2. DISCUSSION**

2.1 **SAT/SRC FRAMEWORK OVERVIEW:** The framework is based on a collaborative

and risk-based approach that brings together the relevant stakeholders to evaluate threats, assess risks, identify mitigation measures, implement actions and monitor their effectiveness. The framework supports the following steps:

- a) identification of potential threats affecting aviation operations;
- b) assessment of associated risks and operational impacts;
- c) development and evaluation of mitigation measures;
- d) implementation of agreed actions;
- e) continuous monitoring of operational conditions; and
- f) periodic reassessment of risks and mitigation effectiveness.

The framework operates as a continuous cycle, ensuring that risk management activities remain responsive to changing conditions and emerging threats.

**2.2 GOVERNANCE AND STAKEHOLDER INVOLVEMENT:** Effective implementation of the framework requires participation and contribution from relevant government entities, civil aviation authorities, military, and industry stakeholders. Stakeholders contribute with information, expertise, and operational perspectives to support comprehensive risk assessments and informed decision-making. The collaborative approach promotes a common understanding of risks and facilitates the development of practical and proportionate mitigation measures.

**2.3 APPLICATION WITHIN STATES AND CIVIL AVIATION AUTHORITY :** Within the Kingdom of Saudi Arabia, the SAT/SRC framework is implemented through the State Safety Program (SSP) Governance Model, which provides the structure for stakeholder consultation, coordination, decision-making, implementation, monitoring, and oversight activities related to aviation safety risk management.

The SSP Governance Model brings together the National Aviation Safety Committee (NASC), Crisis Management Team (CMT), SSP specialized working groups (AGA, ANS, AIR, and OPS), and industry stakeholders to support a coordinated and risk-based approach to the management of risks that may affect aviation operations.

The Crisis Management Team (CMT) serves as the primary coordination forum within the framework, facilitating information sharing and coordination among GACA, NASC, SSP working groups, industry stakeholders, and other relevant entities.

**2.4 NASC STRATEGIC OVERSIGHT:** NASC provides strategic oversight of the framework by reviewing risk assessment outcomes, monitoring implementation progress, supporting stakeholder coordination, and facilitating collaboration across the aviation sector service providers and operators. In addition, NASC serves as the primary forum for civil-military coordination.

**2.5 SSP WORKING GROUP RISK ASSESSMENT:** Risk assessments are conducted through SSP specialized working groups responsible for:

- reviewing available information and relevant data;
  - identifying potential risks to aviation operations;
  - assessing risk levels and operational impacts;
  - evaluating existing controls and mitigation measures; and
  - recommending additional actions where necessary.
- This process enables stakeholders to evaluate risks collectively, assess existing controls, and identify additional mitigation measures based on the assessed level of risk.

**2.6 MITGATIONS IMPLEMENTATION:** Industry stakeholders contribute through the operational expertise and support the implementation of practical and effective mitigation measures. Their participation enhances information sharing, situational awareness, and ensures that operational considerations are incorporated into the risk management process.

2.7 **MOINTORING AND OVERSIGHT:** The General Authority of Civil Aviation provides regulatory oversight for the implementation of agreed mitigation measures and monitors their effectiveness through established safety oversight processes and procedures to ensure that risks are managed at an acceptable level of safety performance.

2.8 **CONTINUOUS CYCLE:** The framework operates as a continuous risk management cycle consisting of risk identification, risk assessment, mitigation development, implementation, monitoring, and reassessment. This approach supports proactive risk management and enables timely responses to evolving operational conditions, and threats. A PowerPoint Presentation on this framework is attached to this paper.

### 3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) note the information contained in this paper and the implementation of the SAT/SRC framework;
- b) recognize the value of structured and collaborative risk management frameworks that support stakeholder coordination, continuous monitoring, risk assessment, and mitigation activities in support of aviation safety;
- c) encourage States to consider establishing or using similar frameworks and governance mechanisms to support coordinated risk management, information sharing, and decision-making among civil aviation authorities, military, and industry stakeholders; and
- d) encourage the exchange of best practices, experiences, and lessons learned related to the implementation of SAT/SRC frameworks and other collaborative approaches that contribute to the enhancement of aviation safety risk management.

- END -

Attachment: PowerPoint Presentation on the Safety Analytic Technique-led Scenario Risk Cycle (SAT/SRC)