

22nd COSCAP Southeast Asia Steering Committee Meeting (SCM/22)

(Diamond Hotel, Manila, Philippines, 19-20 June 2025)

Information Paper 3 (IP-3)

Agenda Item 10: Updates from Safety Partners

Use of risk-based auditing in industry and potential benefits for State oversight / Surveillance programs including USOAP/SSP-IA

(Presented by the International Air Transport Association - IATA)

EXECUTIVE SUMMARY

This discussion paper presents an overview of the benefits of the risk-based approach used by the IATA Operational Safety Audit (IOSA).

An effective risk-based surveillance program takes the outcomes from surveillance activities as a source of intelligence to feed back into the program to support its evolution, including the drafting of provisions.

There is a lack of insights gained from both the USOAP and SSP-IA for the expert groups (panels) charged with the drafting ICAO SARPs and guidance material. Consequently, an opportunity is missed to evolve provisions that take into consideration surveillance outcomes from USOAP and SSP-IA

Action: The COSCAP Southeast Asia Steering Committee is invited to:

- a) note and consider the contents of this discussion paper.

1. INTRODUCTION

1.1 ICAO Doc 10004, Global Aviation Safety Plan (GASP), among others, strives to enhance global civil aviation safety by taking data-driven decisions; promoting the sharing and exchange of safety information; and prioritizing actions to address operational safety risks and organizational challenges through a risk-based approach.

1.2 It further stipulates that an SSP requires the implementation of a risk-based approach to measure and monitor the safety performance of the State's civil aviation system.

1.2 The GASP Goals include, among others, the implementation of effective State safety programs (Goal 3) and the aiming for the expansion of using industry assessment programs and safety information sharing networks (Goal 5). Goal 5 specifically, has the target to increase the number of service providers participating in relevant industry assessment programs.

1.3 The GASP recognizes the IATA Operational Safety Audit (IOSA) as an industry safety assessment program¹. As such, IOSA delivers on the GASP Goal to expand the use of industry programs.

1.4 ICAO Doc 8335, Manual of Procedures for Operations Inspection, Certification and Continued Surveillance refers to the industry assessment programs such as IOSA, in part as a provider of audit information for review of aircraft leases, codeshare arrangements and other operators.

1.5 The IOSA Program is a globally recognized audit system that evaluates an air operator's operational management and control systems. All IATA members are IOSA registered and must remain registered to maintain their IATA membership. As of June 2025, 440 airlines are listed on the IOSA registry, including 81 that are not IATA members.

1.6 IOSA has demonstrated its contribution to improved safety performance. Since 2005, the all-accident rate for airlines on the IOSA registry is almost three times better than for non-IOSA airlines. This sustained performance demonstrates that the implementation of global standards contributes to the improvement of safety.

1.7 The Universal Safety Oversight and Audit Programme (USOAP) was established to monitor the fulfilment of safety oversight obligations by states, including the assessment of the implementation of standards, recommended practices and guidance material. The State Safety Programme – Implementation Assessment (SSP-IA) is a complementary programme which assesses the effective implementation of a State Safety Programme by a State.

2. DISCUSSION

2.1 Risk-Based IOSA (RBI)

2.1.1 In 2022, IATA began evolving IOSA into a risk-based model under which audits are tailored to the operator's profile, focusing on high-priority areas through a data-driven approach.

2.1.2 IOSA Standards and Recommended Practices (ISARPs) are now prioritized on an industry level, taking into consideration, among others, industry safety performance and aggregate audit data. Audit scopes are tailored and focus areas are identified, based on an air operator's profile, audit history and recent safety performance

2.1.3 Audit practices were updated to include a process-based approach and more nuanced focus techniques. Some 200 IOSA Auditors worldwide are directly engaged and trained by IATA. A maturity assessment has been introduced, which determines the degree to which an operator's SMS and other safety relevant systems and programs are effective.

¹ ICAO Doc 10004 Global Aviation Safety Plan, 4.2.7.2: "For the purpose of the GASP, ICAO-recognized industry assessment programmes include the following: a) Airports Council International (ACI) Airport Excellence (APEX) in Safety programme; b) Civil Air Navigation Services Organization (CANSO) and European Organization for the Safety of Air Navigation (EUROCONTROL) maturity assessment within the Standard of Excellence in Safety Management Systems; c) Flight Safety Foundation (FSF) Basic Aviation Risk Standard (BARS); d) International Air Transport Association (IATA) Operational Safety Audit (IOSA); e) IATA Safety Audit for Ground Operations (ISAGO); and f) International Business Aviation Council (IBAC) International Standard for Business Aircraft Operations (IS-BAO)."

2.1.4 In 2024, IATA Connect was launched. IATA Connect is an industry-wide platform, connecting operators, auditors, and in the future also civil aviation authorities. The platform houses a comprehensive resource library and the IOSA registry as well as the IATA Safety Issue Hub. IATA Connect allows operators and authorities alike to exchange information with each other and to access IOSA Audit Reports as well as other safety and compliance relevant information by accessing air operator profiles in a secure environment.

2.1.5 IATA develops the IOSA Standards and Recommended Practices (ISARPs) in accordance with established governance and standards development rules and policies. These rules and policies ensure, among others, that the ISARPs are primarily derived from applicable standards in the Annexes to the Chicago Convention

2.1.6 The ISARPs are developed, maintained and overseen by the IOSA Oversight Group and the IOSA Task Forces (groups of subject matter experts responsible for each of the IOSA audit domains). Revisions to the standards are driven by a number of factors, including but not limited to first hand feedback from the IOSA program, by means of auditor/operator feedback, audit statistics and other program insights.

3. EVOLUTION OF USOAP – LESSONS LEARNED FROM IOSA

3.1 The transition to risk-based IOSA has led to an increase in average number of non-conformities, but more importantly, it has increased the quality of the audit results.

3.2 Feedback from airlines indicates that the IOSA maturity assessments provide a valuable complement to the compliance assessment against the IOSA standards. Changes to audit methods and direct engagement and training of auditors have led to more thorough assessments and more meaningful audit outcomes.

3.3 A risk-based approach, if implemented effectively, is not a measure to save resources, but to achieve a more effective outcome of assurance activities through smarter resource allocation.

3.4 The changes to the program have resulted in valuable safety and compliance insights regarding air operators. For example, the quality of identified non-conformities has improved, and the maturity assessments provide insights about the industry's effectiveness in implementing SMS.

3.5 The above-mentioned insights, in turn, improve the standards development process. In particular, the Task Forces can be provided with meaningful analysis of the audit results, which can be used to drive improvements to the standards.

3.6 Key regulators have since acknowledged the important evolution of IOSA through the introduction of Risk-Based IOSA, and support IATA Connect to complement state safety oversight.

3.7 There is a lack of visibility of insights gained from both the USOAP and SSP-IA for the expert groups (panels) charged with the drafting ICAO SARPs and guidance material. Consequently, an opportunity is missed to evolve provisions that take into consideration surveillance outcomes from USOAP and SSP-IA.

3.8 Surveillance outcomes can provide an indication of weak areas of provision implementation, that the provision was not well developed and requires evolution, or that enhanced guidance is required to support implementation.

3.9 An effective risk-based surveillance program takes the outcomes from surveillance activities as a source of intelligence to feed back into the program to support its evolution, including its provisions.

3.10 In the USOAP/SSP-IA setting, this translates into the findings and observations from the programs being made available as part of the process for the drafting of standards and recommended practices (SARPs) and supporting guidance material.

4. IMPROVED VISIBILITY OF INSIGHTS FROM USOAP

4.1 The initial drafting of SARPs is typically undertaken by subject matter experts participating in ICAO expert groups (panels), prior to the eventual adoption by the ICAO Council.

4.2 The details of USOAP findings and SSP-IA observations are made available to the state who received the audit, and in a de-identified format, to other member states. Additionally, the Lack of Effective Implementation (LEI) of Critical Elements scores are made available on ICAO website. However, the detailed outcomes of surveillance (in an appropriately de-identified format) are not provided to the expert groups who undertake the initial drafting of SARP provisions.

4.3 Consequently, the drafting of provisions does not take into consideration real world safety management implementation challenges identified for service providers and states that are highlighted through the USOAP and via an SSP-IA.

4.4 ICAO provisions can only evolve to their greatest potential if the expert groups charged with their drafting are furnished with insights obtained from USOAP and SSP-IA.

5. EVOLUTION OF ICAO PROVISIONS

5.1 Prescriptive provisions provide a baseline level of risk mitigation. However, the benefits of performance-based provisions are widely recognized; where, instead of specifying a prescriptive means to meet an outcome or objective, the outcome is specified, where the service provider or state is free to determine the most effective and appropriate means to deliver this outcome.

5.2 Providing insights from the USOAP and SSP-IA to the ANC Panels would provide enhanced information to identify the prescriptive based provisions which are suitable candidates to be evolved to be performance-based.

5.3 Insights provided from the USOAP and SSP-IA to the ANC Panels may primarily focus on states. Therefore, these insights could be complemented with insights coming from ICAO recognized industry evaluation programs such as IOSA. This would add aggregate information related to service providers, such as challenges that they face with regards to implementing certain standards.

5.4 There is potential for the USOAP and the SSP-IA program to benefit from insights received during the surveillance process, in the same way the IOSA's program takes insights from audits and incorporates them back into the program.

6. CONCLUSION

6.1 There is a lack of visibility of insights gained from both the USOAP and SSP-IA for the expert groups (panels) charged with the drafting ICAO SARPs and guidance material.

6.2 Consequently, an opportunity is missed for the evolution of ICAO SARPs to take into consideration surveillance outcomes from USOAP and SSP-IA. Meaningful insights from the USOAP and SSP-IA, as well as ICAO recognized industry evaluation programs such as IOSA would serve as additional enablers to an effective standards development process.

6.3 The USOAP program may benefit from utilizing intelligence gained from audits in the same way adopted by IOSA's risk-based approach.

6.4 Providing insights from USOAP and SSP-IA would support moving towards a greater number of provisions to become performance based, rather than prescriptive.

7. ACTION

7.1 COSCAP-SEA Steering Committee is requested to note and consider the contents of this discussion paper.

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