



International Civil Aviation Organization

RASG-MID Steering Committee

Sixth Meeting (RSC/6)
(Cairo, Egypt, 25 – 27 June 2018)

Agenda Item 2: Global Developments related to Aviation Safety

GLOBAL DEVELOPMENTS RELATED TO AVIATION SAFETY

(Presented by the Secretariat)

SUMMARY

This paper provides an update on the global developments related to aviation safety, particularly the Global Aviation Safety Plan (GASP), Global Aviation Safety Oversight System (GASOS) and Safety Management.

Action by the meeting is at paragraph 3.

REFERENCES

- RASG-MID/6 Report
- Report of the GASOS Feasibility Study

1. INTRODUCTION

1.1 The current version of the GASP (Doc 10004) is 2017 - 2019 Edition, which is available at <http://www.icao.int/gasp>, was approved by the Council during its 208th Session in May 2016 and endorsed at the 39th Session of the ICAO Assembly (27 September – 7 October 2016). ICAO is currently revising the GASP in preparation for the 2020 - 2022 Edition.

1.2 The First Amendment to Annex 19 — Safety Management was adopted by the ICAO Council on 2 March 2016 and became effective on 11 July 2016 with an applicability date of 7 November 2019. It is important to note that the applicability for the existing safety management provisions as originally introduced continue to apply; the new applicability date only relates to the changes introduced with Annex 19, Amendment 1. States are encouraged to begin working to address Amendment 1 to Annex 19 as soon as possible to ensure implementation is achieved by the applicability date.

1.3 Subsequent to the adoption of Amendment 1 to Annex 19, ICAO identified the following deliverables to support the implementation of effective State Safety Programmes (SSPs) and Safety Management Systems (SMS):

- a) an update to the Safety Management Manual (SMM) (Doc 9859);

- b) the development of an ICAO Safety Management Implementation (SMI) website to serve as a repository for the collection and sharing of practical examples and tools to complement the SMM;
- c) updated SSP implementation tools;
- d) an update to the ICAO Safety Management Online Training Course; and
- e) ICAO Safety Management Symposia and Workshops.

1.4 The main objective of new Global Aviation Safety Oversight System (GASOS) is to enable the strengthening of State safety oversight capabilities by providing States with a system for the delegation of certain safety oversight functions or tasks to ICAO recognized Safety Oversight Organizations (SOOs). GASOS will also strengthen existing SOOs to make them more effective and efficient in supporting States. The following three levels are defined, based on the complexity of tasks and functions performed:

Level 1 – advisory and coordinating tasks and functions

Level 2 – operational assistance tasks and functions

Level 3 – certifying agency tasks and functions

2. DISCUSSION

Global Aviation Safety Plan (GASP)

2.1 The GASP Study Group (GASP-SG), composed of subject matter experts from States, covering all Regions, and International Organizations was established to develop the 2020 - 2022 Edition of the GASP and to address organizational challenges, such as effective safety oversight and SSP implementation, as well as operational safety risks, current and emerging.

2.2 The 2020 - 2022 Edition of the plan will contain a series of Goals, Targets and Indicators for States, Regions and Industry. It will also address high-risk categories of occurrences, which could lead to fatalities, such as Loss of Control in-Flight accidents. These categories will supersede the current global safety priorities.

2.3 The draft 2020 - 2022 Edition of the GASP will be sent to States and International Organizations as part of the consultation process. The next edition of the GASP will then be formally presented at the 13th Air Navigation Conference in October 2018 to gather feedback. It will then undergo a final review by the ANC and be submitted to the Council of ICAO for its approval. The next edition of the GASP will then be presented at the next 40th Session of the ICAO Assembly in October 2019 for endorsement, prior to its publication in early 2020. The 2020 - 2022 Edition of the GASP will serve as the basis for the development and implementation of national and regional aviation safety plans.

2.4 The GASP offers a long-term vision that will assist ICAO, RASGs, RSOOs and other regional entities, States and industry in developing a harmonized safety strategy. The inclusion of the Global Aviation Safety Roadmap in the GASP provides a structured common frame of reference for all relevant stakeholders to ensure that safety initiatives deliver the intended benefits associated with the GASP objectives.

2.5 It's to be highlighted that the RASG-MID/6 meeting (Bahrain, 26-28 September 2017) invited States to provide ICAO with their feedback on the new Global Aviation Safety and Roadmap and suggestions for the future 2020 -2022 edition. Accordingly, the ICAO MID Regional Office sent State Letters followed by reminders. However, no reply has been received.

CONCLUSION 6/1: GLOBAL AVIATION SAFETY PLAN (GASP)

That, States:

- a) be requested to establish a national aviation safety plan, including goals and targets consistent with the MID Region Safety Strategy, and in line with the GASP objectives, including the global aviation safety roadmap, and based on their operational safety needs; and*
- b) be invited to provide ICAO feedback on the new global aviation safety roadmap and suggestions for the future 2020 -2022 edition of the GASP via email to GASP@icao.int, by March 2018.*

Fourth Edition of the Safety Management Manual

2.6 The advance unedited version of the Safety Management Manual (SMM, Doc 9859), Fourth Edition has been posted on the ICAO-NET (<https://portal.icao.int/icao-net>).

2.7 The Fourth Edition of the *Safety Management Manual (SMM)* (Doc 9859) includes guidance material to address the full range of subjects covered by Annex 19, Amendment 1 and, in particular, the implementation of State Safety programmes (SSP), which is a key objective of the GASP. It also provides guidance for States and service providers on the implementation of Safety Management Systems (SMS) in accordance with the provisions of Annex 19. A Summary of the changes from the Third to the Fourth Edition is provided in **Appendix A**.

Safety Management Implementation Website

2.8 The ICAO Safety Management Implementation (SMI) website is a public website that serves as a repository for sharing practical examples and tools to support effective SSP and SMS implementation. This SMI public website is now available at <https://www.icao.int/SMI>.

2.9 ICAO State Letter AN8/9-18/48 dated 19 April 2018 invited States and International Organizations to nominate a focal point for the submission of the practical examples and tools for validation and subsequent posting on the SMI public website.

SSP Implementation Tools

2.10 In recognition of safety oversight forming the foundation of the SSP, an SSP Foundation Tool has been developed to complement the SSP GAP Analysis Tool on iSTARS (<https://portal.icao.int/space/Pages/SSP-Gap-Analysis.aspx>). The tool is expected to assist States in building a solid safety oversight foundation in support of an effective SSP implementation and allows States to verify the status of a subset of USOAP PQs, which have been identified as the foundation for SSP. SSP implementation plans should include the resolution of these PQs. The SSP foundation tool has been updated in March 2018 to align with the USOAP PQs 2016 version and can be found on iSTARS at <http://portal.icao.int/space/Pages/SSPFoundation.aspx>.

2.11 The ICAO SSP GAP Analysis tool will be updated by July 2018 to reflect Amendment 1 to Annex 19. The data already entered into the ICAO SSP GAP Analysis tool will be transferred to the updated tool.

SSP Implementation Assessments under the USOAP CMA

2.12 In order to assess State's implementation of SSP, ICAO is rolling out SSP Implementation Assessments under the USOAP CMA. In June 2018, a new set of SSP-related PQs were published by ICAO, reflecting Amendment 1 of Annex 19, the 4th Edition of the SMM and the lessons learned to date from the voluntary confidential SSP implementation assessments performed by ICAO. Although Amendment 1 to Annex 19 does not become applicable until November 2019, selected States will be approached by ICAO with a view to performing assessments using the amended SSP-related PQs between 2018 and 2020 on a voluntary but non-confidential basis. As of 2021, ICAO will perform assessments using the Amended SSP-related PQs on the States, which will meet the criteria to be established by ICAO, in line with the GASP.

Safety Management Training Programme

2.13 ICAO offers a Safety Management Training Programme using a blended training approach with an online portion and a face-to-face portion. The Safety Management Online Training Course is most beneficial for those who work for a State regulatory body involved in the planning, development, and implementation of SSP, and for staff who work for an aviation service provider involved in the planning, development, and implementation of SMS (<http://store1.icao.int/index.php/safety-management-training-tic-course-part-1-html.html>).

2.14 To complement the Safety Management Online Training Course, the Safety Management for Practitioners Course (SMxP) aims to provide regulatory and service provider staff involved in the implementation of SSP and SMS with an understanding of operational safety management processes and practical examples.

ICAO Safety Management Symposia and Workshops

2.15 To further promote the implementation of safety management, ICAO has delivered 4 Regional Safety Management Symposia across all ICAO Regions. The symposia provided an important information-sharing opportunity for regulators, service providers, operational personnel and all aviation professionals involved in safety management activities.

2.16 Regional Safety Management Workshops were delivered with the Symposia, with additional Workshops planned across all ICAO Regions. The Workshops will be tailored to the needs of the participants and will focus on the more practical aspects of safety management with case studies and hands on exercises. The Workshops are expected to provide a means for sharing of experience at a regional level and an opportunity for the further collection of examples to be posted on the ICAO SMI website.

Global Aviation Safety Oversight System (GASOS)

2.17 The GASOS was presented at Director General level meetings and Regional Aviation Safety Group (RASG) meetings. The GASOS concept was also presented at the first Safety and Air Navigation Implementation Symposium (SANIS/1) in December 2017 where further development of the concept was encouraged.

2.18 The launch of GASOS is planned for January 2020. ICAO has so far completed an evaluation of RSOOs and a feasibility study confirming GASOS to be achievable, established a study group of experts to assist in the development of the GASOS programme, and in 2018 will complete a legal review, a business case, the development of tools and pilot tests of the assessment mechanisms.

2.19 It's to be highlighted that the RASG-MID/6 meeting (Bahrain, 26-28 September 2017) supported the conduct of the GASOS Feasibility Study and agreed to the following Conclusion:

CONCLUSION 6/3: REGIONAL SAFETY OVERSIGHT ORGANIZATIONS

That, States support:

- a) *the proposed global strategy and action plan to improve RSOOs; and*
- b) *the conduct of a study related to the proposed global aviation safety oversight system (GASOS).*

2.20 The feasibility study was conducted in November 2017 aiming to assist stakeholders in exploring how GASOS can be developed into a viable, effective and sustainable global solution to improve safety oversight. The analysis included an identification of risks and their mitigation strategies; a review of various options for the establishment and implementation of GASOS and it provides input for the development of a Business Case that could help determine if GASOS would be financially viable as a self-funding programme.

2.21 The conclusion of the feasibility study is that no issues have been identified to signal that the GASOS initiative would not be achievable. The review process helped clarify a number of institutional issues and pointed more clearly toward a direction where GASOS could deliver the most value. Supporting safety oversight capacity at the operational level would likely have the greatest overall impact on improving global safety oversight capacity. Therefore, whereas the GASOS assessment or recognition process would be open to any safety oversight service provider, it is recommended that its primary focus be on Level 2 service providers of operational assistance to States. A Summary of Recommendations is at **Appendix B**.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) note the information related to Global Aviation Safety developments, and take action as required;
- b) invite States, International and Regional Organizations to share practical examples and tools which support the implementation of effective safety management to be considered for posting on the Safety Management Implementation (SMI) website; and
- c) review the recommendations of the GASOS feasibility study, and take action as necessary.

APPENDIX A

CHANGES FROM THE THIRD TO THE FOURTH EDITION OF THE SAFETY MANAGEMENT MANUAL (SMM)

Importantly, the 4th edition of the Safety Management Manual (SMM) is an evolution of its predecessors. Readers will see many similarities between the 4th edition and the 3rd Edition of the SMM. The key differences between the two editions are highlighted in the table below.

No.		Summary of Changes
3rd Edition		4th Edition
1	254 pages	<ul style="list-style-type: none"> approx. 170 pages
2	Examples and tools contained in the manual as Appendices to the Chapters	<ul style="list-style-type: none"> Examples and tools from the 3rd edition of SMM moved to the Safety Management Implementation (SMI) website which is complementary to the 4th edition of SMM Additional examples and tools will be collected from the stakeholders and will be posted on the SMI website to support SSP and SMS implementation that is commensurate with the size and complexity of the organization
3	Aligned to <i>Annex 19 Safety Management, 1st edition</i>	<ul style="list-style-type: none"> Aligned to <i>Annex 19 Safety Management, Amendment 1</i>
4	Divided into five chapters: <ol style="list-style-type: none"> Overview of the Manual Safety Management Fundamentals ICAO Safety Management SARPs State Safety Programme (SSP) Safety Management Systems (SMS) 	Divided into 9 Chapters with expanded guidance for the new Chapters: <ol style="list-style-type: none"> Introduction Safety Management Fundamentals Safety Culture Safety Performance Management Safety Data Collection and Processing Systems Safety Analysis Protection of Safety Data, Safety Information and Related Sources State Safety Management Responsibilities Safety Management Systems

5	No information regarding safety management applicability beyond mention of applicability dates	<ul style="list-style-type: none"> Expanded introduction to address the scope of safety management provisions and their applicability, including discretionary SMS applicability
6	No information on integrated risk management	<ul style="list-style-type: none"> Concept of integrated risk management is introduced in Chapter 1
7	State safety oversight (SSO) and the critical elements (CEs) limited to SSP component 3: State safety assurance.	<ul style="list-style-type: none"> <i>Chapter 8 – State Safety Management Responsibilities</i> reflects the SSP with the State safety oversight (SSO) system critical elements (CEs) as the foundation of SSP. The CEs are integrated throughout the components. The term “framework” is no longer used in reference to SSP.
8	The role of safety objectives not strongly highlighted	<ul style="list-style-type: none"> Strengthened link between safety objectives and safety performance in Chapter 4, 8 and 9
9	Some information on system description and interfaces	<ul style="list-style-type: none"> General guidance on system description and interfaces contained in Chapter 1 Specific guidance directed at States under SSP Implementation in Chapter 8 Specific guidance directed at service providers under SMS Implementation in Chapter 9
10	Refers to SSP and SMS being commensurate with the size and complexity without clearly explaining how this is achieved.	<ul style="list-style-type: none"> General guidance on scalability contained in Chapter 1 The guidance has been updated with a focus on intended outcomes and performance in order to achieve effective implementation. The implementation of SSP and SMS should be tailored to the needs and operational context of the organization.
11	Some information on Acceptable Level of Safety Performance (ALoSP) in <i>Chapter 4 – State Safety Programme</i> under Safety Performance Indicators section	<ul style="list-style-type: none"> Specific guidance directed at States under State Safety Performance section in Chapter 8 The linkage between ALoSP and safety performance management activities of service providers is illustrated
12	General information on Management of Change	<ul style="list-style-type: none"> Enhanced guidance on Management of Change in Chapters 8 and 9 for States and service providers, respectively.
13	Refers to the training requirements being consistent with the needs and complexity of the organization for each area of activity without clearly explaining how this is achieved.	<ul style="list-style-type: none"> Specific guidance on the performing a Training Needs Analysis in Chapter 9 for service providers.

14	Some information on the integration of management systems and SMS-QMS integration	<ul style="list-style-type: none">• Additional guidance on the integration of management systems, including the integration of SMS and QMS in Chapter 9
15	Some information on safety culture and protection of safety data and safety in Chapter 2 - Safety management fundamentals under safety culture section and safety data collection and analysis section separately.	<ul style="list-style-type: none">• New chapters on safety culture and Protection of safety data, safety information and related sources.

APPENDIX B

GASOS Feasibility Study Summary of Recommendations

Recommendation 1: Use USOAP Protocol for Level 3

Considering that there is already an established USOAP protocol for the assessment of Level 3 oversight service providers, it is recommended that the GASOS model be developed on the premise that any applicant for Level 3 recognition be assessed through a USOAP audit and that the EI scores derived from this process be associated with that Level 3 service provider in a GASOS directory of recognized safety oversight service providers. This process would apply to RSOOs, State CAAs and other safety oversight service providers.

Recommendation 2: Target Level 2 Market Niche

Whereas the assessment of Level 1 safety oversight service providers could be included in the GASOS model, GASOS would add the most value by expanding the pool of competent Level 2 entities capable of providing operational assistance to State CAAs. It is therefore recommended that the GASOS assessment and recognition process be focused on serving this market niche. This strategy would help strengthen some of the RSOOs by providing a benchmark, based on the USOAP methodology, for their evolution and assessment. It would also support a strategy of phased implementation, addressing financial and other risks that may exist during the inception phase of the GASOS life cycle. The validation of certain types of Level 2 safety oversight provider competencies would require a modified USOAP Audit and continuous monitoring approach for recognition of Level 2 functions.

Recommendation 3: Monitoring and Reassessment

To safeguard the validity of the GASOS assessment process, the GASOS design would need to include a monitoring mechanism that provides for quality assurance and a process by which the competencies of recognized safety oversight service providers can be reassessed. Whereas the USOAP CMA protocol has such a mechanism for Level 3, it is recommended that a similar monitoring mechanism be applied to Level 1 and Level 2 service providers.

Recommendation 4: Draw Lessons from the ICAO Global Aviation Training Model (GAT)

Break-even pricing² will be required for GASOS to be self-funding. It is recommended that lessons are drawn from the ICAO Global Aviation Training (GAT) business model and pricing policy. Additionally, the pricing policies of other ICAO programmes could be reviewed, such as the Technical Cooperation Programme Civil Aviation Purchasing Service (CAPS) Roster of Registered Suppliers, the ICAO recognition of Instrument Procedure Design Organizations, etc.

Recommendation 5: Synergies with the Solution Centre

It is recommended that the development of the Solution Centre be followed closely to identify opportunities to create synergies with the GASOS model. Of particular relevance is the opportunity to create a directory of GASOS recognized safety oversight service providers within the Solution Centre.

Recommendation 6: Prepare a GASOS Business Case

It is recommended that a Business Case be developed to support the presentation of the GASOS concept to the Secretary General, the Air Navigation Commission, and the ICAO Council. Should the analysis indicate that GASOS would not be self-funding in the short-run, given that GASOS would be supporting the ICAO Strategic Objective on Aviation Safety, it may be possible to explore alternative funding options such as voluntary contributions and/or support from the Regular Budget.

Recommendation 7: Pilot Test the GASOS Assessment Process

It is recommended that the GASOS implementation plan is refined by pilot testing the GASOS assessment process. For example, a gap analysis of an RSOO could be conducted on the basis of a protocol envisioned for the GASOS assessment process. Also, a State CAA could volunteer to be assessed for its capacity to provide operational assistance to the CAAs of other States, and the same trial could be conducted for another safety oversight provider. Input from these pilot studies would serve to fine-tune the assessment process; provide a basis for costing; and help select progress markers for the purpose of evaluating GASOS benefits.

-END-