



ICAO

International Civil Aviation Organization  
North American, Central American and Caribbean Office

WORKING PAPER

NACC/DCA/08 — WP/15  
06/07/18

**Eighth Meeting of the North American, Central American and Caribbean Directors of Civil Aviation  
(NACC/DCA/08)**

Ottawa, Canada, 31 July to 2 August 2018

**Agenda Item 5: Global Aviation Needs and Challenges**

**ENHANCING SUPPORT FOR THE IMPLEMENTATION OF EFFECTIVE SAFETY MANAGEMENT**

(Presented by the Secretariat)

**EXECUTIVE SUMMARY**

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 ICAO Safety Management Symposia and Workshops.

<b>Action:</b>	Refer to Section 4.
<i>Strategic Objectives:</i>	<ul style="list-style-type: none"><li>• Safety</li><li>• Air Navigation Capacity and Efficiency</li></ul>

**1. INTRODUCTION**

1.1 As a result of the Second High-level Safety Conference 2015 (HLSC 2015) held at ICAO Headquarters in Montréal from 2 to 5 February 2015, the Montréal Declaration on Planning for Aviation Safety Improvement called upon ICAO to continue assisting States in implementing safety-related Standards and Recommended Practices (SARPs) and an effective safety oversight system through additional guidance material, training and tools. Conclusion 2/1 b) related to implementing SSP highlights that additional guidance and sharing of experiences are necessary for States to further develop and implement SSPs.

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. State letter AN 8/3.1-16/16, dated 4 April 2016 provides the contents of the amendment. 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 During the 39th Session of the ICAO Assembly, held in Montréal from 27 September to 7 October 2016 the need for additional support for ICAO to assist States in the implementation of SSP was expressed. State letter AN 8/3-16/89, dated 27 September 2016, announced the establishment of an ICAO Safety Management Programme and outlined a set of deliverables with timelines to support SSP implementation.

## 2. DISCUSSION

### *Fourth Edition of the Safety Management Manual*

2.1 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>). The official publication of the manual in English as well as the other ICAO working languages will depend on the resources available and the priority given to the document.

2.2 The Fourth Edition of the 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 SSP which is a key objective of the Global Aviation Safety Plan (GASP). The manual is less prescriptive and more focused on the intended outcomes to support the need for the implementation to be tailored to the organization. It also provides guidance for States and service providers on the implementation of SMS in accordance with the provisions of Annex 19. Notably, the document has been restructured with nine Chapters, including specific Chapters dedicated to Safety Culture, Safety Performance Management, Safety Data Collection and Processing Systems and Safety Analysis. A summary of the changes from the Third to the Fourth Edition is provided in the Appendix to this working paper.

### *Safety Management Implementation Website*

2.3 Recognizing the challenges faced in implementing SSP and SMS “commensurate with the size and complexity” of each organization and the wide range of service providers addressed by Annex 19, the Fourth Edition of the SMM (Doc 9859) is complemented by an ICAO Safety Management Implementation (SMI) website. This 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>.

2.4 The SMM, 4th edition eBook is posted on the SMI website. The SMI public website currently includes some updated examples from the Third Edition of the SMM but also additional examples will be collected, validated and posted on an ongoing basis. 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. Practical examples and tools may also be submitted using the instructions provided on the SMI public website found at the top of the left hand navigation bar “How to submit examples”, after clicking on “Start”. Examples will initially be collected in English only, but translations into other languages are welcome.

#### *SSP Implementation Tools*

2.5 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 Universal Safety Oversight Audit Programme (USOAP) Protocol Questions (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 2017 version and can be found on iSTARS at <http://portal.icao.int/space/Pages/SSPFoundation.aspx>.

2.6 The ICAO SSP Gap Analysis tool will be updated by September 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.

2.7 In order to assess State's implementation of a SSP, ICAO is rolling out State Safety Programme (SSP) Implementation Assessments under the USOAP Continuous Monitoring Approach (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, select 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*

2.8 ICAO also 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>).

2.9 A two-phased update process was planned to align the Online Safety Management Training Course with the Amendment 1 to Annex 19. Phase 1 of the update was launched on 17 October 2016 and includes a new module, which explains the changes introduced with the Amendment 1 to Annex 19. The new module will be made available, at no additional cost, to those who have already taken the online course. Phase 2 of the Online Safety Management Training Course update, expected to be released in October 2018 will further reflect the Fourth Edition of the SMM. An additional module on the protection of safety data, safety information and related sources will be added to the safety management online training course by the end of 2018.

2.10 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. The classroom course incorporates the use of a software tool to demonstrate how the efficiency of safety management activities can be enhanced. This hands-on course is conducted in English and is five days (30 training hours) in duration. The ICAO Global Aviation Training Office is accepting nominations for instructors and requests for the delivery of the Safety Management for Practitioners Course through the ICAO Regional Offices.

2.11 *In 2017, two SMxP courses were provided in the region. The first one hosted by Academia Superior de Ciencias Aeronáuticas (ASCA) in Dominican Republic, and the second one held in the ICAO NACC Regional Office in Mexico City.*

#### *ICAO Safety Management Symposia and Workshops*

2.12 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.

2.13 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.

2.14 For the NAM/CAR and SAM Regions, the Regional Safety Management Symposium and Workshop was held in Lima, Peru, 13 to 16 March 2018. The Symposium gathered participants and presenters from all over the globe, sharing practical experience on key components for safety management implementation. Under P/12, the outcomes and feedback of the symposia are shown.

### **3. CONCLUSION**

3.1 States, international and regional organizations are invited 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.

**4 SUGGESTED ACTION**

4.1 The Meeting is invited to:

- a) note the updates on Safety management requirements and ICAO tools to support implementation; and
- b) follow SM recommendations provided under this paper and P/12

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## 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
3 <sup>rd</sup> Edition		4 <sup>th</sup> Edition
1	254 pages	<ul style="list-style-type: none"> <li>Approx. 170 pages.</li> </ul>
2	Examples and tools contained in the manual as Appendices to the Chapters.	<ul style="list-style-type: none"> <li>Examples and tools from the 3<sup>rd</sup> edition of SMM moved to the Safety Management Implementation (SMI) website which is complementary to the 4<sup>th</sup> edition of SMM.</li> <li>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.</li> </ul>
3	Aligned to <i>Annex 19 Safety Management, 1st edition.</i>	<ul style="list-style-type: none"> <li>Aligned to <i>Annex 19 Safety Management, Amendment 1.</i></li> </ul>
4	Divided into five chapters: <ol style="list-style-type: none"> <li>Overview of the Manual</li> <li>Safety Management Fundamentals</li> <li>ICAO Safety Management SARPs</li> <li>State Safety Programme (SSP)</li> <li>Safety Management Systems (SMS).</li> </ol>	Divided into 9 Chapters with expanded guidance for the new Chapters: <ol style="list-style-type: none"> <li>Introduction</li> <li>Safety Management Fundamentals</li> <li>Safety Culture</li> <li>Safety Performance Management</li> <li>Safety Data Collection and Processing Systems</li> <li>Safety Analysis</li> <li>Protection of Safety Data, Safety Information and Related Sources</li> <li>State Safety Management Responsibilities</li> <li>Safety Management Systems.</li> </ol>
5	No information regarding safety management applicability beyond mention of applicability dates.	<ul style="list-style-type: none"> <li>Expanded introduction to address the scope of safety management provisions and their applicability, including discretionary SMS applicability.</li> </ul>
6	No information on integrated risk management.	<ul style="list-style-type: none"> <li>Concept of integrated risk management is introduced in Chapter 1.</li> </ul>
7	State safety oversight (SSO) and the critical elements (CEs) limited to SSP component 3: State safety assurance.	<ul style="list-style-type: none"> <li><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.</li> <li>The CEs are integrated throughout the components.</li> <li>The term “framework” is no longer used in reference to SSP.</li> </ul>

No.		Summary of Changes
3 <sup>rd</sup> Edition		4 <sup>th</sup> Edition
8	The role of safety objectives not strongly highlighted.	<ul style="list-style-type: none"> <li>Strengthened link between safety objectives and safety performance in Chapter 4, 8 and 9.</li> </ul>
9	Some information on system description and interfaces.	<ul style="list-style-type: none"> <li>General guidance on system description and interfaces contained in Chapter 1.</li> <li>Specific guidance directed at States under SSP Implementation in Chapter 8.</li> <li>Specific guidance directed at service providers under SMS Implementation in Chapter 9.</li> </ul>
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"> <li>General guidance on scalability contained in Chapter 1.</li> <li>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.</li> </ul>
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"> <li>Specific guidance directed at States under State Safety Performance section in Chapter 8.</li> <li>The linkage between ALoSP and safety performance management activities of service providers is illustrated.</li> </ul>
12	General information on Management of Change.	<ul style="list-style-type: none"> <li>Enhanced guidance on Management of Change in Chapters 8 and 9 for States and service providers, respectively.</li> </ul>
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"> <li>Specific guidance on the performing a Training Needs Analysis in Chapter 9 for service providers.</li> </ul>
14	Some information on the integration of management systems and SMS-QMS integration.	<ul style="list-style-type: none"> <li>Additional guidance on the integration of management systems, including the integration of SMS and QMS in Chapter 9.</li> </ul>
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"> <li>New chapters on safety culture and Protection of safety data, safety information and related sources.</li> </ul>