

SMM (Doc 9859) 2nd to 3rd Edition Correlation

SMM 3rd Edition Contents		SMM 2nd Edition Contents (as correlated to 3rd edition Contents)	Scope of Change in SMM 3rd Edition	Rationale
AMENDMENTS		AMENDMENTS	NA	NA
ACRONYMS AND ABBREVIATIONS		ACRONYMS AND ABBREVIATIONS	Added ALoS, OSHE abbreviations, etc	
OVERVIEW OF THE MANUAL		Chapter 1. OVERVIEW OF THE MANUAL	Overview of 3rd edition new consolidated manual structure.	Consolidation from 11 to 4 distinct chapters.
DEFINITIONS		Nil Definitions Listing	Definitions Listing added	Need Definitions Listing.
CHAPTER 1 - SAFETY MANAGEMENT FUNDAMENTALS				
1.1	THE CONCEPT OF SAFETY	2.2 The concept of safety	Enhancement	Improvement/ clarity
1.2	THE EVOLUTION OF SAFETY	2.3 The evolution of safety thinking	Enhancement	Improvement/ clarity
1.3	ACCIDENT CAUSATION	2.4 Accident causation — The Reason model; 2.5 The organizational accident	Enhancement	Improvement/ clarity
1.4	PEOPLE, CONTEXT AND SAFETY	2.6 People, context and safety — The Shel	Enhancement	Improvement/ clarity
1.5	ERRORS AND VIOLATIONS	2.7 Errors and violations	Enhancement	Improvement/ clarity
1.6	SAFETY CULTURE	2.8 Organizational culture	Enhancement. Introduction of safety culture/ risk profile assessment concept/ tool. [Chpt 1, App 3]	Improvement/ clarity. Process for assessment anticipated in matured SSP/ SMS phase.
1.7	THE MANAGEMENT DILEMMA	3.3 The management dilemma	Enhancement	Improvement/ clarity
1.8	CHANGE MANAGEMENT	3.6 The imperative of change	Enhancement	Improvement/ clarity
1.9	INTEGRATION OF MANAGEMENT SYSTEMS	7.8 Integration of management systems	Additional basic concepts for chapter 1, with further specific guidance on SMS-QMS integration under SMS chapter 4.4.2	Improvement/ clarity; especially SMS-QMS integration.
1.1	SAFETY REPORTING AND INVESTIGATION	2.9 Safety investigation	Enhancement.	Improvement/ clarity
1.11	SAFETY DATA COLLECTION AND ANALYSIS	Chapter 4, Appendix 1 - Safety Information Analysis.	Enhancement.	Improvement/ clarity
1.12	HAZARDS	Chapter 4 - Hazards	Enhancement. Additional guidance on Hazard prioritization procedure (App 1) and need to distinguish aviation hazards from OSHE hazards (1.12.4).	Improvement/ clarity
1.13	SAFETY INDICATORS AND PERFORMANCE MONITORING	Chapter 9.6 - Safety performance monitoring & measurement.	Introduction to SPI and associated alert & target level development concept. Further details in chapter 3 & 4.	Improvement/ clarity
1.14	SAFETY RISK	Chapter 5 - Safety Risks	Enhancement of Risk severity and likelihood matrix illustrations (App 2).	Improvement.

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1.15	SAFETY RISK MANAGEMENT	Chapter 5 - Safety Risks	<i>Introduction of a basic HIRM Tool (Worksheet) in App 2. [Enhanced version available separately]</i>	<i>Facilitate need to avail a basic HIRM tool for organizations without sophisticated HIRM software.</i>
1.16	PRESCRIPTIVE AND PERFORMANCE-BASED REQUIREMENTS	Chapter 6.9 - Compliance and conformance	<i>Enhanced guidance on performance-based requirements and its oversight.</i>	<i>Improvement/ clarity</i>
	Appendix 1 - Hazard Prioritization Procedure (Illustration)	Nil	<i>Additional guidance on Hazard prioritization procedure</i>	<i>Improvement/ clarity</i>
	Appendix 2 – Safety Risk Mitigation Worksheet (Illustration)	Chapter 5, App 1, para 6 - Hazard Identification & Safety Risk Management Log.	<i>Introduction of basic HIRM Tool (Worksheet) in App 2. [Enhanced version available separately]</i>	<i>Enhanced and practical HIRM tool required.</i>
	Appendix 3 – Organization Safety Culture/ Risk Profile Assessment	Nil.	<i>Introduction of safety culture/ risk profile assessment concept/ tool.</i>	<i>Process for assessment anticipated in matured SSP/ SMS phase.</i>
CHAPTER 2 - ICAO SAFETY MANAGEMENT SARPs				
2.1	Introduction to ICAO Safety Management SARPs	Chapter 6. ICAO SAFETY MANAGEMENT SARPs	<i>Consolidation and overview of current SARPs status.</i>	<i>Overview and information.</i>
2.2	State safety Management Requirements			
2.3	Service Providers' Safety Management Requirements			
2.4	New Annex on Safety Management	Nil.	<i>Introduction to Annex 19 development status.</i>	<i>Information.</i>
CHAPTER 3 - STATE SAFETY PROGRAMME (SSP)				
3.1	INTRODUCTION TO SSP			
3.2	SSP FRAMEWORK			
	STATE SAFETY POLICY AND OBJECTIVES			
	1-1 State safety legislative framework			
	1-2 State safety responsibilities and accountabilities			
	1-3 Accident and incident investigation			
<i>Enhanced guidance material for each component and element of the SSP framework, especially under following elements:</i>				

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	1-4 Enforcement policy	Chapter 11. STATE SAFETY PROGRAMME 11.1 Objectives and contents 11.2 The components and elements of an SSP 11.3 The ICAO SSP framework 11.4 SSP development 11.5 SSP implementation 11.6 The role of the SSP in supporting SMS implementation	1-4: <i>Enforcement Policy</i> 2-2: <i>Agreement on service provider safety performance [agreement on SPIs and associated target & alert levels setting];</i> 3-2: <i>Safety data collection, analysis and exchange [mandatory & voluntary reporting systems, SPI & ALoS development, Safety Information Protection];</i> 3-3: <i>Safety-data driven targeting of oversight of areas of greater concern or need [safety data and risk based surveillance concept];</i>	<i>Improvement and clarity.</i>
	STATE SAFETY RISK MANAGEMENT			
	2-1 Safety requirements for the service provider's SMS			
	2-2 Agreement on the service provider's safety performance			
	STATE SAFETY ASSURANCE			
	3-1 Safety oversight			
	3-2 Safety data collection, analysis and exchange			
	3-3 Safety-data-driven targeting of oversight of areas of greater concern or need			
	STATE SAFETY PROMOTION			
	4-1 Internal training, communication and dissemination of safety information			
	4-2 External training, communication and dissemination of safety information			
3.3	SSP IMPLEMENTATION PLANNING	11.4 SSP development 11.5 SSP implementation	<i>Enhancement</i>	<i>Improvement/ clarity</i>
3.3.1	Regulatory System Description		<i>Enhancement</i>	<i>Improvement/ clarity</i>
3.3.2	Gap Analysis		<i>Updated GAQs with main text cross references</i>	<i>Improvement/ clarity</i>
3.3.3	SSP Implementation Plan		<i>Enhanced basic documentation for gap analysis outcomes and tasks implementation (App 1)</i>	<i>Improvement/ clarity</i>
3.3.4	Safety Indicators & Acceptable level of safety performance	Chapter 6.6 - SMS Safety Performance. Chapter 11, App 5, 3.2(d) - Safety data collection, analysis and exchange.	<i>Specific guidance on ALoS measurement and monitoring through State aggregate SPIs and associated target and alert levels setting.</i>	<i>Improvement, clarity and practical criteria for ALoS measurement & monitoring.</i>

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3.4	SSP IMPLEMENTATION - PHASED APPROACH	Nil.	<i>New 4-phased SSP implementation guidance (chapter 3.4). Prioritization of SSP elements and processes implementation in a progressive manner, from initial basic expectations to subsequent more matured requirements.</i>	<i>Facilitation of phased implementation approach.</i>
	PHASE I			
	PHASE II			
	PHASE III			
	PHASE IV			
	Appendix 1 to Chapter 3 Guidance on SSP Gap Analysis and Implementation Plan	Chapter 11, App 3 - Guidance on the development of a SSP gap analysis. Chapter 11, App 5 - Guidance on the development of an SSP implementation plan.	<i>Enhanced and updated Gap analysis questions, with inclusion of appropriate main text cross references. Enhanced basic documentation for gap analysis outcomes and tasks implementation (App 1)</i>	<i>Improvement/ clarity</i>
	Appendix 2 to Chapter 3 Guidance on a State Safety Policy Statement	Chapter 11, App 2 - Guidance on the development of a State safety policy statement.	<i>Enhancement</i>	<i>Improvement/ clarity</i>
	Appendix 3 to Chapter 3 Guidance on State Enforcement Policy	Chapter 11, App 4 - Guidance on the development of a State's enforcement policy and enforcement procedures in an SMS environment.	<i>Enhancement and segregation of enforcement policy from enforcement procedures into separate Appendices, for better clarity and focus.</i>	<i>Improvement/ clarity</i>
	Appendix 4 to Chapter 3 Guidance on State Enforcement Procedures in an SSP-SMS Environment			
	Appendix 5 to Chapter 3 State SMS Regulation (Example)	Chapter 10, App 1 - Guidance on the development of a State's regulation on SMS	<i>Enhancement and separation of SMS guidance materials from SMS regulatory clause/ requirement.</i>	<i>Improvement/ clarity</i>
	Appendix 6 to Chapter 3 Safety Indicators & ALoSP (Examples)	Chapter 6.6 - SMS Safety Performance. Chapter 11, App 5, 3.2(d) - Safety data collection, analysis and exchange.	<i>Specific guidance on ALoS measurement and monitoring through State aggregate SPIs and associated target and alert levels setting.</i>	<i>Need to provide practical and guidance and criteria for ALoS measurement & monitoring.</i>

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	Appendix 7 to Chapter 3 SMS Acceptance/ Assessment (Example)	Nil	<i>Inclusion of initial SMS acceptance as well as routine SMS assessment checklists for regulatory oversight of SMS.</i>	<i>Facilitate State's SMS acceptance & assessment processes.</i>
	Appendix 8 to Chapter 3 Accident and Incident Notification and Reporting Guidance	Nil	<i>Inclusion of accident and serious incident reporting procedure by States to ICAO.</i>	<i>Facilitate State's awareness of accident and serious incident reporting procedure to ICAO.</i>
	Appendix 9 to Chapter 3 Safety Information Protection	Chapter 4, App 2, para 6 - Protection of safety data	<i>Enhanced guidance, as well as information on safety information protection (SIP) Task Force.</i>	<i>Improvement and information.</i>
	Appendix 10 to Chapter 3 SSP Document/ Manual Contents (Example)	Nil	<i>Inclusion of guidance on SSP Manual Contents development.</i>	<i>Facilitation and guidance.</i>
	Appendix 11 to Chapter 3 State Voluntary and Confidential Reporting System	Nil	<i>Inclusion of guidance on State's voluntary reporting system .</i>	<i>Facilitation and guidance.</i>
	Appendix 12 to Chapter 3 State Mandatory Reporting Procedure	Nil	<i>Inclusion of guidance on State's mandatory reporting system by service providers.</i>	<i>Facilitation and guidance.</i>
CHAPTER 4 - SAFETY MANAGEMENT SYSTEM (SMS)				
4.1	INTRODUCTION TO SMS	Chapter 7 - INTRODUCTION TO SAFETY MANAGEMENT SYSTEMS: 7.1 Objective and contents 7.2 Introductory concepts 7.3 SMS features 7.4 System description Appendix 1 to Chapter 7. Guidance on system description Appendix 2 to Chapter. 7 Guidance on the development of an SMS GAP analysis for service providers	<i>No significant change.</i>	NA
4.2	SCOPE		<i>No significant change.</i>	NA
4.3	SMS FRAMEWORK		<i>No change</i>	NA
	SAFETY POLICY AND OBJECTIVES			
4.3.1	MANAGEMENT COMMITMENT AND RESPONSIBILITY		<i>No significant change.</i>	NA
4.3.2	SAFETY ACCOUNTABILITY		<i>No significant change.</i>	NA
4.3.3	APPOINTMENT OF KEY SAFETY PERSONNEL		<i>No significant change.</i>	NA
4.3.4	COORDINATION OF EMERGENCY RESPONSE PLANNING		<i>Enhancement with additional Appendix 4 on Emergency Response Plan.</i>	<i>Improvement/ clarity</i>

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4.3.5	SMS DOCUMENTATION	Chapter 8 - SMS PLANNING: 8.1 Objective and contents 8.2 The components and elements of an SMS	<i>Enhancement with additional Appendix 3 on Guidance for development of SMS Manual.</i>	<i>Facilitation and guidance.</i>
	SAFETY RISK MANAGEMENT	8.3 The ICAO SMS framework		
4.3.6	HAZARD IDENTIFICATION	8.4 Management commitment and responsibility 8.5 Safety accountabilities 8.6 Appointment of key safety personnel 8.7 Coordination of emergency response planning	<i>Enhancement and inclusion of Appendix 7 on SMS voluntary and confidential reporting system. [A separate schematic flow chart on Reactive, Proactive & Predictive Hazards Identification is available].</i>	<i>Facilitation and guidance.</i>
4.3.7	RISK ASSESSMENT AND MITIGATION	8.8 SMS documentation 8.9 SMS implementation plan Appendix 1 to Chapter 8 - Framework for safety management systems (SMS) Appendix 2 to Chapter 8 - Sample job description for a safety manager	<i>Introduction of an enhanced basic HIRM Tool (Worksheet) in chapter 1, App 2 for organizations without sophisticated HIRM software.[A further enhanced version is available]</i>	<i>Facilitation and guidance.</i>
	SAFETY ASSURANCE			
4.3.8	SAFETY PERFORMANCE MONITORING AND MEASUREMENT	Chapter 9. SMS OPERATION	<i>Additional guidance on mandatory and voluntary reporting system [App 7]</i>	<i>Improvement.</i>
4.3.9	THE MANAGEMENT OF CHANGE	9.1 Objective and contents	<i>No significant change.</i>	<i>NA</i>
4.3.10	CONTINUOUS IMPROVEMENT OF THE SMS	9.2 Safety risk management — General 9.3 Hazard identification	<i>No significant change.</i>	<i>NA</i>
	SAFETY PROMOTION	9.4 Risk assessment and mitigation		
4.3.11	TRAINING AND EDUCATION	9.5 Safety assurance — General	<i>No significant change.</i>	<i>NA</i>
4.3.12	SAFETY COMMUNICATION	9.6 Safety performance monitoring and measurement	<i>No significant change.</i>	<i>NA</i>
4.4	SMS IMPLEMENTATION PLANNING	9.7 Protection of sources of safety information		
4.4.1	SYSTEM DESCRIPTION	9.8 The management of change 9.9 Continuous improvement of the SMS	<i>Enhancement</i>	<i>Improvement/ clarity</i>
4.4.2	INTEGRATION OF MANAGEMENT SYSTEMS	9.10 The relationship between safety risk management (SRM) and safety assurance (SA)	<i>Enhanced guidance, especially on SMS-QMS integration.</i>	<i>Improvement/ clarity</i>
4.4.3	GAP ANALYSIS	9.11 Safety promotion — Training and education 9.12 Safety promotion — Safety communication	<i>Enhanced and updated Gap analysis questions, with inclusion of appropriate main text cross references.</i>	<i>Improvement/ clarity</i>

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4.4.4	SMS IMPLEMENTATION PLAN	Chapter 10. PHASED APPROACH TO SMS IMPLEMENTATION	<i>Enhanced basic documentation for gap analysis outcomes and tasks implementation (App 2)</i>	<i>Improvement/ clarity</i>
4.4.5	SAFETY PERFORMANCE INDICATORS	10.1 Objective and contents 10.2 Why adopt a phased approach to SMS implementation 10.3 Phase I — Planning SMS implementation 10.4 Phase II — Reactive safety management processes	<i>Specific guidance on safety performance measurement and monitoring through SMS SPIs and associated target and alert levels setting.</i>	<i>Improvement, clarity and practical criteria for ALoS measurement & monitoring.</i>
4.5	PHASED IMPLEMENTATION APPROACH	10.5 Phase III — Proactive and predictive safety management processes	<i>Enhanced and more comprehensive guidance on 4 phased SMS implementation approach.(chapter 4.5, Table A)</i>	<i>Improvement/ clarity</i>
4.5.1	PHASE I	10.6 Phase IV — Operational safety assurance		
4.5.2	PHASE II	Appendix 1 to Chapter 10. Guidance on the development of a State’s regulation on SMS		
4.5.3	PHASE III	Appendix 2 to Chapter 10. Guidance on the development of an SMS implementation plan for service providers		
4.5.4	PHASE IV			
	Appendix 1 - SAMPLE JOB DESCRIPTION FOR A SAFETY MANAGER		<i>No significant change.</i>	<i>NA</i>
	Appendix 2 - GUIDANCE ON SMS GAP ANALYSIS AND IMPLEMENTATION PLAN	Chapter 6.6 - SMS safety performance	<i>Enhanced and updated SMS Gap analysis questions, with inclusion of appropriate main text cross references and implementation documentation.</i>	<i>Improvement/ clarity</i>
	Appendix 3 - GUIDANCE FOR THE DEVELOPMENT OF A SMS MANUAL		<i>Inclusion of SMS Manual Contents structure illustration.</i>	<i>Facilitation and guidance.</i>
	Appendix 4 - EMERGENCY RESPONSE PLANNING		<i>Enhanced guidance on Emergency Response Plan.</i>	<i>Facilitation and guidance.</i>
	Appendix 5 - RELATED ICAO GUIDANCE MATERIAL		<i>No significant change.</i>	<i>NA</i>
	Appendix 6 – SAFETY PERFORMANCE INDICATORS (EXAMPLES)		<i>Practical examples of SPIs for all sectors and guidance on development of SMS SPI charts and their associated target and alert levels setting.</i>	<i>Facilitation and guidance.</i>
	Appendix 7 - VOLUNTARY & CONFIDENTIAL REPORTING SYSTEM		<i>Illustration of a typical operator voluntary reporting system</i>	<i>Facilitation and guidance.</i>

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	Appendix 8 - ELECTRONIC SIGNATURE	<i>Additional Information.</i>	<i>Information.</i>