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Universal Safety Oversight Audit Programme Continuous Monitoring Manual

Approved by the Secretary General
and published under his authority

Fourth Edition — 2014

International Civil Aviation Organization

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AMENDMENTS

Amendments are announced in the supplements to the *Publications Catalogue*; the Catalogue and its supplements are available on the ICAO website at www.icao.int. The space below is provided to keep a record of such amendments.

RECORD OF AMENDMENTS AND CORRIGENDA

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FOREWORD

This manual is the main reference document prepared in connection with the ICAO Universal Safety Oversight Audit Programme (USOAP). It provides policy, procedures, information and guidance on the management and conduct of programme activities under the Continuous Monitoring Approach (CMA). USOAP CMA procedures have been developed for the implementation of CMA concepts and methodologies as part of USOAP. Within the USOAP CMA, standardized processes and procedures have been established to describe and ensure that activities are planned, conducted and reported in a systematic, consistent, objective and established manner.

The first edition of *Safety Oversight Audit Manual* (Doc 9735) was developed as a result of Assembly Resolution A32-11 of the 32nd session of the ICAO Assembly (22 September to 2 October 1998), and the decision of the ICAO Council to implement the mandatory USOAP for application in ICAO safety oversight audits starting in January 1999. The second edition became necessary as a result of a decision taken during the 35th session of the ICAO Assembly (28 September to 8 October 2004). Assembly Resolution A35-6 called for the transition of the Programme to a comprehensive systems approach for the conduct of safety oversight audits and expanded the scope to include safety-related provisions of all safety-related Annexes to the Convention. The third edition was developed for the transition of USOAP to a continuous monitoring approach as directed under Assembly Resolution A36-4 — Application of a continuous monitoring approach for the ICAO Universal Safety Oversight Audit Programme (USOAP) beyond 2010, and A37-5 — The Universal Safety Oversight Audit Programme (USOAP) Continuous Monitoring Approach.

The fourth edition of this manual describes the additional tools, processes and guidance that have been implemented to support USOAP CMA and ensure its success. It also reflects the essential role of USOAP CMA in providing metrics for ICAO to monitor States' achievement of the objectives set out in the Global Aviation Safety Plan (GASP). The contents of this manual were developed with input from the Monitoring and Oversight (MO) Office, USOAP CMA management and ICAO Regional Offices (ROs), followed by peer reviews and incorporation of collected feedback.

This edition is published under the authority of the Secretary General and supersedes all previous editions of this manual.

Comments on this manual would be appreciated from all ICAO Member States and interested parties. These comments should be addressed to:

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Chapter 1

INTRODUCTION

1.1 PURPOSE

1.1.1 The primary purpose of this manual is to describe the Universal Safety Oversight Audit Programme Continuous Monitoring Approach (USOAP CMA) and to provide guidance to ICAO Member States (hereafter referred to as Member States or States), recognized organizations, team leaders (TLs), team members (TMs), subject matter experts (SMEs) and support staff involved in the planning, preparation, conduct and reporting of USOAP CMA activities.

1.1.2 It also provides information on the background and evolution of USOAP CMA, an explanation of its management and various components and standardized processes and procedures which ensure that USOAP CMA activities are conducted in a systematic and consistent manner.

1.2 REFERENCES

1.2.1 In support of the USOAP CMA, ICAO has published and will continue to publish additional documentation providing procedural guidance and training material.

1.2.2 The USOAP CMA references the *Convention on International Civil Aviation* (Doc 7300, hereafter referred to as the Convention), ICAO Standards and Recommended Practices (SARPs) contained in all safety-related Annexes to the Convention and related guidance material, including but not limited to:

a) Doc 9734 — *Safety Oversight Manual*:

Part A — *The Establishment and Management of a State's Safety Oversight System*;

Part B — *The Establishment and Management of a Regional Safety Oversight Organization*; and

b) Doc 9859 — *Safety Management Manual*.

1.2.3 Additional references include ISO 19011 — *Guidelines for auditing management systems*.

1.2.4 Together these documents describe the requirements and guidelines for the implementation of an effective safety oversight system by States. This implementation shall be continuously monitored under the USOAP CMA framework and verified during USOAP CMA activities.

Note.— The ICAO Publications Catalogue provides a complete list of ICAO guidance material available to support the requirements of Annexes to the Convention.

1.3 DEFINITIONS AND TERMINOLOGY

Adequate. The state of fulfilling minimal requirements; satisfactory; acceptable; sufficient.

Assessment. An appraisal of procedures or operations based largely on experience and professional judgement.

Audit. A USOAP CMA on-site activity during which ICAO assesses the effective implementation of the critical elements (CEs) of a safety oversight system and conducts a systematic and objective review of a State's safety oversight system to verify the status of a State's compliance with the provisions of the Convention or national regulations and its implementation of ICAO Standards and Recommended Practices (SARPs), procedures and aviation safety best practices. Also see definition of *critical elements (CEs)*.

Audit area. One of eight audit areas pertaining to USOAP, i.e. primary aviation legislation and civil aviation regulations (LEG), civil aviation organization (ORG); personnel licensing and training (PEL); aircraft operations (OPS); airworthiness of aircraft (AIR); aircraft accident and incident investigation (AIG); air navigation services (ANS); and aerodromes and ground aids (AGA).

Compliance checklist (CC). Assists the State in ascertaining the status of implementation of ICAO Standards and Recommended Practices (SARPs) and in identifying any difference that may exist between the national regulations and practices and the relevant provisions in the Annexes to the Convention.

Corrective action plan (CAP). A plan of action to eliminate the cause of a deficiency or finding.

Cost recovery activity. A USOAP CMA activity that is paid for by the requesting State.

Critical elements (CEs). The critical elements of a safety oversight system encompass the whole spectrum of civil aviation activities. They are the building blocks upon which an effective safety oversight system is based. The level of effective implementation of the CEs is an indication of a State's capability for safety oversight.

Effective implementation (EI). A measure of the State's safety oversight capability, calculated for each critical element, each audit area or as an overall measure. The EI is expressed as a percentage. Also see definition of *lack of effective implementation (LEI)*, *critical element (CE)* and *audit area*.

Finding. Generated in a USOAP CMA activity as a result of a lack of compliance with Articles of the Convention, ICAO Assembly Resolutions, safety-related provisions in the Annexes to the Convention, Procedures for Air Navigation Services (PANS) or a lack of application of ICAO guidance material or good aviation safety practices. Also see definition of *Protocol Question (PQ) finding*.

Finding and recommendation (F&R). Under the USOAP CSA, each finding was generated and expressed in terms of one or more (usually several) Protocol Questions. Each finding also included ICAO's recommendations to the State for the resolution of the finding. Also see definitions of *finding* and *Protocol Question (PQ) finding*.

ICAO Coordinated Validation Mission (ICVM). A USOAP CMA on-site activity during which an ICAO team of subject matter experts collects and assesses evidence provided by the State demonstrating that the State has implemented corrective actions (or mitigating measures for significant safety concerns) to address previously identified findings; ICAO validates the collected evidence and information. Also see definitions of *finding* and *Protocol Question (PQ) finding*.

Inspection. An examination of an aviation licence, certificate, approval or authorization holder (or applicant) performed by aviation safety inspectors to confirm compliance with requirements for the licence, certificate, approval or authorization already issued (or being issued) by the State.

Lack of effective implementation (LEI). A measure of the State's lack of safety oversight capability, calculated for each critical element, each audit area or as an overall measure. The LEI is expressed as a percentage. Also see definitions of *effective implementation (EI)*, *critical element (CE)* and *audit area*.

Mission. An activity requiring one or more persons to travel to a State and conduct an on-site activity.

Mitigating measure. An immediate action taken to resolve a significant safety concern (SSC).

Objective evidence. Information that can be verified, supporting the existence of a documented system and indicating that the system generates the desired results.

Off-site validation activity. A USOAP CMA activity during which an ICAO team of subject matter experts assesses corrective actions implemented by a State and validates submitted supporting evidence at the ICAO HQ without an on-site visit to the State.

Oversight. The active control of the aviation industry and service providers by the competent regulatory authorities to ensure that the State's international obligations and national requirements are met through the establishment of a system based on the critical elements.

Procedure. A series of steps followed in a methodical manner to complete an activity or a process, describing what should be done, when and by whom; where and how each step should be carried out; what information, documentation and resources should be used; and how it should all be controlled.

Process. A set of interrelated or interacting activities that transforms inputs into outputs. Processes within an organization or programme are generally planned and carried out under controlled conditions to add value.

Protocol Question (PQ). The primary tool used in USOAP for assessing the level of effective implementation of a State's safety oversight system based on the critical elements, the *Convention on International Aviation*, ICAO Standards and Recommended Practices (SARPs), Procedures for Air Navigation Services (PANS) and related guidance material.

Protocol Question (PQ) finding. Under the USOAP CMA, each finding is generated and expressed in terms of one Protocol Question (PQ); issuance of a PQ finding changes the status of the related PQ to not satisfactory. Also see definitions of *finding* and *Protocol Questions (PQs)*.

Quality management system (QMS). A management system to direct and control an organization with regard to quality.

Recognized organizations. Entities including national, regional, supranational and international organizations, committees or bodies with which ICAO has signed a Memorandum of Understanding (MOU) for the sharing of information under the USOAP CMA.

Safety. The state in which risks associated with aviation activities, related to, or in direct support of the operation of aircraft, are reduced and controlled to an acceptable.

Safety audit. A USOAP CMA audit that a State requests and pays for (on a cost recovery basis). The State determines the scope and date of a safety audit. Also see definition of *audit*.

Safety risk. The predicted probability and severity of the consequences or outcomes of a hazard.

Scope. Audit areas and Protocol Questions addressed and covered in a USOAP CMA activity.

Significant safety concern (SSC). Occurs when the State allows the holder of an authorization or approval to exercise the privileges attached to it, although the minimum requirements established by the State and by the Standards set forth in the Annexes to the Convention are not met, resulting in an immediate safety risk to international civil aviation.

Validation. Confirming submitted information in order to determine either the existence of a Protocol Question (PQ) finding or the progress made in resolving the PQ finding. Also see definition of *Protocol Question (PQ) finding*.

1.4 ACRONYMS AND ABBREVIATIONS

AGA	Aerodromes and ground aids
AIG	Aircraft accident and incident investigation
AIR	Airworthiness of aircraft
ANB	Air Navigation Bureau
ANS	Air navigation services
AOC	Air operator certificate
C/OAS	Chief of Safety and Air Navigation Oversight Audit Section
CAA	Civil Aviation Authority
CAP	Corrective action plan
CBT	Computer-based training
CC	Compliance checklist
CE	Critical element
CMA	Continuous Monitoring Approach
CSA	Comprehensive Systems Approach
DD/MO	Deputy Director of Monitoring and Oversight
DSA	Daily subsistence allowance
EFOD	Electronic Filing of Differences
EI	Effective implementation
F&R	Finding and recommendation
GASP	Global Aviation Safety Plan
HLSC	High-level Safety Conference
HQ	Headquarters
iSTARS	Integrated Safety Trend Analysis and Reporting System
ICVM	ICAO Coordinated Validation Mission
ISO	International Organization for Standardization
LEG	Primary aviation legislation and civil aviation regulations
LEI	Lack of effective implementation
MIR	Mandatory information request
MOU	Memorandum of Understanding
NCMC	National Continuous Monitoring Coordinator
OAS	Safety and Air Navigation Oversight Audit Section
OJT	On-the-job training
OLF	Online Framework
OPS	Aircraft operations
ORG	Civil aviation organization
OSU	Oversight Support Unit
PANS	Procedures for Air Navigation Services
PEL	Personnel licensing and training
PH	Portfolio holder
PQ	Protocol Question
QMS	Quality management system
RCMC	Regional Continuous Monitoring Coordinator

RO	Regional office
RSOO	Regional safety oversight organization
SAAQ	State aviation activity questionnaire
SARPs	Standards and Recommended Practices
SME	Subject matter expert
SMS	Safety management system
SPO	Standards and Procedures Officer
SSC	Significant safety concern
SSP	State safety programme
TCB	Technical Cooperation Bureau
TL	Team leader
TM	Team member
TO	Technical Officer
USOAP	Universal Safety Oversight Audit Programme

Chapter 2

THE ICAO USOAP

2.1 BACKGROUND

2.1.1 On 7 June 1995, the ICAO Council approved the then-voluntary Safety Oversight Assessment Programme, as well as the related mechanisms for financial and technical contributions. The programme was subsequently endorsed by the 31st session of the Assembly and became operational in March 1996. It was a voluntary assessment of a State's implementation of the ICAO SARPs, and assessment reports were provided only to the assessed States. Other Member States were provided with a summary report on the differences identified by the assessment team.

2.1.2 During its first two years, the ICAO Safety Oversight Assessment Programme detected numerous deficiencies in the establishment of effective safety oversight programmes in Member States. Consequently, the ICAO Council recognized the critical need for increased attention to global aviation safety, which was the main subject discussed during the Directors General of Civil Aviation Conference on a Global Strategy for Safety Oversight (DGCA/97), held in Montreal from 10 to 12 November 1997.

2.1.3 Following the DGCA/97 Conference, the ICAO Council completed a preliminary review of the conference conclusions and recommendations and instructed the Secretary General to develop an action plan to address them.

2.1.4 On 6 May 1998, the Council reviewed the action plan submitted by the Secretary General and decided to recommend to the 32nd session of the Assembly that an ICAO USOAP be established.

2.1.5 The 32nd session of the Assembly (22 September – 2 October 1998) reviewed the recommendations of the Council and adopted Assembly Resolution A32-11 — Establishment of an ICAO Universal Safety Oversight Audit Programme (USOAP) with the objective of monitoring the safety oversight obligations of all State entities in ensuring the implementation of all ICAO safety-related SARPs.

2.1.6 The 33rd session of the Assembly (22 September – 5 October 2001) recognized the successful implementation of the USOAP mandatory audits and adopted Assembly Resolution A33-8 which expanded the USOAP to include audits of Annex 11 — *Air Traffic Services*, Annex 14 — *Aerodromes*, and other safety-related areas such as Annex 13 — *Aircraft Accident and Incident Investigation*.

2.1.7 On the recommendation of the Secretariat and the Air Navigation Commission, the Council decided to delay the expansion of USOAP and proposed to the 35th session of the Assembly the transition of the Programme to a comprehensive systems approach (CSA).

2.1.8 Accordingly, the 35th session of the Assembly adopted Resolution A35-6, which requested that the USOAP be expanded to include the safety-related provisions contained in all safety-related Annexes to the Convention as of 2005. This Resolution, which superseded Assembly Resolution A33-8, further requested the Secretary General to restructure the USOAP to implement the CSA and to restructure the safety oversight audit reports to reflect the critical elements (CEs) of a safety oversight system, as presented in the *Safety Oversight Manual* (Doc 9734), Part A — *The Establishment and Management of a State's Safety Oversight System*. Under the CSA, all Member States would be audited at least once during a six-year period.

2.2 TRANSITION TO CMA

2.2.1 In September 2007, the 36th session of the Assembly adopted Resolution A36-4 directing the Council to examine different options for the continuation of the USOAP beyond 2010, including the feasibility of applying a new approach based on the concept of continuous monitoring. Pursuant to this resolution, the Council directed the Secretariat to look at the future of the programme beyond 2010, with a view to incorporating the analysis of safety risk factors, adopting a more proactive approach, making a more effective and efficient use of ICAO resources, and increasing the role of other ICAO bureaux and the regional offices (ROs). To this effect, in July 2008 the Secretariat established a study group to examine the feasibility of adopting a CMA.

2.2.2 The study group identified six options to be considered for the continuation of USOAP beyond 2010, including details on the particular objectives, requirements, benefits, constraints and associated costs of each. Based on a comparative analysis of the benefits, constraints and implementation costs of each option, the study group resolved that, in order to ensure efficiency, long-term sustainability and cost-effectiveness, preference should be given to the application of a CMA for the continuation of USOAP beyond 2010.

2.2.3 The Council examined the Secretariat's recommendations during its 187th session and directed the Secretary General to develop the methodology and tools required to implement a CMA, including the necessary detailed guidance to Member States. The Council also directed the Secretary General to conduct targeted ICAO Coordinated Validation Missions (ICVMs) during the transition phase. Activities to be carried out under the USOAP CMA were to be phased in gradually, with pilot projects conducted in selected Member States.

2.2.4 The High-level Safety Conference 2010 (HLSC/2010) (29 March – 1 April 2010) in Montréal, attended by 551 participants from 117 Member States and observers representing 32 international organizations, agreed that the USOAP presented a major achievement for aviation safety and fully supported the evolution of the Programme to the USOAP CMA. The HLSC/2010 also agreed that States should commit to supporting USOAP CMA by providing ICAO with relevant safety information and that the Council should monitor the progress made during the transition period and, if required, adjust its duration. The participants also indicated that ICAO should enter into new agreements and amend existing agreements for the sharing of confidential safety information with international entities and organizations, with the objective of reducing the burden on States caused by repetitive audits and the systematic duplication of monitoring activities.

2.2.5 The 37th session of the Assembly (September – October 2010) adopted Resolution A37-5, affirming that the evolution of USOAP to the CMA should continue to be a top priority for ICAO to ensure that information on the safety performance of Member States is provided to other Member States and to the travelling public on an ongoing basis. This vital improvement of international aviation safety oversight required the participation and support of all Member States, particularly during the transition period in which the tools and guidance required for USOAP CMA were being developed and refined.

2.2.6 The two-year transition to USOAP CMA was conducted from 2011 to 2012 and the programme was fully launched on 1 January 2013, as scheduled and approved by the Council during its 197th session in November 2012. The CMA transition plan included numerous activities related to: communications with States and stakeholders, development and launch of the online framework and its multiple tools and modules, development of supporting documentation and guidance material, upgrading of the USOAP CMA quality management system (QMS), documentation of processes and procedures, training of auditors and experts, conduct of CMA on-site activities in States and development and expansion of agreements with relevant partners to foster coordination and cooperation.

2.2.7 During the transition, ICAO changed its approach from generating findings and recommendations (F&Rs) to PQ findings. ICAO also modified the formulae for calculating the effective implementation (EI) in order to make the EI percentage more accurate. See 2.9 and 2.13.

2.2.8 The USOAP CMA online framework (<https://soa.icao.int/usoap/>) was also launched on 1 January 2013 with the redesigned and integrated tools required for the conduct of CMA activities available for use. In order to provide States with a seamless transition to the online framework, ICAO developed a phased plan for migrating State PQ finding and corrective action plan (CAP) data from the previous platform, Integrated Safety Trend Analysis and Reporting System (iSTARS), to the online platform. The data migration was completed throughout 2013.

Note.— Version 2.0 of iSTARS, called SPACE, was released in 2013.

2.2.9 In the context of USOAP CMA, the 37th session of the Assembly also directed the Council to assess how information on significant safety concerns (SSCs) could be shared with the public in a form which would allow them to make an informed decision about the safety of air transport. During its 195th and 197th sessions, the Council considered the sharing of unresolved SSCs with the public and approved that SSCs be made available on the ICAO public website starting in January 2014. The 38th session of the Assembly (September – October 2013) endorsed this process. Information on the existence and nature of an unresolved SSC are now posted alongside the State-specific information already available on the ICAO public website (www.icao.int).

2.2.10 Annex 19 — *Safety Management* was adopted by the Council in February 2013 and it became applicable on 14 November 2013. The SARPs in Annex 19 are intended to assist States in managing aviation safety risks and to support the continued evolution of a proactive strategy to improve safety performance. A roll-out plan was published in April 2013 outlining amendments required for USOAP CMA tools to address the new SARPs in Annex 19 in a comprehensive manner.

2.3 USOAP CMA PRINCIPLES

2.3.1 *Sovereignty.* Every Member State has complete and exclusive sovereignty over the airspace of its territory. Accordingly, ICAO fully respects a sovereign State's responsibility and authority for safety oversight, including its decision-making powers with respect to implementing corrective actions related to identified deficiencies.

2.3.2 *Universality.* All Member States shall be subject to continuous monitoring activities by ICAO, in accordance with the principles, methodologies, processes and procedures established for conducting such activities, and on the basis of the Memorandum of Understanding (MOU) signed by ICAO and each Member State.

2.3.3 *Transparency and disclosure.* USOAP CMA activities shall be conducted under a process that is fully transparent and open for examination by all parties concerned. There shall be full disclosure of the finalized results of USOAP CMA activities which shall provide sufficient information for Member States to make informed decisions regarding the safety oversight capability of other Member States.

2.3.4 *Timeliness.* Results of USOAP CMA activities shall be produced and posted by ICAO in a timely manner, in accordance with a predetermined schedule for the preparation and submission of these results. Member States shall submit updates, comments, action plans and all required documentation in accordance with the timelines set out in Appendix A and in the MOU. Relevant information will be published by ICAO on an ongoing basis.

2.3.5 *All-inclusiveness.* The scope of USOAP CMA includes the ICAO SARPs contained in all safety-related Annexes to the Convention, Procedures for Air Navigation Services (PANS), guidance material and related procedures and practices.

2.3.6 *Systematic, consistent and objective.* USOAP CMA shall be conducted in a systematic, consistent and objective manner. Standardization and uniformity in the scope, depth and quality of USOAP CMA activities shall be achieved through the use of trained and qualified auditors and SMEs, through the use of standardized PQs and the provision of relevant guidance material.

2.3.7 **Fairness.** USOAP CMA activities shall be conducted in a manner such that Member States have every opportunity to monitor, comment on, and respond to the CMA processes.

2.3.8 **Quality.** The quality of USOAP CMA activities shall be ensured by assigning trained and qualified auditors and SMEs to conduct USOAP CMA activities, as well as by implementing and maintaining a documented QMS that continually monitors and evaluates feedback received from USOAP CMA stakeholders to ensure their ongoing satisfaction.

2.4 AUDITING PRINCIPLES

2.4.1 The following auditing principles apply to USOAP CMA activities, in accordance with ISO 19011:2011 — *Guidelines for auditing management systems*. USOAP CMA has adopted *ISO 19011* including the principles of auditing, managing an audit programme, conducting management system audits, guidance on the evaluation of competence of individuals involved in the audit process.

Note.— The terms “audit” and “auditing” used below apply to USOAP CMA activities in general.

- a) **Ethical conduct:** the foundation of professionalism. Trust, integrity, confidentiality and discretion are essential to conducting USOAP CMA activities.
- b) **Fair presentation:** the obligation to report truthfully and accurately. Audit findings, conclusions, activity reports and SSCs shall reflect truthfully and accurately the State's safety activities. Significant obstacles encountered during the activity and unresolved diverging opinions between a USOAP CMA mission team and the visited State are reported.
- c) **Due professional care:** the application of diligence and judgement in the conduct of USOAP CMA activities. Team members (TMs) shall exercise care in relation to the importance of the tasks they perform and the confidence placed in them by Member States and other interested parties. Having the necessary competence is an important factor.
- d) **Independence:** the basis for the impartiality of USOAP CMA activities and the objectivity of the conclusions. TMs shall be independent of the activity being audited and be free from bias and conflict of interest. TMs shall maintain an objective state of mind throughout the process to ensure that audit findings and conclusions are based only on the assessed evidence.
- e) **Evidence-based approach:** the rational method for reaching reliable and reproducible conclusions in a systematic process. Audit evidence shall be verifiable and based on samples of the information available. The appropriate use of sampling is closely related to the confidence that can be placed in the audit conclusions.

2.5 CRITICAL ELEMENTS

2.5.1 Critical elements (CEs) are essentially the safety defence tools of a State's safety oversight system required for the effective implementation of safety-related standards, policy and associated procedures. Each Member State should address all CEs in its effort to establish and implement an effective safety oversight system that reflects the shared responsibility of the State and the aviation community. CEs of a safety oversight system cover the whole spectrum of civil aviation activities, including personnel licensing, aircraft operations, airworthiness of aircraft, aircraft

accident and incident investigation, air navigation services and aerodromes. The level of effective implementation of the CEs is an indication of a State's capability for safety oversight.

2.5.2 The CEs of a State's safety oversight system are described in Doc 9734 *Safety Oversight Manual, Part A — The Establishment and Management of a State's Safety Oversight System* and Annex 19 — *Safety Management, Appendix 1*.

2.6 AUDIT AREAS

The following eight audit areas have been identified in the USOAP:

- 1) primary aviation legislation and civil aviation regulations (LEG);
- 2) civil aviation organization (ORG);
- 3) personnel licensing and training (PEL);
- 4) aircraft operations (OPS);
- 5) airworthiness of aircraft (AIR);
- 6) aircraft accident and incident investigation (AIG);
- 7) air navigation services (ANS); and
- 8) aerodromes and ground aids (AGA).

2.7 USOAP CMA PROTOCOL QUESTIONS

2.7.1 Protocol Questions (PQs) are the primary tool for assessing the level of effective implementation of a State's safety oversight system. They are based on ICAO SARPs, PANS, ICAO documents, other guidance material and taking into consideration the CEs. PQs are organized by audit areas.

2.7.2 The use of standardized PQs ensures transparency, quality, consistency, reliability and fairness in the conduct and implementation of USOAP CMA activities.

2.7.3 The PQs are based on the Convention, safety-related SARPs established in the Annexes to the Convention and associated guidance material. At the same time, each PQ is sufficiently flexible to allow the appropriate evaluation of the scope and complexity of the aviation activity in each State.

2.7.4 PQs are maintained live and online, so that the status of each PQ can be continuously updated based on information and evidence which is submitted by the State and validated by the Safety and Air Navigation Oversight Audit Section (OAS).

2.7.5 Any change in the status of a PQ for a State will lead to an update of the State EI.

2.7.6 The OAS amends and updates PQs on a periodic basis to reflect the latest changes in ICAO provisions and Annexes to the Convention, to include emerging issues in civil aviation and to harmonize and improve PQ

references and content. PQ amendments incorporate input from ICAO Air Navigation Bureau (ANB), ROs, USOAP mission team members and external stakeholders.

2.7.7 PQ amendments may have a minor impact on all States' EIs because the CE relevant to the PQ may be changed, some PQs may be merged with others, some PQs may be divided and some deleted. New PQs being added will be marked as undetermined until they are reviewed in a USOAP CMA activity.

2.8 PQ SELF-ASSESSMENT

2.8.1 States are required to submit and regularly update the status of PQs, using the online framework. Particularly, in light of the adoption of *Annex 19 — Safety Management*, States are encouraged to perform self-assessment. As a priority, States shall conduct a PQ self-assessment:

- a) on PQs that were deemed not satisfactory in a previous USOAP activity;
- b) on new PQs introduced through PQ amendments – these PQs will have an undetermined status until they are assessed through a USOAP CMA activity;
- c) on amended PQs, if the amendment impacts the status of the PQ; or
- d) in case of any changes in their aviation system, regulations and/or procedures to determine whether these changes impact the status of any PQs.

2.8.2 Starting in November 2014 and in line with the mid-term objective of the GASP calling for all States to achieve full implementation of State Safety Programmes (SSPs) and safety management systems (SMS), States with an EI of over 60 per cent are required to conduct self-assessment on new or amended PQs on the provisions of Annex 19. Other States will be encouraged to do so as their SSPs gradually mature. See 2.13.

2.8.3 The PQ self-assessment is an important tool for States to use in order to prepare for a USOAP CMA activity. Each PQ includes information on ICAO references which helps identify the ICAO standard or provision related to the PQ. Each PQ also includes guidance for review of the PQ and examples of what the State needs to establish and implement to comply with the ICAO provision outlined in the PQ; this is also an indication of the type of evidence that the USOAP CMA team will be looking for during a USOAP CMA activity. The CE linked to each PQ is also an indication for States – CEs 1 to 5 indicate that the State must *establish the ICAO provision* outlined in the PQ and CEs 6 to 8 indicate that the State must *implement the established provision*.

2.8.4 Regular self-assessments using PQs are also a tool for States to actively monitor and report the health of their aviation system on a continuous basis. States can use PQ self-assessments to conduct scheduled internal audits of their safety oversight system. Thus, States can actively monitor their own systems in a proactive manner to identify and resolve safety oversight deficiencies.

2.9 PQ FINDING

2.9.1 When ICAO cannot obtain evidence indicating compliance, a deficiency is identified and a PQ finding is issued in one or more of the following cases:

- a) lack of compliance of the State's safety oversight system with the Convention;
- b) lack of implementation of ICAO SARPs and PANS; and/or
- c) lack of application of guidance material and relevant safety-related practices in general use in the aviation industry to support the implementation of the ICAO SARPs and PANS.

Generating a finding changes the status of the associated PQ to “not satisfactory” and decreases the State's EI, as described in 2.13 and in Chapter 3, 3.7.

2.9.2 A PQ finding is issued when there is no evidence of compliance with provisions in the aviation safety system of the State. Such evidence may be obtained during a USOAP CMA on-site activity, or through a USOAP CMA off-site activity, if the State does not provide an acceptable response to a mandatory information request (MIR); see 2.11. Also see Chapter 3, 3.2 for USOAP CMA activities.

2.9.3 Each PQ finding must be based on one PQ. Each PQ is linked to a CE, therefore, a not satisfactory PQ is also reflected in the related CE in the audit results.

2.9.4 A PQ finding contains:

- a) the not satisfactory PQ;
- b) the applicable CE; and
- c) a description of the identified deficiencies.

2.9.5 In order for ICAO to close a PQ finding, the State must address the associated PQ by resolving all the deficiencies detailed in the finding.

Note.— In order for ICAO to close a finding and recommendation (F&R) from the USOAP CSA cycle, the State must address all PQs associated with the F&R. See the definition of F&R in Chapter 1, 1.3.

2.10 SIGNIFICANT SAFETY CONCERN

2.10.1 In November 2006, the Council approved a mechanism for dealing with significant safety concerns (SSCs) identified during the conduct of safety oversight audits. The SSC mechanism is a USOAP CMA process that is used to notify a State of identified deficiencies that may pose an immediate safety risk to international civil aviation.

2.10.2 An SSC may be identified by a USOAP CMA activity team during the conduct of a USOAP CMA on-site activity (see Chapter 3, 3.2) or by ICAO at any stage throughout the continuous monitoring process.

2.10.3 If the SSC is confirmed, the National Continuous Monitoring Coordinator (NCMC) of the State is notified, specifying the due date for the State to take mitigating measures. A notification is also sent to the ICAO Regional Office (RO).

Note.— When requested by the State, ICAO RO may assist the State on how to develop and submit immediate mitigating measures to resolve the SSC.

2.10.4 If the State does not take appropriate mitigating measures or corrective actions to resolve the SSC by the specified due date, the SSC will be made available to all Member States on the online framework (OLF). If the State

does not resolve the SSC within 90 days after posting on the online framework, it will also be posted on the ICAO public website. The SSC will remain posted until it is resolved. Details of the SSC process are described in the SSC procedure and the SSC process flowchart in Appendix C.

2.11 MANDATORY INFORMATION REQUEST

2.11.1 The OAS may submit a mandatory information request (MIR) to a State to request information or documentation needed for USOAP CMA review and validation. A MIR can be issued when:

- a) a State has not submitted and/or maintained its SAAQ, CCs and/or PQs complete and up to date;
- b) a State has not submitted and/or maintained its CAPs up to date;
- c) information in the SAAQ, CCs and/or PQs provided by the State contradicts information found in other documents or provided by other stakeholders;
- d) a significant change is observed in the organization responsible for a State's aviation safety oversight;
- e) evidence indicates that a potential deficiency or significant safety concern may exist, and additional information is required to validate this — it gives the State the opportunity to clarify the issue;
- f) information is needed on an aircraft accident or incident;
- g) information is needed in addition to an ICAO RO visit; and
- h) information collected during a USOAP CMA activity is incomplete or insufficient.

2.11.2 If the State does not respond to the MIR with complete, clear and relevant information, or if the State does not respond to a MIR within the specified timeframe, ICAO can generate a PQ finding or even an SSC.

2.12 CORRECTIVE ACTION PLAN

2.12.1 When ICAO issues a finding, i.e. when the status of a PQ changes to not satisfactory as a result of a USOAP CMA activity, in response the State must develop a corrective action plan (CAP), as required by the CMA MOU (see Chapter 4, 4.6 and Appendix B). The State shall develop an acceptable CAP and submit it to the OAS through the USOAP CMA online framework (see Chapter 5 for an introduction to the online framework).

2.12.2 The State must provide and implement CAPs that meet certain criteria. Proposed CAPs must fully address the associated PQ and all identified deficiencies. Guidance and criteria for States on developing CAPs are described in Appendix D.

Note.— When requested by the State, ICAO RO may assist the State on how to develop and submit a CAP

2.12.3 Once OAS accepts the State's CAPs, the State starts to implement the corrective actions. The OAS regularly monitors the State's progress in implementing its CAPs through the online framework until each CAP is fully implemented. Further details regarding the submission, assessment, implementation and validation of CAPs are described in Chapter 7, 7.4.15 to 7.4.21, and 7.8.3.

2.12.4 If a State does not submit a CAP within the required timeline, the OAS will coordinate with the RO and other relevant ICAO sections and report to DD/MO to determine further action, as appropriate.

2.13 EFFECTIVE IMPLEMENTATION

2.13.1 Effective implementation (EI) is a measure of the State's safety oversight capability. A higher EI indicates that a State's safety oversight system has a greater degree of compliance with ICAO provisions.

2.13.2 The EI is calculated for any group of applicable PQs based on the following formulae:

$$EI (\%) = \frac{\text{number of satisfactory PQs}}{\text{total number of applicable PQs}} \times 100$$

The EI can thus be calculated for each CE, each audit area and as an overall value.

In addition to the EI, a lack of effective implementation (LEI) score is also calculated for certain analysis. The LEI is simply calculated as:

$$LEI (\%) = 100 - EI (\%)$$

Note.— The EI calculation was changed under the CMA in order to make the EI a more accurate measure for analysis purposes. This change has been applied to all States uniformly and has had a minimal impact on States' EI. It does not impact the overall interpretation of results or prioritization and conduct of USOAP CMA activities for States.

2.14 STATE AVIATION ACTIVITY QUESTIONNAIRE

2.14.1 The State aviation activity questionnaire (SAAQ) is designed to collect comprehensive and specific information on each State's aviation activities, including legislative, regulatory, organizational, operational, technical and administrative details. Each State shall complete and maintain its SAAQ up to date in order to assist the Monitoring and Oversight Office in monitoring the level of aviation activity in the State related to each audit area and in prioritizing and planning USOAP CMA activities.

2.14.2 ICAO will revise the SAAQ periodically. States are required to update their SAAQs regularly.

2.15 COMPLIANCE CHECKLISTS (CCS)/EFOD

2.15.1 States are required by the USOAP CMA Memorandum of Understanding (MOU; see Chapter 4, 4.3.1, 4.3.2 and 4.6) to file their differences against standards and recommended practices by completing and maintaining up-to-date Compliance Checklists (CCs). These contain information regarding the implementation of the specific provisions of the relevant Annexes to the Convention. The completion of the CCs by Member States will provide an overview of the level of implementation of ICAO Standards to authorized users.

2.15.2 States must provide this information through the Electronic Filing of Differences (EFOD) system on the CMA online framework (<http://www.icao.int/usoap/>). By completing the CCs through the EFOD system, States can use the EFOD as an alternative means for notifying ICAO of their compliance and differences.



Chapter 3

THE CONTINUOUS MONITORING APPROACH (CMA)

3.1 OBJECTIVE

USOAP CMA provides a mechanism for ICAO to collect and analyze safety information from Member States and other stakeholders to identify and prioritize appropriate oversight and monitoring activities to be carried out by ICAO. It is a strategy that uses a risk-based approach for measuring and monitoring the safety oversight capabilities and improving safety performance of States and global aviation on a continuous basis.

3.2 USOAP CMA ACTIVITIES

3.2.1 The following activities may be performed under USOAP CMA to identify deficiencies in a State and to assess the resolution of findings and SSCs, if applicable:

- a) USOAP CMA audit;
- b) safety audit;
- c) ICVM; and
- d) off-site validation activity.

3.2.2 The objective of a USOAP CMA audit is to determine a State's capability for safety oversight by assessing the effective implementation of the CEs of the safety oversight system and the status of the State's implementation of all safety-related ICAO SARPs, associated procedures, guidance material and best safety practices. Audits are tailored to the complexity of the State's civil aviation system.

3.2.3 The objective and methodology of a safety audit are the same as a USOAP CMA audit. The difference is that for a USOAP CMA audit, ICAO identifies the need for the audit, determines its scope and pays for its conduct; whereas for a safety audit, a Member State requests an audit of its current safety oversight system, determines its scope and pays for its conduct on a cost recovery basis.

3.2.4 The objective of an ICVM is to assess and validate CAPs (or mitigating measures for SSCs) implemented by a State to address previously identified findings, including SSCs. During an ICVM, the ICAO team of SMEs may also provide on-site guidance to the State on resolving findings and deficiencies.

Note 1.— Some ICVMs are planned and conducted specifically to assess and validate a State's resolution of SSCs.

Note 2.— A State may request ICAO to conduct an ICVM, in which case ICAO will schedule and conduct a cost recovery ICVM as described in Chapter 4, 4.7.6 and 4.7.7.

Although it is not an objective of ICVMs, the SMEs may identify preliminary SSCs during the conduct of the ICVM.

3.2.5 The objective of an off-site validation activity is to assess and validate CAPs implemented by a State to address certain PQ findings without conducting an on-site activity, i.e. an audit or ICVM. CAPs typically addressing PQ findings associated with CEs 1 to 5 (collectively known as “establishment” CEs) are best suited for an off-site validation activity, if the State submits evidence of their full implementation. This activity is conducted at ICAO HQ.

Note 1 .— CEs 1 through 5 are related to “establishment”, i.e. they indicate that the addressed provision must be fully and effectively established within the State’s safety oversight system. CEs 6 through 8 are related to “implementation”, i.e. they indicate that the addressed provision must be fully and effectively implemented within the State’s safety oversight system.

Note 2 .— CAPs related to the majority of PQ findings associated with CEs 6, 7 and 8 (collectively known as “implementation” CEs) do not qualify for an off-site validation activity and must be assessed and validated through an on-site activity.

Note 3 .— If a State’s response to a MIR is not acceptable, the OAS generates an off-site validation activity to change the status of the associated PQs from satisfactory to not satisfactory. In that case, the State must submit CAPs to the OAS in response to those not satisfactory PQs, as described in Chapter 7, 7.8.3 and 7.4.16 to 7.4.21.

These activities are also defined in Chapter 1, 1.3. The scope of each type of these activities are determined in the planning and scheduling process, as described in Chapter 4, 4.7. Further details about the phases and conduct of each type of activity are described in Chapter 7.

3.3 THE USOAP CMA CONCEPT

3.3.1 USOAP CMA consists of the following four major components:

- a) collection of safety information;
- b) determination of State safety risk profile;
- c) prioritization and conduct of USOAP CMA activities; and
- d) update of the EI and the status of SSCs.

These components, not necessarily in a particular order, enable ICAO to continuously monitor the safety oversight capabilities of Member States. Figure 3-1 shows the USOAP CMA components.