



ASSEMBLY — 41ST SESSION

EXECUTIVE COMMITTEE

Agenda Item 15: Audit Programmes – Continuous Monitoring Approach

IMPLEMENTATION OF THE ICAO CONTINUOUS MONITORING APPROACH (CMA) AUDIT PROGRAMMES

(Presented by the Council of ICAO)

EXECUTIVE SUMMARY

This working paper presents a consolidated progress report since the 40th Session of the Assembly on the implementation and activities of the ICAO Universal Safety Oversight Audit Programme (USOAP) and the Universal Security Audit Programme (USAP), which are both operating under a Continuous Monitoring Approach (CMA).

Detailed information on the activities and developments of the USOAP CMA and USAP CMA during the triennium period of 2019 to 2021 are presented in Appendices A and B, respectively.

Action: The Assembly is invited to:

- a) note the progress reports on the implementation and activities of the USOAP CMA and USAP CMA;
- b) urge States to continue with their full engagement in the USOAP CMA and USAP CMA, while supporting the programmes' developments; and
- c) encourage States to continue contributing resources for the successful operation of the USOAP CMA and USAP CMA, including with the long-term secondment of qualified experts, and supporting these programmes through their participation in relevant training courses and seminars.

<i>Strategic Objectives:</i>	This working paper relates to the following three Strategic Objectives: Safety, Air Navigation Capacity and Efficiency, and Security and Facilitation.
<i>Financial implications:</i>	The activities referred to in this paper will continue to be subject to the resources available in the 2023-2025 Regular Programme Budget and extra budgetary contributions.

<i>References:</i>	<p>C-WP/15306 C-WP/15097 C-DEC 221/7 State letter AN 19/51-21/24 Doc 10160, <i>Report of the High-level Conference on COVID-19</i> Doc 10115, <i>Report of the Thirteenth Air Navigation Conference (AN-Conf/13), Corrigenda Nos. 1 and 2, and Supplement No. 1</i> Doc 10140, <i>Assembly Resolutions in Force (as of 4 October 2019)</i> Doc 10137, <i>Assembly 40th Session — Report of the Technical Commission</i> Doc 10136, <i>Assembly 40th Session — Report and Minutes of the Executive Committee</i> Doc 10071, <i>Assembly 39th Session — Report of the Technical Commission</i> Doc 9807, <i>Universal Security Audit Programme Continuous Monitoring Manual</i> Doc 9735, <i>Universal Safety Oversight Audit Programme Continuous Monitoring Manual</i> A40-WP/11, <i>Report on the Evolution of the Universal Safety Oversight Audit Programme (USOAP) Continuous Monitoring Approach (CMA)</i> A40-WP/32, <i>Report on the review of the scope and methodology of the Universal Security Audit Programme – Continuous Monitoring Approach (USAP CMA)</i></p>
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1. BACKGROUND

1.1 Launched in 1999, the Universal Safety Oversight Audit Programme (USOAP) transitioned to a Continuous Monitoring Approach (CMA) in January 2013, evolving into a more evidence-based, risk-informed and result-oriented programme to determine on a universal basis the effectiveness and sustainability of States' safety oversight systems. Today, the programme also assesses the progress of States in implementing their State safety programmes (SSPs). To support its continuous evolution, the ICAO Assembly, during its 39th Session, recommended that ICAO undertake a review of the programme's methodology, processes and tools to give Member States an opportunity to provide user feedback, thereby enabling ICAO to plan improvements (Doc 10071, *Assembly 39th Session — Technical Commission Report* refers). The ICAO Assembly, during its 40th Session (Assembly Resolution A40-13 refers), further directed the Secretary General to implement organizational improvements necessary to successfully manage the changes brought about by the long-term evolution of the programme, in line with the recommendations of the Group of Experts for a USOAP CMA Structured Review (GEUSR) as agreed by the Council and of the Thirteenth Air Navigation Conference.

1.2 The Universal Security Audit Programme (USAP), launched in 2002, has been implementing a risk-based CMA since 2015. The ICAO Assembly, during its 39th Session (Assembly Resolution A39-18, Appendix E refers), requested the Secretariat to review the scope and methodology of the USAP, in consultation with Member States, to ensure that it provides reliable information regarding the effective implementation of aviation security measures on the ground, and that the methodology takes into consideration a risk-based approach for the implementation of aviation security measures. At its 40th Session, the ICAO Assembly endorsed a set of 26 recommendations and requested that the Council direct the Secretary General to implement these improvements aimed at ensuring consistent interpretation of Annex 17 — *Security Standards*, utilizing a more operational focus to the USAP CMA programme, addressing serious deficiencies in a timely manner and applying a risk-based approach to audit prioritization, thus ensuring effective reporting of Member States' risk-based and outcomes-focused compliance with relevant security objectives (Assembly Resolution A40-11, Appendix D refers).

1.3 This paper provides a consolidated progress report on the implementation and activities of both the USOAP CMA and USAP CMA since the 40th Session of the Assembly. Detailed information on

the USOAP CMA and USAP CMA activities and developments in the triennium period of 2019 to 2021 are outlined in Appendices A and B¹. The critical areas identified by both audit programmes are presented in Appendices C and D.

2. DISCUSSION

2.1 Implementation of the USOAP CMA

2.1.1 From 1 January 2019 to 31 December 2021, the USOAP CMA conducted a total of 88 USOAP CMA activities. Appendix A outlines these activities, which includes audits, ICAO Coordinated Validation Missions (ICVMs), off-site validation activities, mandatory information requests (MIRs), State safety programme implementation assessments (SSPIAs) and workshops. At the end of the reporting period, the States' effective implementation (EI) was 68.18 per cent. The audit areas with the lowest levels of EI are aircraft accident and incident investigation (AIG) (54.08 per cent) and aerodromes and ground aids (AGA) (61.79 per cent), while the CEs with the lowest level of EI are qualified technical personnel (CE-4) (58.57 per cent), surveillance obligations (CE-7) (61.43 per cent) and resolution of safety issues (CE-8) (54.37 per cent).

2.1.2 During the reporting period, ICAO identified three significant safety concerns (SSCs) and two SSCs previously identified by ICAO were resolved. As of 31 December 2021, globally, three SSCs remain unresolved affecting seven States². In this period, ICAO deployed the MIR mechanism to request information or documentation from four States for USOAP CMA review and validation. Three of those four MIRs issued have been closed satisfactorily.

2.1.3 The Secretariat executed four streams of work to manage the evolution of the USOAP CMA. Firstly, the internal transformation and optimization stream was progressed. Of the 37 recommendations stemming from the GEUSR, only one³ remains to be completed. The ad hoc USOAP CMA Advisory Group (USOAP-AG) was established and its recommendations were progressed. Lastly, the Secretariat implemented COVID-19 contingency measures to maintain the operation of the USOAP CMA during the pandemic. The most notable developments resulting from the implementation of the streams of work are contained in Appendix A. The improvements introduced by these streams of work will streamline and improve the USOAP CMA's processes, methodologies and tools, and will improve its outcomes.

2.1.4 States continued to support the efforts of the USOAP CMA through the provision of long-term secondments who are contributing to the successful operation and evolution of the programme. During the reporting period, China, Dominican Republic, France, Republic of Korea, Saudi Arabia and United States contributed long-term secondments.

¹ The reporting period includes the full years from 2019 to 2021. A full report of activities undertaken in 2022 will be presented to the next session of the Assembly.

² ICAO identified SSCs in Bhutan, Eritrea and the Eastern Caribbean Civil Aviation Authority (ECCAA), a regional safety oversight organization that performs delegated safety oversight responsibilities on behalf of the Organisation of Eastern Caribbean States (OECS) Member States, namely Antigua and Barbuda, Grenada, Saint Kitts and Nevis, Saint Lucia, and Saint Vincent and the Grenadines. Dominica is a member of OECS and it became a member of ICAO on 13 April 2019. Dominica signed the Memorandum of Understanding regarding the USOAP CMA on 7 February 2020.

³ Recommendation 33 will be concluded in early 2022 and will enhance ICAO's responses to State feedback, bug reports and enquiries by creating a Service Desk to the OLF applications.

2.1.5 In this period, the USOAP CMA provided Online Framework (OLF)⁴ capabilities to the USAP, Global Aviation Safety Oversight System (GASOS) and World Food Programme (WFP).

2.2 Implementation of the USAP CMA

2.2.1 From 1 January 2019 to 31 December 2021, a total of 75 USAP CMA activities were conducted. Appendix B provides an overview of these activities conducted during the reporting period, which includes audits, validation missions, regional seminars, auditor information sessions and auditor training courses. The graphs in Appendix B highlight the global sustainability of States' oversight systems (level of implementation of the critical elements), as well as their compliance with Annex 17 Standards, as assessed by the USAP CMA. At the end of the reporting period, States' Sustainability Indicator was 71.86 per cent. Within the sustainability indicator, the CEs with the lowest level of effective implementation are CE-7, quality control obligations (53.21 per cent) and CE-8, resolution of security concerns (62 per cent). As at 31 December 2021, 19 Significant Security Concerns (SSeCs) in 8 States were posted on the USAP secure portal.

2.2.2 In response to the COVID-19 outbreak, in addition to supporting ICAO actions to assist Member States in responding to this crisis and to prepare for an effective global response and recovery, the Secretariat moved to a rolling twelve-month schedule, and replaced postponed on-site audits with documentation-based audits. More details on the management of the USAP CMA during the pandemic are provided in Appendix B.

2.2.3 Moreover, multiple refinements and improvements were made to the USAP CMA in order to make it more responsive to the needs of Member States and increase the accuracy of the audit results. Over the reporting period, the Secretariat progressed the implementation of the 26 recommendations made by the Secretariat Study Group on the USAP CMA (SSG), approved by the Council during its 217th Session and endorsed by the 40th Assembly. Of these recommendations, 25 are now fully implemented. The Secretariat also continued reviewing and providing feedback on the many State corrective action plans (CAPs) submitted. Furthermore, both Doc 9807, *Universal Security Audit Programme Continuous Monitoring Manual* and Doc 10047, *Aviation Security Oversight Manual* were updated and published in all ICAO languages. A summary of all improvements is presented in Appendix B.

2.2.4 Specific challenges that continue to be faced by the audit programme are the frequent amendments made to Annex 17 and Annex 9 — *Facilitation* and a shortage of qualified audit team leaders. Each new Annex amendment requires a careful revision of the USAP CMA protocol questions (PQs) and consultation with the SSG to receive direct feedback from States. Meanwhile, the audit programme is reliant on seconded audit team leaders to meet its needs, leading to frequent challenges in ensuring full implementation of the annual schedule of audits.

3. CONCLUSION

3.1 ICAO's safety and security audit programmes play a vital role in providing objective and independent assessments of Member States' capacity for aviation safety and security oversight as well as the sustainability of their systems. The audit programmes also provide much-needed assistance in the form

⁴ The USOAP CMA OLF (<https://icao.int/usoap>) is the main platform for ICAO to monitor, evaluate and report States' safety oversight-related information and documentation, track CMA activities and manage USOAP CMA data in real time. It hosts the Electronic Filing of Differences (EFOD) module, where digitized versions of the Annexes are stored, allowing States to notify any differences to the ICAO provisions. The OLF is also the provenance of all the monitoring and oversight data used in the iSTARS (integrated Safety Trend and Analysis Reporting System) platform.

of recommendations to guide States in their efforts to improve safety and security oversight systems. ICAO audit programmes are dependent on extra-budgetary voluntary financial and in-kind contributions for their full and effective implementation and sustainability. In this context, the continued engagement of States in the audit programmes demonstrates the global aviation community's commitment to continued improvement and full implementation of ICAO Standards.

3.2 In addition to providing direct assistance to States, the USOAP CMA and USAP CMA also provide ICAO, other States and stakeholders with important and useful information to help in the targeting of assistance activities and the development of aviation policies. Moreover, the audit programmes continue to play a central role in the identification and mitigation of significant deficiencies that pose a risk to international civil aviation. Nevertheless, the results of both audit programmes demonstrate that a number of States continue to experience difficulties in meeting their obligations under the *Convention on International Civil Aviation* and its Annexes, necessitating continued monitoring and assistance from ICAO and its partners.

APPENDIX A

DETAILED INFORMATION ON DEVELOPMENTS AND USOAP CMA ACTIVITIES IN THE REPORTING PERIOD 2019 TO 2021

1. USOAP CMA DEVELOPMENTS

1.1 During the reporting period, the USOAP CMA had multiple developments resulting from the execution of its four streams of work.

1.2 Internal transformation and optimization stream

1.2.1 The USOAP CMA concluded a number of review processes that implemented actions for addressing or mitigating risks associated with the execution of the programme. A lean review, a risk management review and a management systems review were undertaken. A human resource (HR) strategy was implemented and a structural review was concluded to enable the operation and evolution of the programme with all available allocated resources.

1.2.2 The USOAP CMA improved communication within ICAO, as well as with Member States and partners. Newsletters and updates on the evolution of the USOAP CMA were issued regularly and are available on ICAO's public website (www.icao.int/safety/CMAForum/Pages/usoap-cma-newsletters.aspx). ICAO produced a series of three SkyTalks during the High-level Conference on COVID-19 (HLCC 2021) where the latest news on the status of the programme's evolution were shared. The series is available on ICAOTV at <https://www.icao.tv/icao-high-level-conference-on-covid-19-hlcc-2021/season:3>. Sharing of information between Headquarters and the regional offices continued through regular meetings to support the prioritization of Member States for USOAP CMA activities and other associated planning tasks. Regular exchanges with ICAO partners on monitoring activities (United States, European Union Aviation Safety Agency (EASA) and European Commission) enabled the coordination of activities minimizing burden caused by duplicated activities on States and supported the prioritization process.

1.2.3 A revision of the *Universal Safety Oversight Audit Programme Continuous Monitoring Manual* (Doc 9735) and the Regional Office Manual was launched in 2021 to include new and updated processes resulting from the implementation of the recommendations of the GEUSR, innovations resulting from the pandemic and overall organizational improvements. It is expected that the new edition of Doc 9735 will be published in the next triennium.

1.2.4 As the entity responsible for the execution of the USOAP CMA, the Monitoring and Oversight (MO) branch of the Air Navigation Bureau (ANB) underwent an internal and external audits of its quality management system in accordance with the ISO 9001, which were completed it successfully without non-conformities. The established Running Action Item List (RAIL), which captures organizational challenges to the operations of the USOAP CMA, entered 18 actions to track and address these issues, and implemented six corrective measures; 15 actions remain outstanding. ICAO also undertook an internal audit on the aviation safety audit process that resulted in eight recommendations, which are already under implementation. Data collected by ICAO through the USOAP CMA Quality

Management System (QMS) indicated an overall satisfaction rate of 86.1 per cent from States that provided feedback on CMA activities conducted using a new reporting tool introduced in 2021.

1.3 **GEUSR stream**

1.3.1 From 2019 to 2021, 36 out of the 37 recommendations of the GEUSR were implemented. This includes **Group A** and **B** recommendations involving the publication of the 2020 version of the USOAP CMA protocol questions (PQs), which reduced the total number from 943 to 790, and identified a subset of PQs, known as priority PQs (PPQs). In October 2021, this version of PQs were published in English, French and Spanish.

1.3.2 The implementation of **Group C** recommendations concluded with the development of methodologies and processes that expanded the modalities of auditing and validation activities, including full-scope, focused, and follow-up audits, as well as ICVMs, integrated validations activities (IVAs) and off-site validations. SSPIAs phase 2 methodologies and processes were completed. As part of the roll-out of these recommendations, an SSPIA module on the OLF was introduced, including a self-assessment tool, a dedicated workshop, a section particularly for this activity in the State aviation activity questionnaire (SAAQ), a questions and answers sheet, and the OLF SSPIA module guidance material.

1.3.3 The implementation of **Group D** recommendations improved the content and functionality of the SAAQ, and enhanced the data and information conveyed to decision-makers through the revamping of the OLF dashboard which provides an updated presentation of State indicators. The implementation of **Group E** recommendations included the publication of the first ever “Guidelines for National Continuous Monitoring Coordinators (NMCs)” distributed to States in June 2021, the update of the training on the OLF tools and enhanced communication through increased participation in regional NCMC and State safety programme (SSP) point of contact (POC) meetings starting in January 2021. Improved guidance material on corrective action plans (CAPs) has been completed. A feedback module in the OLF was included to enable NCMCs a means to provide comments and suggestions as well as report issues to ICAO. A summary of all available OLF training was shared amongst participants in each course. An updated USOAP computer-based training (CBT) (Phase I and II) was released in 2021 for most audit areas. An auditor preparation course has been developed and is ready to be delivered. Workshops and advocacy for NCMC and its role will continue to be planned once travel restrictions allow in-person activities to restart. The recommendations presented in **Group F** were concluded with the update of the OLF, allowing States to complete the self-assessment and CAP modules offline. Other updates currently available include the data exchange between States and the OLF, the inclusion of a feedback function and continuous enhancements to all OLF modules.

1.4 **USOAP-AG stream**

1.4.1 The USOAP-AG was established in November 2019, met once and conducted the remaining of its mandate with virtual meetings because of the pandemic. The USOAP-AG provided 43 recommendations categorized into six groups as well as advice that was presented to the Council during its 221st Session (C-WP/15097 refers). The Council requested that the Secretary General (C-DEC 221/7) consult with Member States on the proposed recommendations. As a means to familiarize States with the material and facilitate the consultation process, the Secretariat delivered seven workshops in all ICAO regions, which were attended by 238 participants. State letter AN 19/51-21/24 was issued to realize the consultation. The Secretariat received 67 responses from 66 States and EASA. The decisions of the Council addressing these recommendations to continue evolving the USOAP CMA are contained in A41-WP/27.

1.5 COVID-19 measures stream

1.5.1 From 2021 to 2022, the USOAP CMA implemented contingency measures to continue monitoring States during the COVID-19 pandemic. On-site activities were suspended for three quarters of the year, restarting in late 2021. Off-site activities increased with the introduction of new methodologies that were developed and implemented to support an increase in off-site and virtual USOAP CMA activities for those States with an adequate environment. These activities have been instrumental in maintaining the execution of activities that update the States' effective implementation (EI) of a safety oversight system.

1.5.2 Travel restrictions imposed by the COVID-19 pandemic prevented the full deployment of training, including on-the-job training, during two-thirds of the reporting period. The USOAP CMA was able to create different means to continue providing this service, including the delivery of enhanced training and the development of remote training methodologies for auditors.

1.5.3 The COVID-19 Contingency-related Differences/Electronic Filing of Differences (CCRD/EFOD) platform was active on the OLF from April 2020 to July 2021.

2. USOAP CMA ACTIVITIES

2.1 The table below provides details of USOAP CMA activities from 1 January 2019 to 31 December 2021. All activity results, are available on the USOAP CMA OLF at: <https://www.icao.int/usoap>.

Activity	Conducted (listed in chronological order)	Comments
1. Auditing activities		
1.1 <i>USOAP CMA Audits</i>		
Determine the effectiveness of States' capabilities for safety oversight by assessing the effective implementation of the critical elements (CEs) of a State safety oversight system.	<p>2019: nine audits were conducted in Senegal, Organization of Eastern Caribbean States (Antigua and Barbuda, Grenada, Saint Kitts and Nevis, Saint Lucia, and Saint Vincent and the Grenadines), United Kingdom (Bermuda), Turkmenistan, Zimbabwe, Netherlands (Curaçao), Bolivia (Plurinational State of), Côte d'Ivoire and Comoros.</p> <p>2020: two audits were conducted in Tunisia and Oman.</p> <p>2021: one audit was conducted in Pakistan.</p>	Total number of USOAP CMA audits conducted during the triennium: 12

Activity	Conducted (listed in chronological order)	Comments
1.2 <i>Focused USOAP CMA Audits</i>		
<p>Partial determination of the effectiveness of States' safety oversight system. Certain implementation CEs may also be determined during a DA, subject to certain conditions.</p>	<p>2019: one focused audit was conducted in Afghanistan⁺.</p> <p>2020: two focused audit were conducted in Iraq⁺ and Libya⁺.</p> <p>2021: two focused audits were conducted in Djibouti⁺ and Spain[*].</p>	<p>Total number of focused audits conducted during the triennium: five</p> <p>*Certain auditing activities were conducted virtually subject to certain conditions.</p> <p>⁺ Documentation-based audit (DA)</p>
1.3 <i>Mandatory Information Requests (MIRs)</i>		
<p>Request information or documentation needed for USOAP CMA assessment and protocol question (PQ) determination.</p>	<p>2019: two MIRs were issued.</p> <p>2020: one MIRs was issued.</p> <p>2021: one MIRs was issued.</p>	<p>The processing of an MIR is considered as a USOAP CMA activity. If a report results from an MIR, this is considered an off-site activity.</p>
2. Validation activities		
2.1 <i>ICAO Coordinated Validation Missions (ICVMs)</i>		
<p>Assess the status of corrective actions taken by the State to address previously identified findings and determine whether or not the State has satisfactorily resolved deficiencies, including Significant Safety Concerns (SSCs).</p>	<p>2019: 17 ICVMs were conducted in Montenegro, Gabon, Cuba, Bosnia and Herzegovina, Uruguay, Serbia, Ghana, Kyrgyzstan, Thailand, Congo, Honduras, Rwanda, Slovenia, Fiji, Cyprus, Burundi and Tonga.</p> <p>2020: five ICVMs were conducted in Guyana, Ethiopia, Ukraine, San Marino[*] and Croatia[*].</p> <p>2021: eight ICVMs were conducted in Colombia[*], Malta[*], Iceland[*], Kazakhstan[*], Germany[*], Bahamas, Singapore[*] and Bolivia (Plurinational State of).</p>	<p>Total number of ICVMs conducted during the triennium: 30</p> <p>*Certain auditing activities were conducted virtually subject to certain conditions.</p>
2.2 <i>Off-site Validation Activities (OVAs)</i>		
<p>Assess information with supporting evidence to validate the status of corrective actions taken</p>	<p>2019: Seven OVAs were conducted in the United Kingdom³, Lithuania³, Benin², Austria¹, Turkey², El Salvador² and Ukraine².</p>	<p>Total number of OVAs issued during the triennium: 34</p>

Activity	Conducted (listed in chronological order)	Comments
<p>by the State to address previously identified findings and determine whether or not the State has satisfactorily resolved deficiencies.</p>	<p>2020: 18 OVAs were conducted in Portugal³, Honduras², Spain², Myanmar², Iceland³, United Republic of Tanzania², Denmark³, Eswatini², Seychelles², France², Gambia¹, Germany¹, Azerbaijan¹, Poland¹, South Africa¹, Sri Lanka¹, Kyrgyzstan¹ and Malaysia¹.</p> <p>2021: nine OVAs were conducted in Nigeria¹, Myanmar¹, Morocco¹, Armenia¹, Switzerland¹, Côte d'Ivoire¹, Thailand¹, Slovenia¹ and Kuwait¹.</p>	<p>¹ The information with supporting evidence for these OVAs were provided by the State concerned through the OLF. The information with supporting evidence were subsequently reviewed and validated by experts from the OAS Section.</p> <p>² The information with supporting evidence for these OVAs were collected by ICAO staff and agreed to by the States. The information with supporting evidence were subsequently reviewed and validated by experts from the OAS Section.</p> <p>³ The information with supporting evidence for these OVAs were collected by experts from EASA, on behalf of ICAO, as part of an agreement between the two organizations and agreed to by the States. The information with supporting evidence were subsequently reviewed and validated by experts from the OAS Section.</p>

Activity	Conducted (listed in chronological order)	Comments
3. Assessment activities		
3.1 <i>State Safety Programme Implementation Assessments (SSPIAs)</i>		
3.1	<p>Assess the maturity level of an SSP in a State.</p> <p>2019: two SSPIA were conducted in Spain* and the United Arab Emirates* .</p> <p>2020: Nil.</p> <p>2021: one assessment was conducted in Canada** .</p>	<p>Total number of SSPIAs conducted during the triennium: Three</p> <p>*SSPIA phase I</p> <p>**SSPIA phase II</p>
4. Training activities		
4.1 <i>Training of Auditor and Subject Matter Expert Nominees</i>		
	<p>Manage the USOAP CMA computer-based training (CBT) as a tool for the selection and training of potential auditors and subject matter experts of the USOAP CMA.</p> <p>53 nominees qualified for training of auditors and subject matter experts (SMEs), and were enrolled in the USOAP CMA CBT in 2019 to 2021.</p> <p>Since the launch of the CBT in 2011, 642 participants have completed the CBT.</p> <p>The USOAP CMA roster now includes a total of 112 qualified USOAP auditors and/or SMEs.</p>	<p>States and recognized organizations are called upon to nominate experts for secondment to ICAO as auditors and SMEs to undertake the CBT and continue their training process to support the USOAP CMA.</p>
4.2 <i>Familiarization Training for State Employees</i>		
	<p>Provide training to States' National Continuous Monitoring Coordinators (NCCMs) and familiarize States' safety oversight employees with USOAP CMA methodology and activities.</p> <p>Since the launch of the CBT in 2011, 1 672 participants from 116 States and 15 international/regional organizations have taken the CBT for NCCM and familiarization training.</p>	<p>NCCM and familiarization training allows States to enhance the knowledge and competency of their aviation safety personnel regarding USOAP CMA, particularly in preparing for an upcoming USOAP CMA activity.</p>

Activity	Conducted (listed in chronological order)	Comments
4.3	Workshops	
	<p>Assist States in their participation in USOAP CMA and, particularly, preparation for an upcoming USOAP CMA activity.</p>	<p>In the triennium 2019-2021, seven workshops were conducted, with 264 participants from 58 States and 3 international/regional organizations.</p> <p>Three regional workshops were budgeted and conducted by ICAO in the following regional offices: Mexico City, Cairo, Nairobi.</p> <p>Four workshops were conducted on a cost-recovery basis in the following (listed in chronological order): South Africa, Colombia, Republic of Korea and Thailand.</p>

2.2 GRAPHIC SUMMARY

2.2.1 Figures A-1 and A-2 provide a graphic summary of the USOAP CMA status at the global level by audit area and by critical element, respectively.

2.2.2 Since the inception of USOAP, 186 Member States have received a USOAP audit. As of 31 December 2021, the average EI score at the global level was 68.17 per cent. Out of the 186 audited Member States, 130 have an EI of 60 per cent or higher.

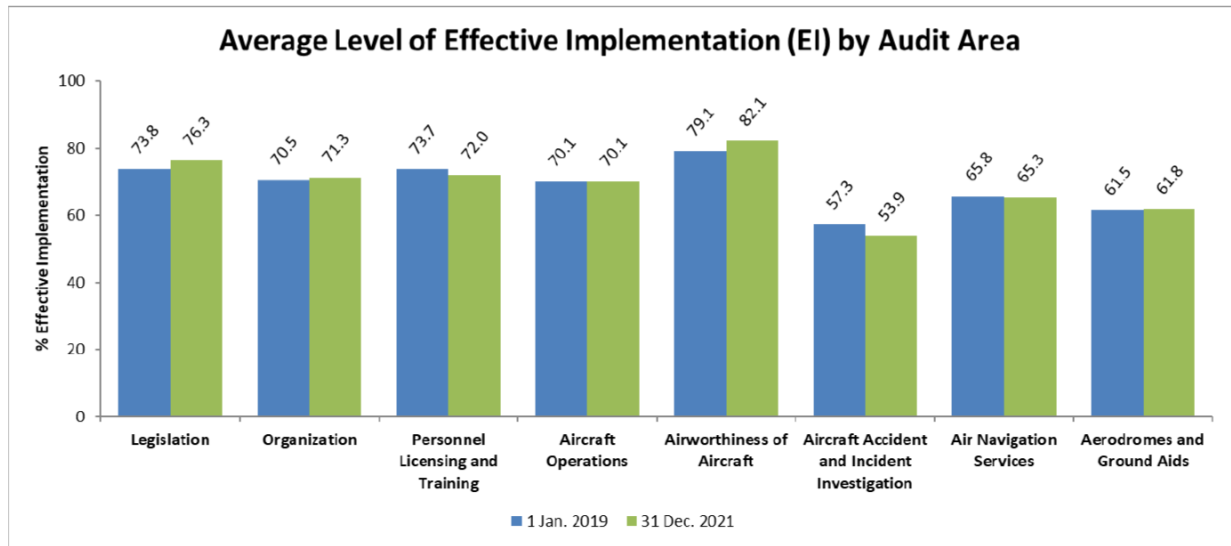


Figure A-1. Average global level of EI by audit area

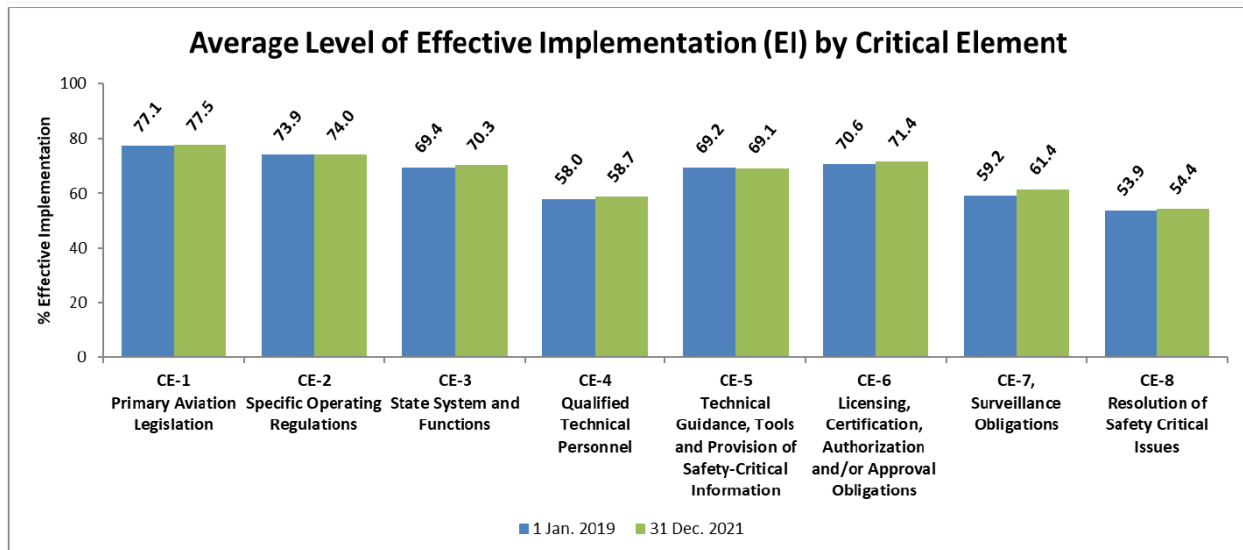


Figure A-2. Average global level of EI by critical element

APPENDIX B

DETAILED INFORMATION ON PROGRAMME DEVELOPMENTS AND USAP CMA ACTIVITIES IN THE REPORTING PERIOD 2019 TO 2021

1. IMPROVEMENTS TO THE USAP CMA

1.1 During the reporting period, multiple refinements and improvements to the programme were made, including:

- a) The identification of USAP CMA protocol questions (PQs) that assess operational compliance for each audited Standard in Annex 9 — *Facilitation* and Annex 17 — *Security*. This enabled the development of a new compliance graph that better reflects operational compliance with Standards.
- b) Consultation with the Secretariat Study Group on the USAP CMA regarding the revision of USAP CMA PQs to reflect amendments to Annex 17 and security-related Standards in Annex 9.
- c) Semi-annual newsletters being sent to provide USAP CMA auditors with important information regarding the USAP programme, as well as to further their knowledge of issues identified through the USAP CMA audits.
- d) The introduction of online information sessions for USAP CMA auditors in English, French and Spanish. The first five of these sessions provided training on new Annex 9 Standards related to Passenger Name Record (PNR) and the revised approach to auditing certain Annex 17 Standards.
- e) The publication and maintenance of a list of National Coordinators on the USAP CMA secure portal. States are encouraged to advise ICAO of any change in their designated National Coordinator and to provide updated information with regard to their functions and contact details by emailing asa@icao.int.
- f) Electronic Bulletins regarding the implementation of the USAP now include the identification of States that request to defer their audits.
- g) The scheduling of on-site audits was adjusted to allow for the review of documentation not communicated to ICAO prior to audits.

2. COVID-19 CONTINGENCY MEASURES

2.1 During the period where on-site activities were postponed due to the COVID-19 pandemic, the Secretariat increased the use of limited-scope documentation-based audits for selected States that demonstrated significant improvements in implementing their Corrective Action Plans (CAPs) following their previous USAP CMA audits. Various measures were also taken to maintain and increase remote activities, while rescheduling on-site activities whenever possible. The need to postpone future on-site audits was assessed on a monthly basis considering, inter alia, the existence of sufficient operations at selected airports, travel restrictions for auditors, including at transit points, and working conditions for the auditors and counterparts, including the availability of personal protective equipment. A rolling twelve-month schedule was developed using the USAP CMA risk-based process, with postponed audits moved to the end of the schedule. In this way, as normal operations initiated, the audit programme was prepared to resume on-site activities. A summary of activities conducted during the triennium is contained below.

3. USAP-CMA ACTIVITIES

3.1 The table below provides details on the USAP CMA activities and developments from 1 January 2019 to 31 December 2021.

Activity	Conducted	Comments
1. USAP CMA Activities		
1.1 USAP CMA Audits		
Determine States' capabilities for security oversight by assessing the effective implementation of the critical elements of a State's aviation security and oversight systems.	<p>2019: 30 audits (4 documentation-based) were conducted in 2019: Armenia, Barbados, Belgium, Brazil, Cabo Verde, Costa Rica, Cuba, Grenada, Kuwait, Lebanon, Liberia, Malaysia, Mauritius, Morocco, Nauru, Nepal, Nicaragua, Pakistan, Papua New Guinea, Peru, Portugal, Russian Federation, Sierra Leone, Slovenia, Sweden, Tajikistan, Uruguay, Uzbekistan, Zambia and Zimbabwe.</p> <p>2020: 7 audits (4 documentation-based) were conducted in 2020: Dominica, El Salvador, Finland, France, Spain, Thailand and Togo.</p> <p>2021: 17 audits (15 documentation-based) were conducted in 2021: Bahamas, Botswana, Colombia, Gabon, Gambia, Honduras, Ireland, Liberia, Luxembourg, Malaysia, Malta, North Macedonia, Pakistan, Rwanda, Senegal, Switzerland and United Kingdom.</p>	<p>Total number of audits conducted during the reporting period: 54</p> <p>Audits include full and limited scope on-site audits and limited scope documentation-based audits.</p>

	Activity	Conducted	Comments
1.2	Validation Missions		
	Gather evidence to assist the ICAO SSeC validation committee to determine whether or not the State has satisfactorily mitigated or resolved Significant Security Concerns (SSeCs).	2019: 5 on-site validation missions 2020: 1 on-site validation mission 2021: 3 on-site validation missions	Total number of validation missions conducted during the reporting period: 9
1.3	Other		
	Participate as observers in European Commission (EC) airport inspections and appropriate authority inspections.	2019: One airport inspection. 2020: One planned airport inspection was cancelled due to the pandemic.	
2. Training			
2.1	Auditor Training Courses		
	Provide training for potential USAP CMA auditors in all three audit languages.	One USAP CMA auditor training course was conducted in 2019. 10 candidates successfully passed the course. However, due to the pandemic, several of them still need to pass their OJT. The USAP CMA roster currently includes a total of 154 certified USAP CMA auditors.	States and recognized organizations are requested to nominate experts for secondment to ICAO as auditors and subject matter experts, on a long- or short-term basis, in support of the USAP CMA. During the 2019-2021 triennium, France and the United Kingdom have provided long-term secondments to support the USAP CMA.
2.2	Regional Seminars		
	Provide training to States' National Coordinators (NCs) and familiarize States' security oversight employees with the USAP CMA methodology and activities.	From 2019 to 2021, six regional USAP CMA seminars were conducted to familiarize NCs with the USAP CMA and help them to prepare for future audits. Three of these workshops took place in person in Bangkok, Lima and Saudi Arabia, while three others were conducted online due to the pandemic.	NC and familiarization training allows States to enhance the knowledge and competency of their aviation security personnel regarding the USAP CMA, particularly for preparing for a scheduled USAP CMA activity.

Activity	Conducted	Comments
	The workshops were attended by 213 NCs.	Note: two additional seminars are planned in the European and North Atlantic (EUR/NAT) and Asia Pacific (APAC) Regions in 2022.

3.2 Figure B-1 below shows the global level of sustainability of a State’s aviation security oversight system, by critical element. This global average is the combined result from the 159 USAP CMA audits conducted as of 31 December 2021 and the second-cycle audit results for those States that have not yet received a USAP CMA audit. The current average sustainability indicator at the global level is 71.86 per cent. Out of the 184 audited Member States, 121 have a sustainability indicator of 65 per cent or higher.

3.3 Figure B-2 shows the average level of compliance by States with Annex 17 Standards, presented by Annex 17 chapter and sub-chapter based on USAP CMA audits conducted as of 31 December 2021. Overall, the global compliance indicator for Annex 17 Standards is at 66.85 per cent.

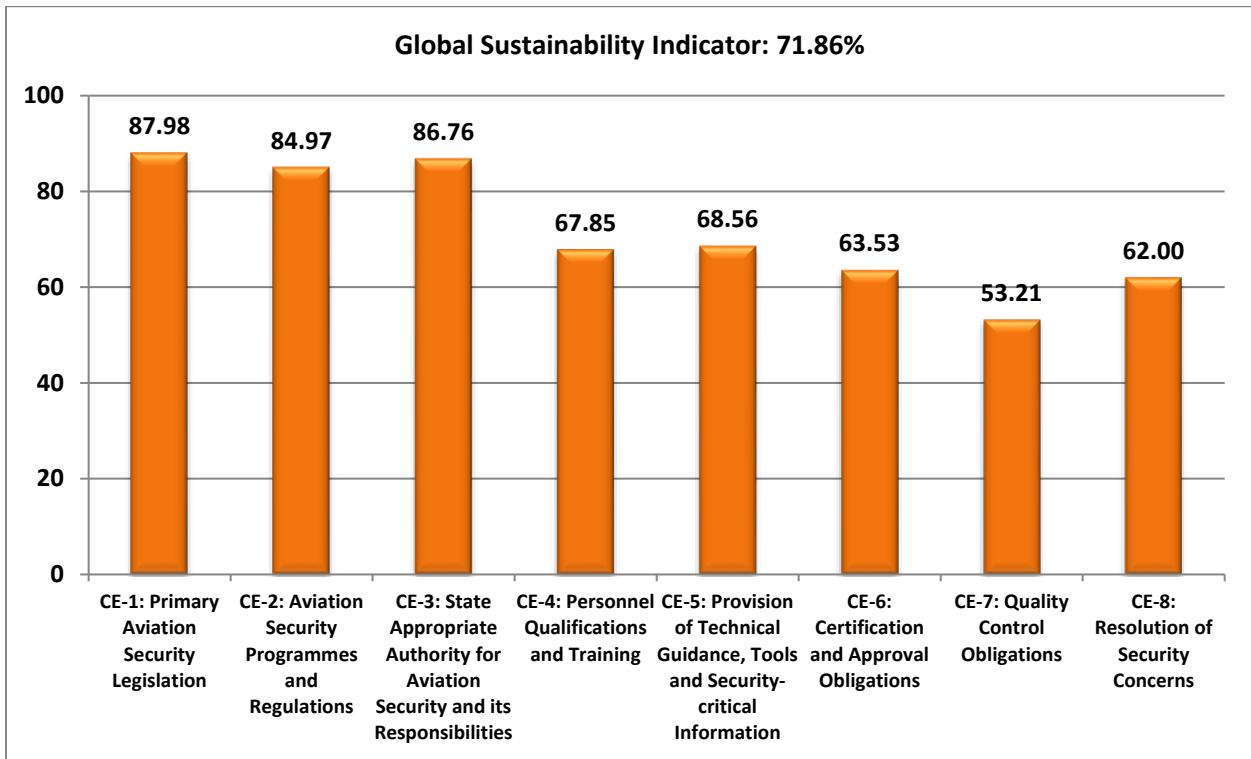


Figure B-1. Average global level of sustainability of a State’s aviation security oversight systems, by critical element

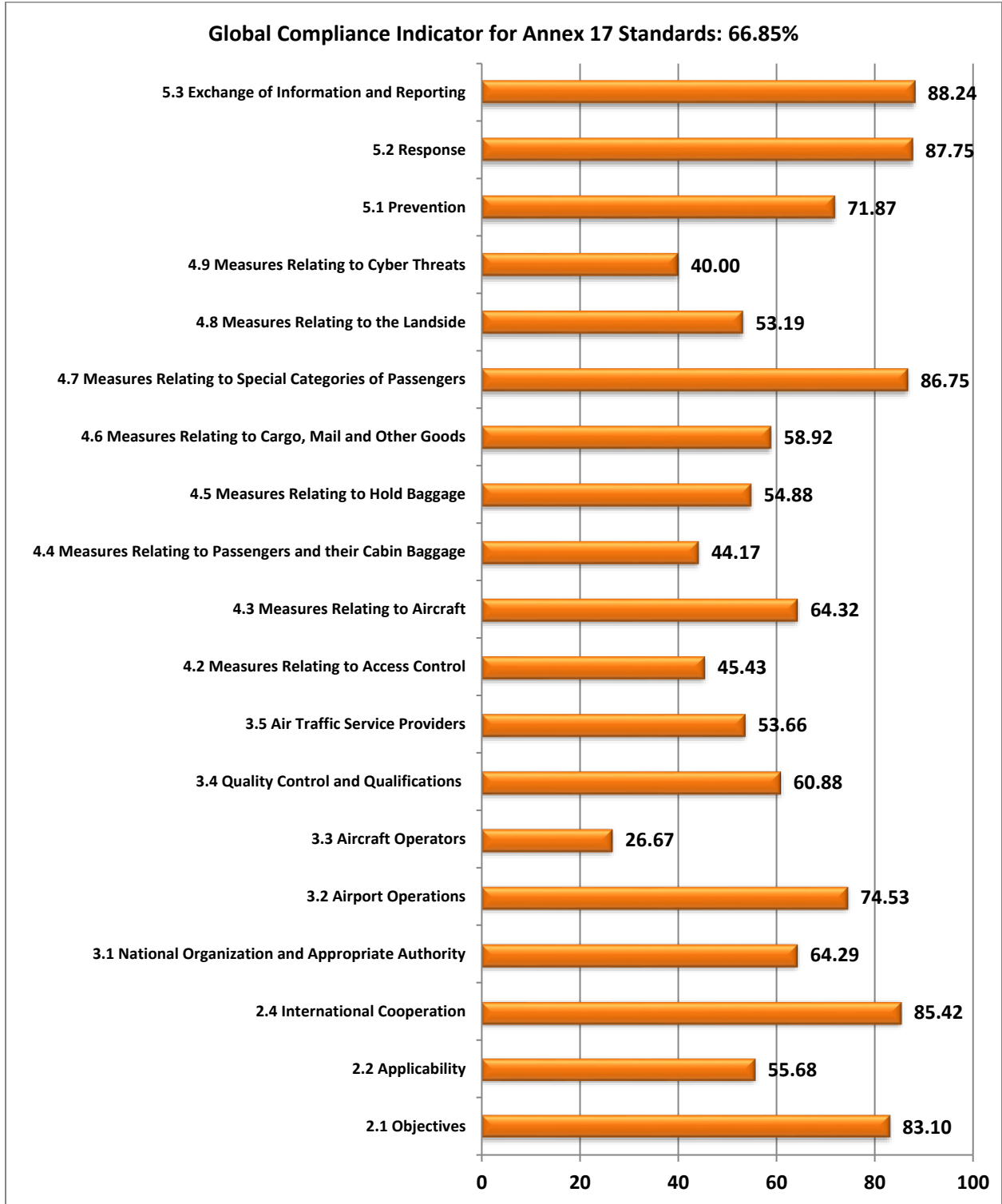


Figure B-2. Average global degree of indicative compliance with Annex 17 Standards by Annex 17 chapter and sub-chapter

APPENDIX C

CRITICAL AREAS IDENTIFIED BY THE USOAP CMA IN THE TRIENNIUM 2019 TO 2021

This appendix outlines a number of critical deficiencies related to safety oversight and accident/incident investigation, for which USOAP CMA activities have identified that most States continue to face challenges. Additional information is available at the USOAP report 2019-2021 (URL to be inserted when available). Solutions available through ICAO to address these challenges are offered through its technical assistance, technical cooperation and training activities.

1. PRIMARY AVIATION LEGISLATION AND SPECIFIC OPERATING REGULATIONS (LEG)

1.1 More than half of States continue to face challenges in bringing their regulatory system into full accord with the Annexes to the Chicago Convention. Almost 50 per cent of States continue to face challenges in the development of comprehensive and appropriate procedures to timely amend their legislation and regulations. Almost 50 per cent and 80 per cent of States, respectively, have deficiencies in the identification of differences and significant differences between the ICAO provisions and States' regulations and practices for notification to ICAO and/or publication in the aeronautical information publication (AIP). Almost 40 per cent of States have deficiencies in granting exemptions supported by an appropriate legal basis or being fully compliant with national regulations and procedures. 55 per cent of States that ratified Article 83 *bis* do not have an adequate legal framework for the transfer of functions and duties or the recognition of transfer of such functions between third parties.

2. CIVIL AVIATION ORGANIZATION (ORG)

2.1 Within almost 60 per cent of States, the lack of or insufficient number of qualified inspectors remains the main obstacle to the implementation of an effective State safety oversight system. More than 40 per cent of States do not ensure that their civil aviation or accident investigation authorities are able to attract, recruit and retain sufficient qualified technical personnel to perform their functions and responsibilities. Almost 30 per cent of States have not established and implemented an effective mechanism to ensure that each safety oversight authority has sufficient financial resources to meet its national and international obligations. Likewise, almost 30 per cent of States have yet to clearly define the functions and responsibilities related to safety oversight and accident and incident investigation.

3. PERSONNEL LICENSING AND TRAINING (PEL)

3.1 More than half of States have not appropriately implemented a training programme for personnel licensing staff, other technical personnel and personnel who perform functions on behalf of the personnel licensing office. In addition, about 60 per cent of States have not implemented procedures for granting exemptions for issuance of licences and have not effectively implemented a system for the

supervision of training programmes related to the first issuance of licences. Furthermore, a large number of States have not appropriately implemented a system for formally evaluating and re-evaluating language proficiency ratings. A significant number of States have not implemented a system to ensure the consistency and reliability of written and oral examinations by designated or delegated organizations or examiners. Finally, States continue to face challenges in effectively implementing a system for the supervision and control of flight as well as practical test delivery, which ensures consistency and reliability of testing by the designated flight and practical examiners.

4. AIRCRAFT OPERATIONS (OPS)

4.1 Around 45 per cent of States do not have enough technical qualified resources to ensure sustainable oversight obligations. More than 65 per cent of States have not finalized the implementation of training plans for their technical staff to acquire and maintain the required level of knowledge, skills, competence and qualifications. Almost 35 per cent of States have not implemented procedures to ensure that the air operator takes into account, review and implement all regulations related to the contents of the operations manual, before the AOC or any specific approval is granted. In almost 50 per cent of the States, dangerous goods inspector procedures have not been implemented to ensure that the organizations or agencies, which are involved in the transport of dangerous goods by air, have established and implemented initial and recurrent dangerous goods training programmes. Around 45 per cent of States have not fully implemented a formal surveillance programme to verify that all their AOC holders comply, on a continuing basis, with national regulations, international standards, AOCs and corresponding operations specifications. Finally, almost 40 per cent of States have not finished implementing procedures to take action when the deficiencies identified during the conduct of inspections are not rectified in a timely manner.

5. AIRWORTHINESS OF AIRCRAFT (AIR)

5.1 About 60 per cent of the audited States have not appropriately implemented the training programme for airworthiness inspectors. One half of the audited States have not implemented a comprehensive procedure for the amendment of enabling airworthiness regulations and national standards, including the identification and notification of differences to ICAO. Likewise, about 50 per cent of States have not taken appropriate actions when information obtained from reliability monitoring indicates a degraded level of safety, despite the fact that 40 per cent of States have not effectively conducted ongoing surveillance of air operators' reliability programmes. Establishing or implementing surveillance programmes for AOC holders and/or approved maintenance organizations continues to be a common deficiency in more than 40 per cent of States. An important number of States do not have an effective tracking system for deficiencies identified during surveillance activities and their timely resolution. Similarly, many States that have delegated certain safety oversight tasks do not carry out effective surveillance of their performance.

6. AIRCRAFT ACCIDENT AND INCIDENT INVESTIGATION (AIG)

6.1 Less than a quarter of States have established an independent and separate accident investigation authority. More than half of States have not implemented a comprehensive investigation manual, checklists or associated guidance to provide investigators with detailed, customized and practical procedures to perform all investigation related tasks. A significant number of States lack procedures and guidance for the issuance and recording of safety recommendations as well as for the monitoring of the

progress of corresponding safety actions. More than half of States have established mechanisms to ensure the coordination between aircraft accident investigators and judicial authorities, while ensuring the separation between the two types of investigations. Finally, a number of audited States have established or effectively implemented comprehensive training programmes and training plans.

7. AIR NAVIGATION SERVICES (ANS)

7.1 Less than 50 per cent of the audited States have not appropriately implemented the training programme for air navigation services (ANS) inspectors in all areas, a comprehensive surveillance programme, and a mechanism/system for the elimination of deficiencies identified, with particular emphasis is search and rescue (SAR) services and flight procedure design. Half of the audited States are not ensuring that flight procedures (IFPs) are reviewed periodically (including validations), and that its rescue coordination centres (RCC) are staffed 24 hours a day by trained personnel proficient in the English language. Finally, only 36 per cent of States ensured that its SAR organization has coordinated with its neighbouring States.

8. AERODROMES AND GROUND AIDS (AGA)

8.1 Almost 60 per cent of States have not yet fully implemented the certification requirements. Similarly, around 60 per cent of States have not developed and implemented a formal surveillance programme for the continuing supervision of the operations conducted by aerodrome operators. More than 75 per cent of the audited States have not appropriately implemented the training programme for aerodrome inspectors. Around 70 per cent of States have not established a process to validate the use of aeronautical studies or risk assessments to justify an application for an exemption or exception, as well as its continuous need. Almost 60 per cent of States have not developed and implemented a process to take actions, including enforcement, if deficiencies found during surveillance activities are not rectified within a reasonable time. In addition, 70 per cent of audited States do not have a quality system in place to verify the accuracy and compliance of aerodrome data with the regulations and to ensure that the accuracy, integrity and protection requirements for aeronautical data reported by the aerodrome operator are met throughout the data transfer process. Finally, 55 per cent of States do not review the organizational competence and level of resources of prospective aerodrome operators or certificate holders to ensure that they employ competent personnel to perform all critical activities for aerodrome operations and maintenance.

APPENDIX D

CRITICAL AREAS IDENTIFIED BY THE USAP CMA IN THE TRIENNIUM 2019 TO 2021

This appendix outlines a number of critical deficiencies related to aviation security and oversight systems with which most States continue to face challenges, as identified by USAP CMA audits. Additional information on these critical areas is available in the annual USAP CMA Analysis of Audit Results booklet on the [USAP secure website](#). Solutions available through ICAO to address these challenges are offered through its technical assistance, technical cooperation and training activities.

1. REGULATORY FRAMEWORK AND THE NATIONAL CIVIL AVIATION SECURITY SYSTEM (LEG)

1.1 While the majority of audited States have promulgated primary and secondary aviation security legislation to enable them to address their aviation security-related obligations and to implement the provisions of Annex 17, a considerable number of audited States have not ensured that their regulations, practices and procedures, such as those contained in the National Civil Aviation Security Programme (NCASP) accurately reflect all Annex 17 Standards and/or provide sufficient guidance, performance criteria or procedures to ensure the efficient, effective and consistent application of national aviation security policies and requirements. The lack of qualified national aviation security inspectors, possessing sufficient legal authority and enforcement powers, still remains a significant obstacle to the implementation of an effective State aviation security oversight system. A majority of audited States have not established or implemented an appropriate risk assessment methodology for adjusting relevant elements of the security measures established in the NCASP.

2. TRAINING OF AVIATION SECURITY PERSONNEL (TRG)

2.1 A large number of audited States have not ensured the development or the implementation of an effective training programme for national aviation security inspectors. The National Civil Aviation Security Training Programmes in almost half of audited States lack sufficient detail regarding training requirements for all aviation security personnel. Furthermore, about half of audited States have not established and implemented an adequate oversight mechanism to identify training needs and to ensure that initial, on-the-job and recurrent training is completed as required for all relevant aviation security personnel. Similarly, about half of audited States have not ensured that all persons who carry out screening operations are certified.

3. QUALITY CONTROL FUNCTIONS (QCF)

3.1 The majority of audited States have developed a National Civil Aviation Security Quality Control Programme. However, many States have not developed detailed procedures, forms, checklists or protocols for their national aviation security inspectors in order to assist them in conducting security audits,

inspections and tests in a standardized and effective manner. In addition, a majority of States do not use an appropriate risk assessment methodology to determine priorities and frequency of national quality control activities. Many operational aviation security measures implemented by various airport-level entities are not effectively and regularly monitored for compliance with national requirements.

4. AIRPORT OPERATIONS (OPS)

4.1 A majority of audited States have not ensured that airport security programmes (ASPs) meet the requirements of their NCASP and provide sufficient detail to ensure the correct application of all security measures at the airport level. Airport-level coordination is often ineffective, as 37 per cent of audited States have not ensured that airport security committees function in accordance with their terms of reference. Another significant challenge is the lack of ability of majority of States to establish minimum detection settings for security screening equipment, including specifications of performance test pieces, and to ensure that regular maintenance and performance testing are consistently and effectively implemented for such equipment.

4.2 With regard to the operational implementation of security measures, frequently identified deficiencies include screening of persons other than passengers, items carried and vehicles being granted access to security restricted areas. In addition, 24 per cent of audited States have not ensured that landside areas have been clearly identified at each airport serving civil aviation and that relevant security measures are established in accordance with a risk assessment.

5. AIRCRAFT AND IN-FLIGHT SECURITY (IFS)

5.1 The most frequent deficiency observed regarding aircraft and in-flight security is the lack of a process to ensure that aircraft operators (both national and foreign) providing service from the State establish and maintain written aircraft operator security programmes (AOSPs) that meet the requirements of the NCASP. It is expected that changes to Standards related to AOSPs introduced in Amendment 18 to Annex 17 may affect future results in this area.

6. PASSENGER AND BAGGAGE SECURITY (PAX)

6.1 About half of audited States have not ensured that relevant airport entities have developed sufficiently detailed procedures for the screening of originating passengers, their cabin and hold baggage. In practice, the audits have also identified frequent deficiencies with regard to the consistent and effective implementation of measures for the screening of originating passengers, and their cabin and hold baggage.

7. CARGO, CATERING AND MAIL SECURITY (CGO)

7.1 Many audited States have not developed detailed performance standards for the application of security controls to cargo and mail, including guidelines on appropriate methods of screening depending on the nature of consignments. Deficiencies have also been identified in many States with regard to airport-level entities that do not consistently and effectively implement security measures for cargo and mail, and protect such consignments from unauthorized interference from the point security controls have been applied until departure of the aircraft.

8. RESPONSE TO ACTS OF UNLAWFUL INTERFERENCE (AUI)

8.1 About half of audited States do not ensure that airport-level contingency plans adequately address the management of responses to various acts of unlawful interference, including notification procedures and minimum response times for entities responsible for dealing with such acts. Similarly, regular exercises and evaluations to determine weaknesses in the contingency plans are not carried out in more than a half of audited States.

9. FACILITATION (FAL)

9.1 Approximately half of all audited States have not established a National Air Transport Facilitation Programme and a majority of such States have not established national or airport level coordinating bodies. Around 60 per cent of audited States have not introduced an advance passenger information system, which became mandatory under Annex 9 to the Chicago Convention on 23 February 2018.

— END —