



NOTA DE ESTUDIO

**ASAMBLEA — 41º PERÍODO DE SESIONES
COMITÉ EJECUTIVO**

Cuestión 15: Programas de auditoría – Enfoque de observación continua

**EJECUCIÓN DE LOS PROGRAMAS DE AUDITORÍA BAJO EL ENFOQUE DE
OBSERVACIÓN CONTINUA (CMA) DE LA OACI**

(Nota presentada por el Consejo de la OACI)

RESUMEN

En esta nota de estudio se presenta un informe de situación consolidado sobre la implementación y actividades del Programa Universal de Auditoría de la Vigilancia de la Seguridad Operacional (USOAP) y el Programa Universal de Auditoría de la Seguridad de la Aviación (USAP), los cuales funcionan bajo el Enfoque de Observación Continua (CMA) de la OACI.

En los apéndices A y B respectivamente, se presenta información sobre las actividades ejecutadas y la evolución del CMA del USOAP y el CMA del USAP durante el trienio 2019-2021.

Decisión de la Asamblea: Se invita a la Asamblea a:

- a) tomar nota de los informes consolidados sobre la ejecución y actividades del CMA del USOAP y el CMA del USAP;
- b) instar a los Estados a seguir plenamente comprometidos con el CMA del USOAP y el CMA del USAP, además de apoyar el desarrollo de los programas; y
- c) alentar a los Estados a que sigan aportando recursos para el buen funcionamiento del CMA del USOAP y el CMA del USAP, entre otras cosas con la adscripción a largo plazo de personas especialistas cualificadas, y a que apoyen estos programas mediante su participación en los cursos de instrucción y seminarios pertinentes.

<i>Objetivos estratégicos:</i>	Esta nota de estudio se relaciona con los objetivos estratégicos de <i>Seguridad operacional, Capacidad y eficiencia de la navegación aérea y Seguridad y facilitación.</i>
<i>Repercusiones financieras:</i>	Las actividades mencionadas en esta nota seguirán dependiendo de la disponibilidad de recursos del presupuesto del Programa Regular de 2023-2025 y de contribuciones extrapresupuestarias.

<i>Referencias:</i>	C-WP/15306 C-WP/15097 C-DEC 221/7 Comunicación AN 19/51-21/24 <i>Informe de la Conferencia de Alto Nivel sobre la COVID-19 (Doc 10160)</i> <i>Informe de la decimotercera Conferencia de Navegación Aérea (AN-Conf/13), Corrigendas 1 y 2, y Suplemento núm. 1 (Doc 10115)</i> <i>Resoluciones vigentes de la Asamblea (al 4 de octubre de 2019) (Doc 10140)</i> <i>Asamblea — 40° período de sesiones — Informe de la Comisión Técnica (Doc 10137)</i> <i>Asamblea — 40° período de sesiones — Informe y actas del Comité Ejecutivo (Doc 10136)</i> <i>Asamblea — 39° período de sesiones — Informe de la Comisión Técnica (Doc 10071)</i> <i>Manual de observación continua en el marco del Programa universal de auditoría de la seguridad de la aviación (Doc 9807)</i> <i>Manual sobre la observación continua del Programa universal de auditoría de la vigilancia de la seguridad operacional (Doc 9735)</i> A40-WP/11, <i>Informe sobre la evolución del enfoque de observación continua (CMA) del Programa universal de auditoría de la vigilancia de la seguridad operacional (USOAP)</i> A40-WP/32, <i>Informe del examen del alcance y la metodología del enfoque de observación continua del Programa Universal de auditoría de la seguridad de la aviación (USAP-CMA)</i>
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1. ANTECEDENTES

1.1 El Programa Universal de Auditoría de la Vigilancia de la Seguridad Operacional (USOAP) puesto en marcha en 1999, pasó a adoptar un enfoque de observación continua (CMA) desde enero de 2013, evolucionando hacia un programa más orientado hacia las evidencias, basado en información sobre los riesgos e impulsado por los resultados, para determinar, a nivel universal, la eficacia y sostenibilidad de los sistemas de vigilancia de la seguridad operacional de los Estados. Actualmente, el programa también evalúa el progreso de la implementación de los programas de seguridad operacional de los Estados (SSP). A fin de respaldar esta evolución continua la Asamblea de la OACI, en su 39° período de sesiones, recomendó a la OACI que examinara la metodología, los procesos y las herramientas del programa para brindar a los Estados miembros la oportunidad de proporcionar comentarios de los usuarios y permitir a la OACI planificar mejoras del programa [véase *Asamblea — Informe de la Comisión Técnica del 39° período de sesiones (Doc 10071)*]. La Asamblea de la OACI, en su 40° período de sesiones (véase resolución A40-13 de la Asamblea), encargó además a la Secretaria General, que implementara las mejoras institucionales necesarias para gestionar con éxito los cambios generados por la evolución a largo plazo del programa, en concordancia con las recomendaciones del Grupo Experto para el Examen Estructurado del Enfoque de Observación Continua del Programa Universal de Auditoría de la Vigilancia de la Seguridad Operacional (CMA del USOAP) (GEUSR) según lo convenido por el Consejo y la decimotercera Conferencia de Navegación Aérea.

1.2 El Programa Universal de Auditoría de la Seguridad de la Aviación (USAP), puesto en marcha en 2002, ha estado implementando un CMA basado en riesgos desde 2015. La Asamblea de la OACI, en su 39° período de sesiones (véase resolución A39-18, apéndice E), pidió a la Secretaría que examinara el alcance y la metodología del USAP, en consulta con los Estados miembros, para asegurarse de que ofreciera información fiable con respecto a la aplicación efectiva de medidas de seguridad de la aviación en tierra y que la metodología tuviera en cuenta un enfoque basado en los riesgos para la aplicación de las medidas de seguridad de la aviación. En su 40° período de sesiones, la Asamblea de la OACI avaló una serie de 26 recomendaciones, y pidió a la Secretaria General que implementara estas mejoras encaminadas

a garantizar una interpretación coherente de las normas del Anexo 17 — *Seguridad*, empleando un enfoque más operativo del programa CMA-USAP para resolver las deficiencias graves de manera oportuna, que aplicara un enfoque centrado en los riesgos para determinar las prioridades de auditoría y asegurar así el efectivo cumplimiento de los objetivos de seguridad pertinentes por parte de los Estados, con un enfoque centrado en los riesgos y los resultados (véase la resolución A40-11, apéndice D).

1.3 En esta nota se proporciona un informe de situación consolidado sobre la implementación y las actividades del CMA-USOAP y del CMA-USAP desde el 40º período de sesiones de la Asamblea. En los apéndices A y B¹ se proporciona información detallada sobre las actividades del CMA-USOAP y el CMA-USAP y sobre su evolución durante el trienio 2019-2021. En los apéndices C y D se presentan las áreas críticas identificadas por ambos programas de auditoría.

2. ANÁLISIS

2.1 Ejecución del CMA del USOAP

2.1.1 Del 1 de enero de 2019 al 31 de diciembre de 2021, el CMA del USOAP realizó un total de 88 actividades USOAP-CMA. En el apéndice A se describen las actividades, que comprenden auditorías, misiones de validación coordinadas de la OACI (ICVM), actividades de validación *ex situ*, solicitudes de información obligatoria (MIR), evaluaciones de la implementación de los programas estatales de seguridad operacional (SSPIA) y talleres. Al final del período que comprende el informe, el índice de implementación efectiva (EI) de los Estados era de 68,18 %. Las áreas auditadas que indican los niveles más bajos de EI comprenden la investigación de accidentes e incidentes de aviación (AIG) (54,08 %) y aeródromos y ayudas terrestres (AGA) (61,79 %), mientras que los CE que muestran un EI más bajo se relacionan con personal técnico calificado (CE-4) (58,57 %), obligaciones de vigilancia (CE-7) (61,43 %) y solución de problemas de seguridad operacional (CE-8) (54,37 %).

2.1.2 Durante el período que abarca el informe, la OACI identificó 3 preocupaciones significativas de seguridad operacional (SSC) y quedaron resueltas 2 SSC identificadas previamente por la OACI. Al 31 de diciembre de 2021, a escala mundial, aún siguen sin resolverse 3 SSC que afectan a 7 Estados². En este período, la OACI inició el mecanismo de MIR para solicitar información o documentación de 4 Estados para su examen y validación por el CMA-USOAP. Se cerraron satisfactoriamente 3 de los 4 MIR iniciados.

2.1.3 La Secretaría ejecutó 4 ejes de trabajo para gestionar la evolución del CMA del USOAP. En primer lugar, se avanzó en el eje de transformación y optimización interna. De las 37 recomendaciones dimanantes del GEUSR, sólo una³ falta por completarse. Se estableció el Grupo Asesor *ad hoc* del CMA del USOAP (USOAP-AG), y se avanzó en sus recomendaciones. Finalmente, la Secretaría implementó medidas de contingencia relacionadas con la COVID-19 a fin de mantener el funcionamiento del CMA del USOAP durante la pandemia. Las evoluciones más notorias derivadas de la implementación de los ejes de trabajo figuran en el apéndice A. Las mejoras introducidas por estos ejes de trabajo facilitarán y mejorarán los procesos, metodologías y herramientas del CMA del USOAP y mejorarán sus resultados.

¹ El período del informe abarca los años completos desde 2019 hasta 2021. Se presentará un informe completo de las actividades realizadas en 2022 en el próximo período de sesiones de la Asamblea.

² La OACI identificó un SSC en Bhután, Eritrea y en la Autoridad de Aviación Civil del Caribe Oriental (ECCAA), una organización regional de vigilancia que desempeña responsabilidades delegadas de vigilancia de la seguridad operacional en nombre de los Estados miembros de la Organización de Estados del Caribe Oriental (OECS), a saber, Antigua y Barbuda, Granada, Saint Kitts y Nevis, Santa Lucía, y San Vicente y las Granadinas. Dominica es un Estado miembro de la OECS y pasó a ser Estado miembro de la OACI el 13 de abril de 2019. Dominica firmó el memorando de acuerdo sobre el USOAP el 7 de febrero de 2020.

³ La aplicación de la recomendación 33 concluirá a principios de 2022 y aumentará las respuestas de la OACI a las solicitudes de información de los Estados, solucionará problemas de los informes y consultas, mediante la creación de un sistema de atención al cliente para las aplicaciones de OLF.

2.1.4 Los Estados siguieron apoyando las iniciativas del CMA del USOAP mediante la adscripción de personal a largo plazo que contribuye en la cooperación y evolución exitosas del programa. Durante el período de este informe, la Arabia Saudita, China, los Estados Unidos, Francia, la República de Corea y la República Dominicana contribuyeron con personal adscripto a largo plazo.

2.1.5 En este período el CMA del USOAP proporcionó las capacidades del marco en línea (OLF)⁴ al USAP, al Sistema Mundial de Vigilancia de la Seguridad Operacional de la Aviación (GASOS) y al Programa Mundial de Alimentos (PMA).

2.2 Ejecución del CMA del USAP

2.2.1 Desde el 1 de enero de 2019 al 31 de diciembre de 2021, se realizaron en total 75 actividades del CMA del USAP. En el apéndice B se proporciona una reseña de estas actividades llevadas a cabo durante el período que abarca el informe, que comprenden auditorías, misiones de validación, seminarios regionales, sesiones informativas para auditores/as y cursos de instrucción para auditores/as. El gráfico que figura en el apéndice B destaca la sostenibilidad mundial de los sistemas de vigilancia de los Estados (nivel de implementación de los elementos críticos), así como el cumplimiento de las normas del Anexo 17 por los Estados, conforme a las evaluaciones del CMA del USAP. Al final del período que comprende el informe, el indicador de sostenibilidad de los Estados era del 71,86 %. En el indicador de sostenibilidad, los CE con el nivel más bajo de implementación efectiva son los relacionados con el CE-7, obligaciones de control de calidad (53,21 %) y el CE-8, resolución de preocupaciones de seguridad de la aviación (62 %). Al 31 de diciembre de 2021, se publicaron en el portal seguro del USAP 19 preocupaciones significativas de seguridad de la aviación (SSeC) de 8 Estados.

2.2.2 En respuesta al brote de COVID-19, además de dar apoyo a las medidas de la OACI para brindar asistencia a los Estados miembros a fin de hacer frente a esta crisis y prepararse para una respuesta y recuperación eficaces a escala mundial, la Secretaría pasó a un cronograma de 12 meses que seguirá renovando paulatinamente y sustituyó las auditorías *in situ* pospuestas, por auditorías basadas en la documentación. En el apéndice B, figuran más detalles sobre la gestión del CMA del USAP durante la pandemia.

2.2.3 Además, se realizaron múltiples modificaciones y mejoras del CMA del USAP a fin de responder mejor a las necesidades de los Estados miembros e incrementar la precisión de los resultados de las auditorías. Durante el período de este informe la Secretaría procesó la implementación de 26 recomendaciones formuladas por el Grupo de Estudio de la Secretaría sobre el CMA del USAP (SSG), aprobadas por el Consejo en su 217º período de sesiones y avaladas por el 40º período de sesiones de la Asamblea. De las 26 recomendaciones, 25 se han implementado plenamente. Asimismo, la Secretaría continuó examinando y proporcionando retroinformación sobre los números planes de acción correctiva (CAP) presentados por los Estados. Además, se actualizaron y publicaron en todos los idiomas de la OACI el *Manual de observación continua en el marco del Programa universal de auditoría de la seguridad de la aviación* (Doc 9807) y el *Manual de vigilancia de la seguridad de la aviación* (Doc 10047). En el apéndice B figura un resumen de todas las mejoras realizadas.

⁴ El OLF del CMA del USOAP (<https://icao.int/usoap>) es la plataforma principal de la OACI para monitorizar, evaluar y proporcionar información y documentación relacionada con la vigilancia de la seguridad operacional de los Estados, realizar el seguimiento de las actividades del CMA y administrar los datos del CMA del USOAP en tiempo real. En ella se aloja el módulo del sistema de notificación electrónica de diferencias (EFOD), en el que se almacenan versiones digitalizadas de los Anexos, permitiendo que los Estados notifiquen cualquier diferencia con respecto a las disposiciones de la OACI. Del OLF también provienen todos los datos de monitoreo y vigilancia empleados en la plataforma iSTARS (Sistema integrado de análisis y notificación de tendencias de seguridad operacional).

2.2.4 Los retos específicos continuos que debe seguir enfrentando el programa de auditoría comprenden las enmiendas frecuentes del Anexo 17 — *Facilitación*, y la falta de jefes/as de equipos de auditoría cualificados/as. Cada enmienda nueva del Anexo debe someterse a una revisión cuidadosa de las preguntas del protocolo (PQ) del CMA del USAP y a consultas con el SSG para recabar comentarios directamente de los Estados. A la vez, el programa de auditoría depende de personal adscripto para la jefatura de las auditorías a fin de satisfacer las necesidades del programa, lo que genera frecuentes dificultades para garantizar la plena implementación del cronograma anual de auditorías.

3. CONCLUSIÓN

3.1 Los programas de auditorías de la seguridad operacional y de la seguridad de la aviación de la OACI desempeñan un papel fundamental en la realización de evaluaciones objetivas e independientes de la capacidad de los Estados miembros para la vigilancia de la seguridad operacional y la seguridad de la aviación, así como de la sostenibilidad de sus sistemas. Los programas de auditoría también proporcionan una asistencia muy necesaria en forma de recomendaciones para orientar a los Estados en sus esfuerzos por mejorar los sistemas de vigilancia de la seguridad operacional y de la seguridad de la aviación. Los programas de auditoría de la OACI dependen de contribuciones voluntarias extrapresupuestarias y en especie para su implementación plena y efectiva y su sostenibilidad. En este contexto, la participación constante de los Estados en los programas de auditoría demuestra el compromiso de la comunidad mundial de la aviación de seguir mejorando y aplicando plenamente las normas de la OACI.

3.2 Además de proporcionar asistencia directa a los Estados, el CMA del USOAP y el CMA del USAP proporcionan a la OACI, a otros Estados y partes interesadas, información importante y útil para ayudar a orientar las actividades de asistencia y elaborar políticas de aviación. Además, los programas de auditoría siguen desempeñando un papel fundamental en la identificación y mitigación de deficiencias significativas que plantean un riesgo para la aviación civil internacional. No obstante, los resultados de ambos programas de auditoría demuestran que varios Estados siguen teniendo dificultades para cumplir las obligaciones que les incumben en virtud de *Convenio sobre Aviación Civil Internacional* y sus Anexos, por lo que es necesario que la OACI y sus asociados sigan prestando supervisión y asistencia.

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 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 NMCs 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>

Activity	Conducted (listed in chronological order)	Comments
2.2	<i>Off-site Validation Activities (OVAs)</i>	
	<p>Assess information with supporting evidence to validate 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.</p> <p>2019: Seven OVAs were conducted in the United Kingdom³, Lithuania³, Benin², Austria¹, Turkey², El Salvador² and Ukraine².</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>Total number of OVAs issued during the triennium: 34</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>		
4.1	<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>		
4.2	<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	<i>Workshops</i>	
	<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.

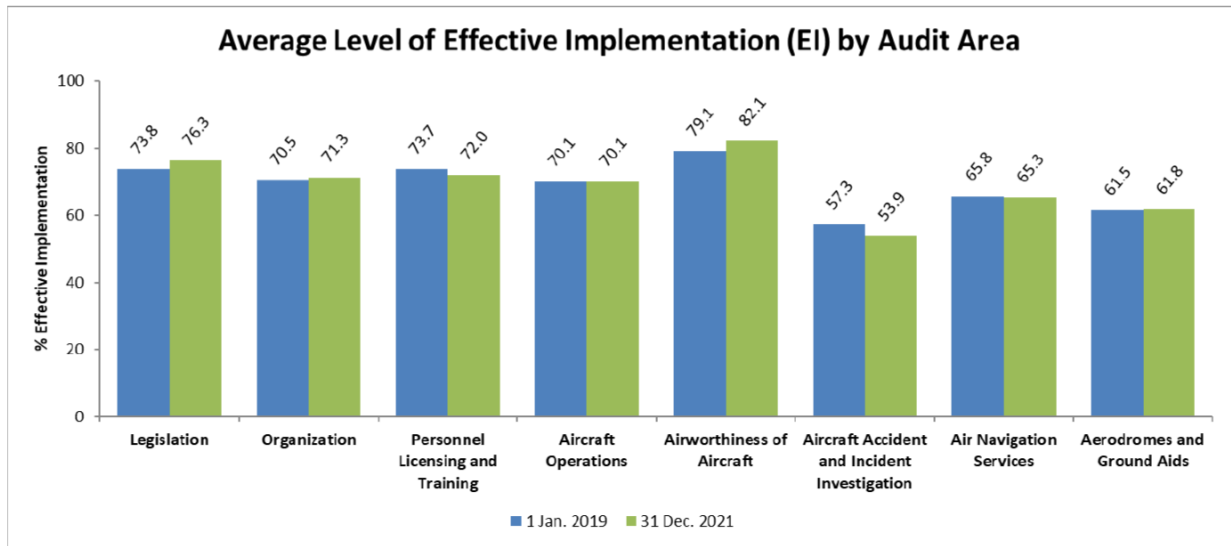


Figure A-1. Average global level of EI by audit area

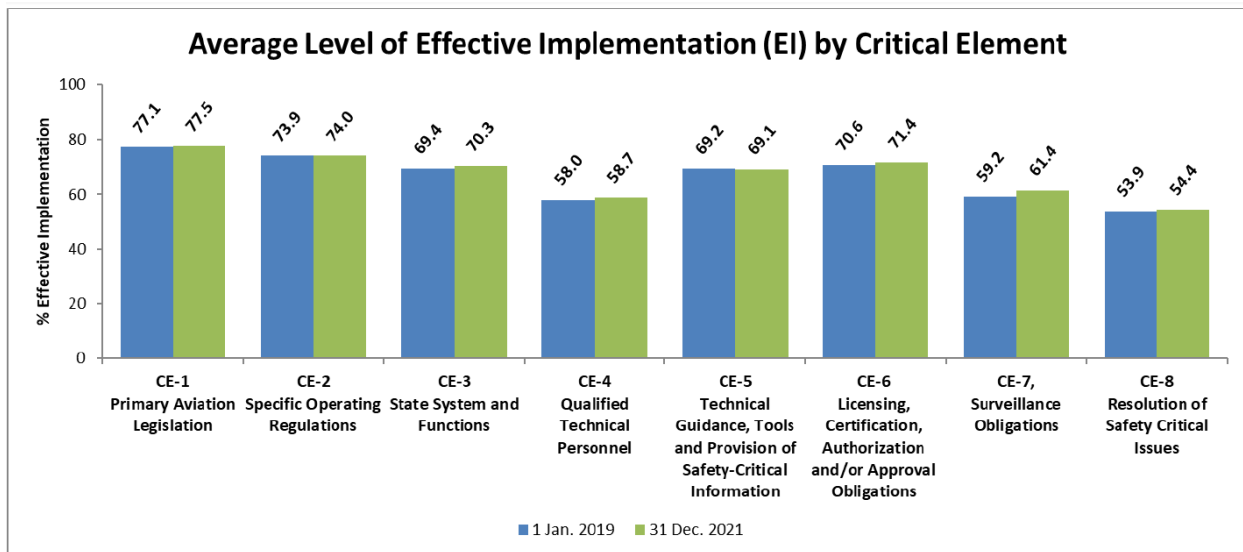


Figure A-2. Average global level of EI by critical element

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		
<p>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>	<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: 8
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.

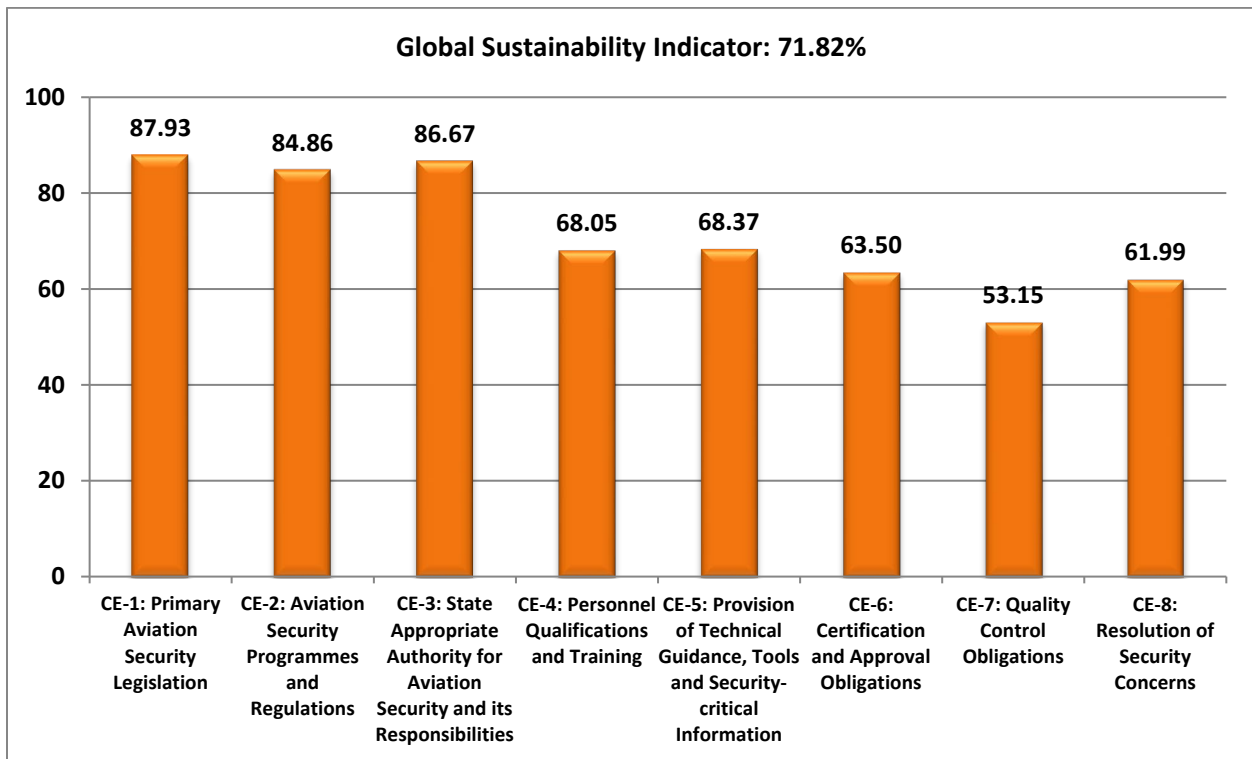


Figure B-1. Average global level of sustainability of a State’s aviation security oversight systems, by critical element

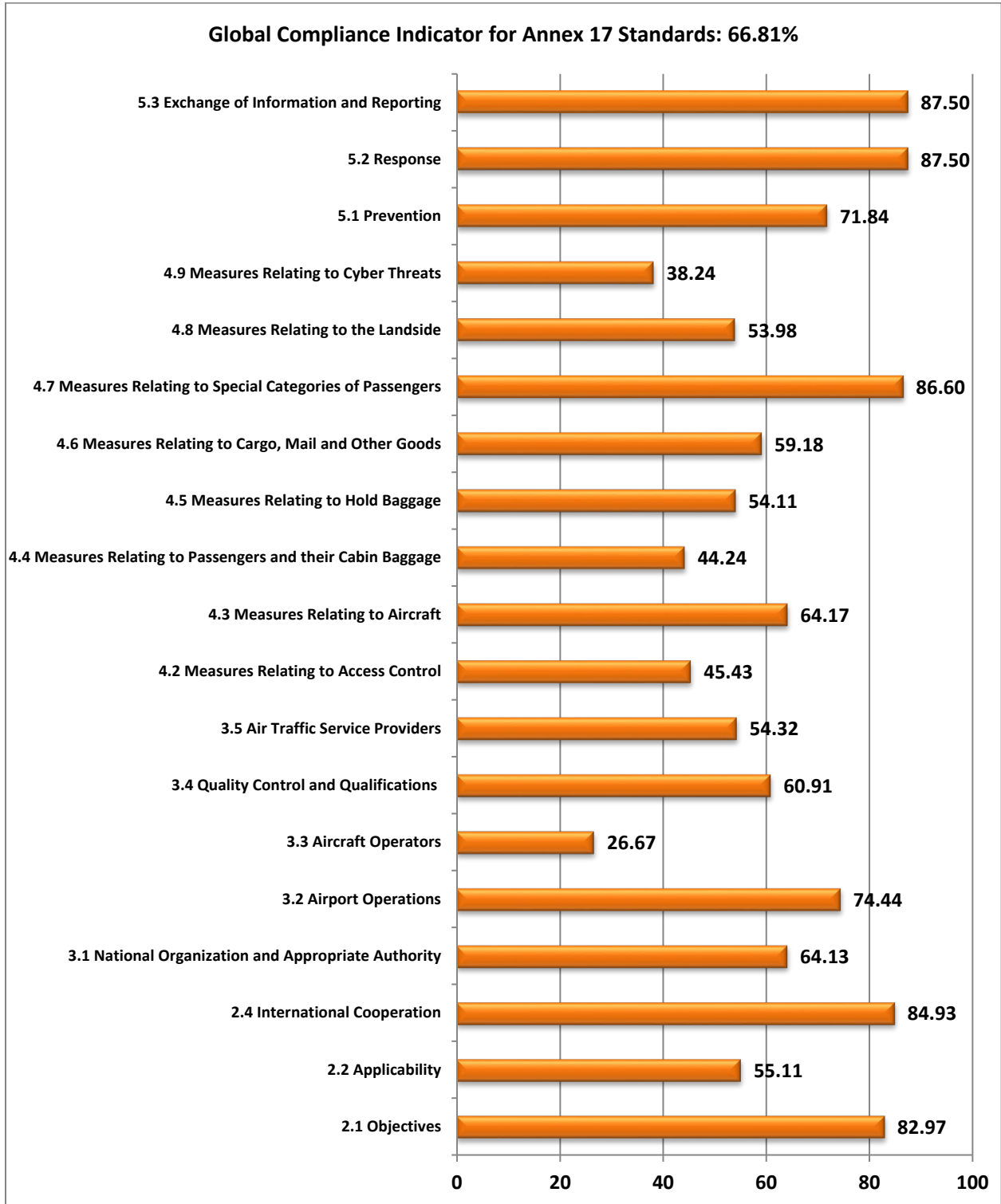


Figure B-2. Average global degree of indicative compliance with Annex 17 Standards by Annex 17 chapter and sub-chapter

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 (AUD)

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.