



大会 — 第 41 届会议

执行委员会

议程项目 15: 审计计划 — 持续监测做法

国际民航组织持续监测做法 (CMA) 审计计划的实施情况

(由国际民航组织理事会提交)

执行摘要

本工作文件提交了自大会第 40 届会议以来关于国际民航组织普遍安全监督审计计划 (USOAP) 和普遍安保审计计划 (USAP) 实施和活动的综合进度报告, 两者均采用持续监测做法 (CMA)。

有关 USOAP CMA 和 USAP CMA 在 2019 年至 2021 年三年期间的活动及发展情况详细信息, 分别载于附录 A 和 B 中。

行动: 请大会:

- a) 注意关于 USOAP CMA 和 USAP CMA 的实施和活动的进度报告;
- b) 敦促各国继续全面参与 USOAP CMA 和 USAP CMA, 同时支助各项计划的发展; 和
- c) 鼓励各国为 USOAP CMA 和 USAP CMA 的成功运作继续捐助资源, 包括长期借调合格专家, 并通过参加相关培训课程和研讨会支持这些计划。

战略目标:	本工作文件涉及以下三个战略目标: 安全、空中航行能力和效率、以及安保和简化手续。
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财务影响:	文件中提到的活动将继续根据 2023 年至 2025 年经常方案预算和来自预算外捐助的可用资源情况进行。
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参考文件：	C-WP/15306 号工作文件 C-WP/15097 号工作文件 C-DEC 221/7 号决定 AN 19/51-21/24 号国家级信件 Doc 10160 号文件：《COVID-19 高级别会议的报告》 Doc 10115 号文件：《第十三次空中航行会议》（AN-Conf/13），第 1 和第 2 号勘误以及第 1 号补篇 Doc 10140 号文件：《大会有效决议》（截至 2019 年 10 月 4 日） Doc 10137 号文件：《大会第 40 届会议技术委员会的报告》 Doc 10136 号文件：《大会第 40 届会议执行委员会的报告和会议纪要》 Doc 10071 号文件：《大会第 39 届会议技术委员会的报告》 Doc 9807 号文件：《普遍安保审计计划持续监测手册》 Doc 9735 号文件：《普遍安全监督审计计划持续监测手册》 A40-WP/11 号工作文件：《关于普遍安全监督审计计划（USOAP）持续监测做法（CMA）演变的报告》 A40-WP/32 号工作文件：《关于普遍安保审计计划持续监测做法（USAP-CMA）范围和方法的审查报告》
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1. 背景

1.1 普遍安全监督审计计划（USOAP）于 1999 年推出，自 2013 年 1 月起向持续监测做法（CMA）过渡，逐步发展为一个更加基于证据的、熟知风险的和注重结果的计划，以确定各国安全监督系统的普遍有效性和可持续性。如今，该计划还评估各国实施其国家安全方案（SSPs）的进展。为了支持其不断发展，国际民航组织大会第 39 届会议建议国际民航组织对该计划的方法、流程和工具进行审查，让成员国有机会提供用户反馈意见，从而使国际民航组织能够就计划的改进加以规划（见 Doc 10071 号文件《大会第 39 届会议技术委员会的报告》）。国际民航组织大会第四十届会议（见大会第 A40-13 号决议）进一步指示秘书长根据理事会商定的 USOAP CMA 结构审查专家组（GEUSR）的建议和第十三次空中航行会议的建议实施必要的组织改进，以成功管理该计划长期演变带来的变化。

1.2 普遍安保审计计划（USAP）于 2002 年推出，自 2015 年起一直在实施一个基于风险的持续监测做法。国际民航组织大会第 39 届会议（参见大会第 A39-18 号决议附录 E）要求秘书处与成员国协商，审查 USAP 的范围和方法，以确保提供关于在实地有效实施航空安保措施的可靠信息，并确保该方法考虑了以基于风险的做法来实施航空安保措施。在第 40 届会议上，国际民航组织大会核可了一套 26 项建议，并请理事会指示秘书长实施这些改进，目的是确保对附件 17 —《安保》标准的一致解释，对 USAP CMA 计划更加侧重于运行，及时解决严重缺陷，并采用基于风险的方法确定审计优先次序，从而确保有效报告成员国以基于风险和注重结果的方式遵守相关安保目标的情况（见大会第 A40-11 号决议，附录 D）。

1.3 本文件提供了自大会第 40 届会议以来 USOAP CMA 和 USAP CMA 实施和活动的综合进度报告。关于 2019 年至 2021 年三年期间 USOAP CMA 和 USAP CMA 活动及发展的详细信息见附录 A 和 B¹。两项审计计划查明的关键领域载于附录 C 和附录 D。

2. 讨论

2.1 USOAP CMA 的实施

2.1.1 从 2019 年 1 月 1 日至 2021 年 12 月 31 日，USOAP CMA 共开展了 88 次活动。附录 A 概述了这些活动，包括审计、经国际民航组织协调的核实访问（ICVMs）、异地核实活动、强制性信息请求（MIRs）、国家安全方案实施评估（SSPIAs）和讲习班。在本报告期结束时，国家有效实施率（EI）为 68.18%。有效实施水平最低的审计领域是航空器事故和事故征候调查（AIG）（54.08%）以及机场和地面助航（AGA）（61.79%），而实施水平最低的关键要素是合格技术人员（CE-4）（58.57%）、监督义务（CE-7）（61.43%）和安全问题的解决（CE-8）（54.37%）。

2.1.2 在本报告所述期间，国际民航组织确定了三个重大安全问题（SSCs），国际民航组织以前确定的两个安全问题得到了解决。截至 2021 年 12 月 31 日，全球有 3 个重大安全问题仍未解决，影响到 7 个国家²。在此期间，国际民航组织部署了 MIR 机制，要求四个国家提供信息或文件，供 USAP CMA 审查和核实。这四份 MIR 中的三份已经令人满意地结案。

2.1.3 秘书处执行了四个方面的工作来管理 USOAP CMA 的演变。首先，内部转型和优化方面正在推进。在 GEUSR 提出的 37 项建议中，只有一项³尚未完成。成立了 USOAP CMA 特设咨询小组（USOAP-AG），其建议也取得了进展。最后，秘书处在疫情期间实施了 COVID-19 应急措施，以维持 USOAP CMA 的运作。实施这几方面的工作带来的最显著的结果载于附录 A。这些工作带来的改进将精简和改善 USOAP CMA 的流程、方法和工具，并将改善其成果。

2.1.4 各国继续通过提供长期借调人员支持 USOAP CMA 的工作，这些借调人员为该计划的成功运作和发展做出了贡献。在本报告所述期间，中国、多米尼加共和国、法国、大韩民国、沙特阿拉伯和美国提供了长期借调人员。

2.1.5 在此期间，USOAP CMA 向 USAP、全球航空安全监督系统（GASOS）和世界粮食计划署（WFP）提供了在线框架（OLF）⁴能力。

¹ 报告期包括 2019 年至 2021 年的全年。2022 年开展的活动的完整报告将提交给大会下届会议。

² 国际民航组织确定了不丹、厄里特利亚和东加勒比民用航空局（ECCAA）的重大安全关切，ECCAA 是一个地区安全监督组织，代表东加勒比国家组织（OECS）成员国即安提瓜和巴布达、格林纳达、圣基茨和尼维斯、圣卢西亚以及圣文森特和格林纳丁斯履行委托的安全监督职责。多米尼克是 OECS 的成员，并于 2019 年 4 月 13 日成为国际民航组织的成员。多米尼克于 2020 年 2 月 7 日签署了关于 USOAP CMA 的谅解备忘录。

³ 第 33 条建议将于 2022 年初完成，并将通过为 OLF 应用程序设立服务台来加强国际民航组织对国家反馈、错误报告和询问的响应。

⁴ USOAP CMA OLF (<https://icao.int/usoap>) 是国际民航组织监测、评估和报告各国安全监督相关信息和文件、跟踪 CMA 活动和实时管理 USOAP CMA 数据的主要平台。该网站设有电子差异申报（EFOD）模块，其中存储了各个附件的数字化版本，使各国能够通报与国际民航组织的规定之间的任何差异。OLF 还是 iSTARS（综合安全趋势和分析报告系统）平台中使用的所有监测和监督数据的来源。

2.2 USAP CMA 的实施

2.2.1 从 2019 年 1 月 1 日至 2021 年 12 月 31 日，共开展了 75 次 USAP CMA 活动。附录 B 概述了报告所述期间开展的这些活动，包括审计、核实访问、地区研讨会、审计员信息会议和审计员培训课程。附录 B 中的图表突出了各国监督系统的全球可持续性（关键要素的实施水平），以及 USAP CMA 评估的各国对附件 17 标准的遵守情况。在报告期结束时，各国的可持续性指标为 71.86%。在可持续性指标中，有效实施水平最低的是关键要素是 CE-7（质量控制义务）（53.21%）和 CE-8（解决安保问题）（62%）。截至 2021 年 12 月 31 日，USAP 安全门户网站上公布了 8 个国家的 19 个重大安保关切（SSeCs）。

2.2.2 为应对疫情，除了支持国际民航组织采取行动，协助成员国应对这一危机，并为有效的全球应对和恢复做好准备外，秘书处采用了 12 个月的滚动时间表，并以基于文件的审计取代了被推迟的现场审计。附录 B 提供了疫情期间 USAP CMA 的更多细节。

2.2.3 此外，对 USAP CMA 进行了多次完善和改进，以使其更加符合成员国的需要，并提高审计结果的准确性。在本报告所述期间，秘书处在实施秘书处 USAP CMA 研究组（SSG）提出的 26 项建议方面取得了进展，这些建议得到了理事会第 217 届会议的批准和大会第 40 届会议的核准。在这些建议中，25 项现已得到充分实施。秘书处还继续审查许多国家提交的纠正行动计划（CAPs）并提供反馈。此外，Doc 9807 号文件《普遍安保审计计划持续监测手册》和 Doc 10047 号文件《航空安保监督手册》均已更新，并以国际民航组织所有语文出版。所有改进的总结见附录 B。

2.2.4 审计计划继续面临的具体挑战是附件 17 和附件 9 —《简化手续》的频繁修订以及缺乏合格的审计小组组长。每一项新的附件修订案都需要仔细修改 USAP CMA 规程问题（PQs）并与 SSG 协商，以获得各国的直接反馈。与此同时，审计方案依赖借调的审计小组组长来满足其需求，这导致在确保全面实施年度审计时间表方面经常遇到挑战。

3. 结论

3.1 国际民航组织的安全和安保审计计划在对成员国的航空安全和安保监督能力及其系统的可持续性进行客观和独立评估方面发挥着至关重要的作用。审计计划还以建议的形式提供急需的援助，指导各国努力改善安全和安保监督系统。国际民航组织各项审计计划的充分有效实施及其可持续性，依赖于预算外自愿财务捐助和实物捐助。在这方面，各国对审计计划的持续参与表明，全球航空界致力于继续改进和全面实施国际民航组织的标准。

3.2 除了向各国提供直接援助外，USOAP CMA 和 USAP CMA 还向国际民航组织、其他国家和利害攸关方提供重要和有用的信息，以帮助确定援助活动和制定航空政策。此外，审计计划继续在查明和减缓对国际民用航空带来风险的重大缺陷方面发挥核心作用。尽管如此，两个审计计划的结果都表明，一些国家在履行《国际民用航空公约》及其附件规定的义务方面仍有困难，需要国际民航组织及其合作伙伴继续提供监测和协助。

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 Focused USOAP CMA Audits		
<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 Mandatory Information Requests (MIRs)		
<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 ICAO Coordinated Validation Missions (ICVMs)		
<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 Off-site Validation Activities (OVAs)		
<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>		
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.

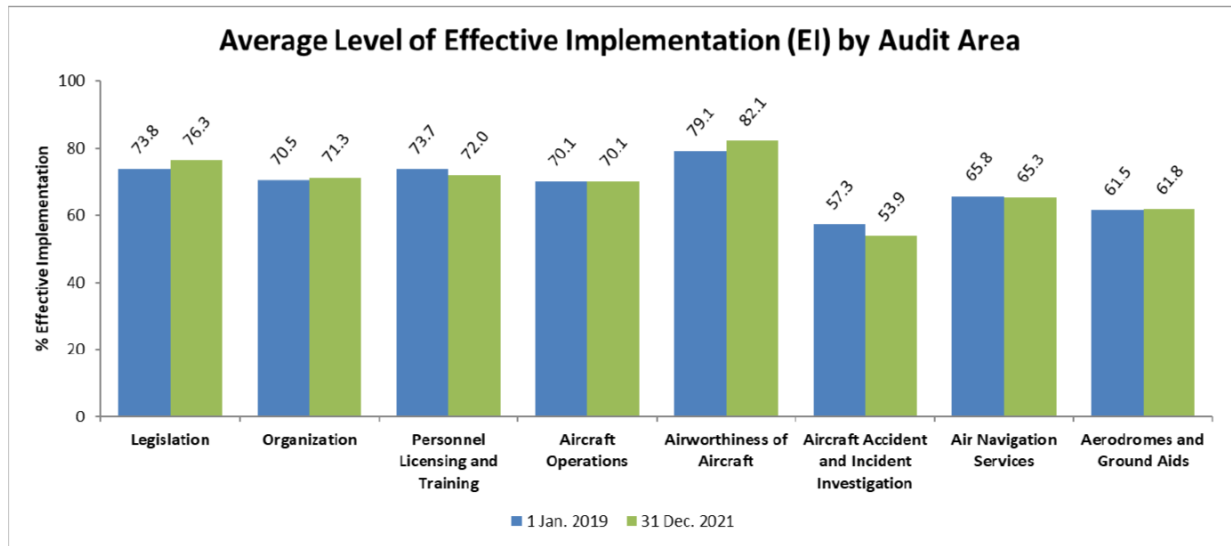


Figure A-1. Average global level of EI by audit area

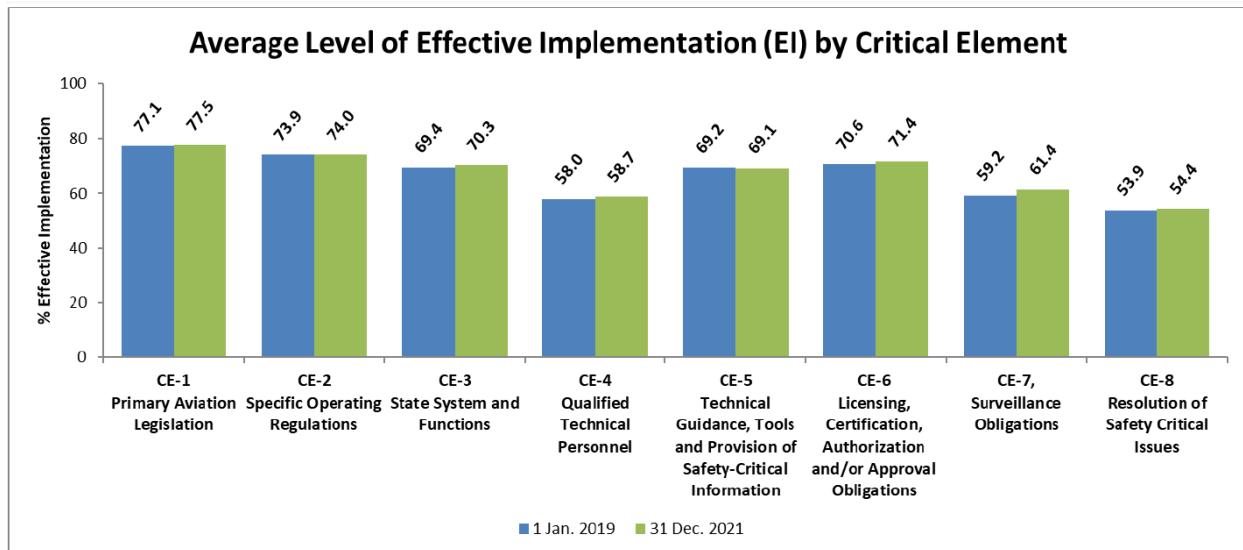


Figure A-2. Average global level of EI by critical element

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	<i>Validation Missions</i>	
	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	<i>Other</i>	
	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	<i>Auditor Training Courses</i>	
	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	<i>Regional Seminars</i>	
	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.

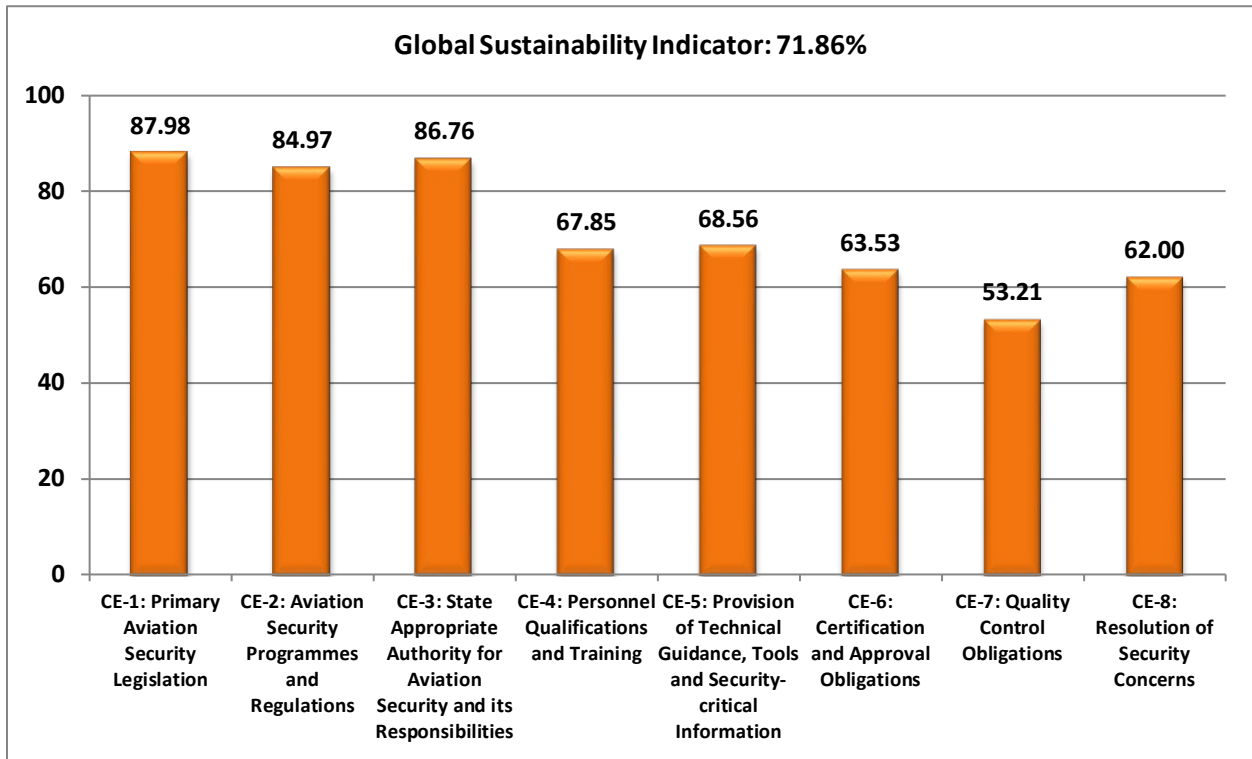


Figure B-1. Average global level of sustainability of a State’s aviation security oversight systems, by critical element

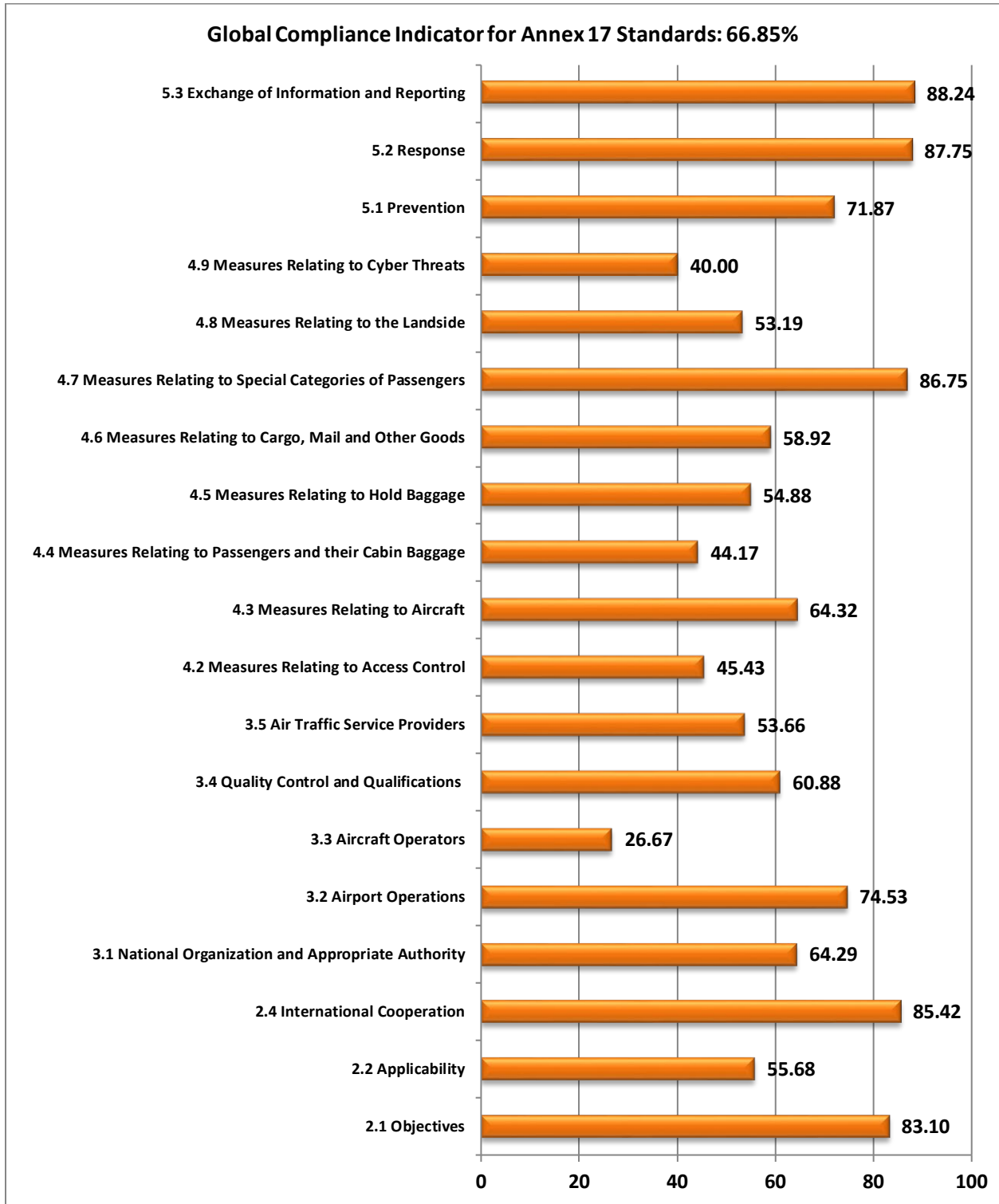


Figure B-2. Average global degree of indicative compliance with Annex 17 Standards by Annex 17 chapter and sub-chapter

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.

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