International Civil Aviation Organization

WORKING PAPER

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ASSEMBLY — 40TH SESSION

EXECUTIVE COMMITTEE

Agenda Item 13: Audit Programmes — Continuous Monitoring Approach (CMA)

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

(Presented by the Council of ICAO)

EXECUTIVE SUMMARY

This working paper presents a consolidated progress report since the 39th Session of the Assembly on the implementation and activities of the ICAO Universal Safety Oversight Audit Programme (USOAP) and the Universal Security Audit Programme (USAP), both under a continuous monitoring approach (CMA).

Detailed information on the USOAP CMA and USAP CMA activities and developments in the triennium 2016 to 2018 are presented in Appendices A and B, respectively, to this working paper.

Overall, implementation of both audit programmes is on target, consistent with Assembly and Council directions, as well as in line with the relevant Strategic Objectives and expected outputs of the Organization's Business Plan.

Action: The Assembly is invited to:

a) note the progress reports on the implementation and activities of the USOAP CMA and USAP CMA;
b) urge States to continue with their full engagement in the USOAP CMA and USAP CMA; and
c) encourage States to continue their support of the USOAP CMA and USAP CMA by, among others, seconding long-term experts and participating in relevant training courses and seminars.

Strategic Objectives:	This working paper relates to the following three Strategic Objectives: Safety, Air Navigation Capacity and Efficiency, and Security and Facilitation.
Financial implications:	The activities referred to in this paper will continue subject to the resources available in the 2020-2022 Regular Programme Budget and/or from extra budgetary contributions.
References:	Doc 10115, *Report of the Thirteenth Air Navigation Conference (AN-Conf/13), Corrigenda Nos. 1 and 2, and Supplement No. 1* Doc 10082, *Assembly 39th Session — Report of the Executive Committee* Doc 10075, *Assembly Resolutions in Force (as of 6 October 2016)* Doc 10071, *Assembly 39th Session — Technical Commission Report* A40-WP/11, Report on the Evolution of the Universal Safety Oversight Audit Programme (USOAP) Continuous Monitoring Approach (CMA) A40-WP/32, Report on the review of the scope and methodology of the Universal Security Audit Programme Continuous Monitoring Approach (USAP CMA)

1. BACKGROUND

1.1 Launched in 1999, the Universal Safety Oversight Audit Programme (USOAP) has since January 2013 transitioned to a continuous monitoring approach (CMA), evolving into a more information-driven, risk-based and result-oriented programme. To support the continuous evolution of the USOAP CMA, the 39th Session of the ICAO Assembly recommended that ICAO undertake a review of the programme's methodology, processes and tools to give Member States an opportunity to provide user feedback and thereby enable ICAO to plan improvements to the programme (*Assembly 39th Session — Technical Commission Report* (Doc 10071) refers).

1.2 The Universal Security Audit Programme (USAP), launched in 2002, began its transition to the USAP CMA in 2013 and was completed at the end of 2014 with full implementation of the new approach incorporating elements of both a continuous-monitoring and risk-based approach starting in 2015. The 39th Session of the ICAO Assembly (Assembly Resolution A39-18, Appendix E refers) requested the Secretariat to review the scope and methodology of the USAP, in consultation with Member States, to ensure that it provides reliable information to Member States regarding the effective implementation of aviation security measures on the ground, and that the methodology takes into consideration a risk-based approach for the implementation of aviation security measures.

1.3 This paper provides a consolidated progress report on the implementation and activities of both the USOAP CMA and USAP CMA since the 39th Session of the Assembly. Detailed information on the USOAP CMA and USAP CMA activities and developments in the triennium 2016 to 2018 are outlined in Appendices A and B. The critical areas identified by both audit programmes of ICAO are presented in Appendices C and D.

2. DISCUSSION

2.1 Implementation of the USOAP CMA

Appendix A outlines the USOAP CMA activities conducted from 2016 to 2018, including 36 audits, 53 ICAO Coordinated Validation Missions (ICVMs), five State Safety Programme Implementation Assessments (SSPIAs), 62 off-site validation activities and 23 workshops. It also issued eight Mandatory Information Requests (MIRs). During the reporting period, a total of 154 USOAP CMA activities impacted the States' effective implementation (EI). The graphs provide the global results by audit area and critical element (CE). The audit areas related with the lowest levels of EI of a safety oversight system are air navigation services (ANS) (65.8 per cent) and aerodromes and ground aids (AGA) (61.5 per cent), while the CEs with the lowest level of EI are qualified technical personnel (CE-4) (58 per cent), surveillance obligations (CE-7) (59.2 per cent) and resolution of safety issues (CE-8) (53.9 per cent). In relation to the low EI of CE-4, States continue to be urged to take the necessary measures to recruit and retain personnel with the required experience and competencies to establish and implement an effective and sustainable safety oversight system. Additional training for such personnel is available through ICAO's Regional Offices and the ICAO Global Aviation Training Office (GAT).[1] The completion of a

[1] Further information on the technical assistance programmes, including training provided by ICAO during the current triennium is presented separately in A40-WP/4, the document entitled "Information related to the Report on the ICAO Technical Assistance Programme Presented Under A40-WP/4" available at http://www.icao.int/Meetings/a40/Pages/documentation-reference-documents.aspx and the ICAO Training in Figures 2018 available at https://www.icao.int/training/Documents/GAT-Statistic%20Abstract-%20Report-2018-FINAL-Web.pdf.

higher number and more complex tasks resulting from the roll-out of the USOAP CMA relies on long and short-term secondments to sustainably run the current framework, activities and requests.

2.1.1 In 2016, ICAO published a new edition of the USOAP CMA Protocol Questions (PQs) to take into account amendments to ICAO provisions as well as feedback received from States and ICAO USOAP teams. Another edition was published in 2017 to exclude aspects related specifically to the State safety programme (SSP) as ICAO developed specific PQs and methodology for SSPIAs.

2.1.2 The SSPIAs were developed as a USOAP CMA activity to address the roll-out of Amendment 1 to Annex 19 — *Safety Management* and the publication of the fourth edition of the *Safety Management Manual (SMM)* (Doc 9859). During the preparatory phase (from September 2015 to April 2018), six SSPIAs were conducted on a voluntary, confidential and cost-recovery basis. In June 2018, a new set of SSP PQs, reflecting Amendment 1 to Annex 19, the *Safety Management Manual* and lessons learnt throughout the SSPIA preparatory phase, was published and used in the first SSPIA conducted, in November 2018, on a voluntary but non-confidential basis.

2.1.3 Responding to growing demands by States for ICAO to validate their progress in resolving their safety deficiencies and thereby improve their effective implementation (EI) scores, ICAO conducted off-site validation activities and also introduced new types of activities to validate progress made by States in addressing PQs requiring on-site review. These activities were supported by more active participation of technical experts qualified by ICAO and whose initial assessments were then validated at Headquarters by the Safety and Air Navigation Oversight Audit (OAS) Section.

2.1.4 ICAO also made use of the MIR mechanism to request information or documentation from eight States for USOAP CMA review and validation, especially when concerns were raised by internal and/or external stakeholders about aspects of a State's safety oversight system. Seven of those eight MIRs issued have been closed satisfactorily. Failure by States to respond satisfactorily to a MIR could result in a PQ finding or even a Significant Safety Concern (SSC) issued by ICAO.

2.1.5 In 2018, a new process was established for the continuous monitoring of States that had resolved SSCs without sustainable capacity building as well as for the provision of enhanced information on such States to the Monitoring and Assistance Review Board (MARB) of ICAO.

2.1.6 In 2017, ICAO published the third edition of the *Safety Oversight Manual* (Doc 9734), Part A — *The Establishment and Management of a State Safety Oversight System*, to further assist States in establishing and implementing their safety oversight systems. This edition, available on ICAO-NET (https://portal.icao.int/icao-net/Pages/Doc9734.aspx), introduced updates reflecting the adoption of Amendment 1 to Annex 19 and enhancements resulting from the experience gained and feedback received from States and other stakeholders.

2.1.7 During the last triennium, ICAO conducted three USOAP CMA standardization training sessions, two in 2016 and one in June 2018. These sessions enabled ICAO staff involved in USOAP CMA activities to keep abreast of the latest developments and improvements in the programme methodology, processes and tools, thereby achieving greater effectiveness, efficiency and standardization in the preparation, conduct and reporting of USOAP CMA activities.

2.1.8 The USOAP CMA online framework (OLF) (https://icao.int/usoap) continues to be the main platform for ICAO to monitor, evaluate and report States' safety oversight-related information and documentation, track CMA activities and manage USOAP CMA data in "real time". It also hosts the Electronic Filing of Differences (EFOD) module, where digitized versions of the Annexes are stored,

allowing States to notify any difference to the ICAO provisions. The OLF is also the provenance of all the monitoring and oversight data used in the iSTARS/SPACE platform.

2.1.9 The success of the OLF had made possible the design and development of a similar application that would enable the USOAP to monitor the aviation activities of the World Food Programme (WFP) using a methodology, processes and tools derived from USOAP.

2.1.10 In September 2017, following a thorough review and update of its processes and procedures focused on the implementation of a risk-based approach, USOAP successfully completed its transition audit to the ISO 9001:2015 standard without any findings. In 2018, new mechanisms were implemented to strengthen the risk management methodology and enhance effectiveness and timeliness in risk mitigation. Data collected by ICAO through the USOAP CMA Quality Management System (QMS) indicated an overall satisfaction rate of above 90 per cent from States that provided feedback on CMA activities conducted in years 2016 to 2018.

2.1.11 USOAP introduced the SSC mechanism in 2006. During the reporting period, a new SSC was identified in one State, while nine States resolved SSCs identified by ICAO. As of 31 December 2018, globally, five SSCs remain unresolved by five States.

2.1.12 Following the Council's review of resolutions and decisions from the 39th Assembly, the Secretariat established a Group of Experts for a USOAP CMA Structured Review (GEUSR) to conduct an independent review of the USOAP CMA, taking into consideration the evolving safety strategy of ICAO and States' progress in implementing Annex 19, in particular, the SSP requirements.

2.1.13 The GEUSR developed 37 recommendations that were presented and approved by the Council (C-DEC 214/5) and have since been agreed by the Thirteenth Air Navigation Conference (AN-Conf/13). AN-Conf/13 also called on ICAO to accelerate the implementation of some GEUSR recommendations and to establish a group before the 40th Session of the ICAO Assembly to address means to avoid duplication of efforts and find synergies to enhance the efficiency of the USOAP CMA, while maintaining safeguards to guarantee the independence, universality, standardization and global acceptance in the implementation of the programme. Following the instruction from the ICAO Council, the Secretariat developed an action plan to address the GEUSR recommendations, taking into account the Council's caution on some elements. The evolution of the USOAP CMA, including the GEUSR recommendations, its action plan, the steps to be taken to address the outcome of AN-Conf/13, and the organizational improvements to support the implementation of the outputs of both groups, is addressed in a separate dedicated working paper (A40-WP/11 refers).

2.2 Implementation of the USAP CMA

2.2.1 One of the most significant changes under the USAP CMA from the second cycle of audits is the ability to capture Standard-specific data as it relates to all the relevant Critical Elements of an oversight system. This allows the USAP CMA to provide detailed State-specific, regional and global assessments of the areas where capacity building is needed. The second major change is that operational implementation of each Standard related to preventative security measures is documented separately from the requirement, thus allowing the USAP CMA to accurately report on operational compliance at the State, regional and global levels.

2.2.2 Another significant change under the USAP CMA from the second cycle is the ability to update audit results to reflect improvements made by States or situations where the existing results no longer accurately reflect the reality on the ground. To this end, the USAP CMA has now begun to conduct targeted audits of States based on a risk assessment and their specific needs.

2.2.3 Over the first three years of the USAP CMA, multiple refinements and improvements have been made to the methodology in order to make it more responsive to the needs of Member States and increase the accuracy of the audit results. These improvements include, amongst others:

a) moving from an activity-centred approach involving observations of predetermined flights and operations to one that is audit area-centred and allows for less predictability of the specific flights and operations assessed; and

b) the consideration of the interrelationships between operational observations and the related training and quality control activities assessed during an audit.

2.2.4 A specific challenge faced by the audit programme has been the frequent amendments made to Annex 17 — *Security — Safeguarding International Civil Aviation against Acts of Unlawful Interference* and to Annex 9 — *Facilitation*. With the introduction of each new Annex amendment, the USAP-CMA PQs need to be carefully revised in order to ensure that auditors can comprehensively address all the new and amended Standards. The Secretariat consults with the Secretariat Study Group (SSG) on the USAP with regard to each set of newly developed PQs. The objective of the PQs is to ensure they cover all the aspects necessary to ensure the sustainable implementation of the Standards, regardless of whether the State uses a prescriptive or a risk-based and outcomes-focused approach. This ensures that all regimes are equally assessed, regardless of the scope of their activities.

2.2.5 Two additional challenges faced by the USAP were highlighted in the Evaluation and Internal Audit Office (EAO) in its 2018 internal audit of the Aviation Security Audit Section (IA/2018/4). The first is that more than 30 per cent of planned audits had not been carried out in 2016 and 2017, largely as a result of requests from Member States to postpone them. In this regard, the Secretariat regularly discourages States from deferring planned audits and relevant text will be included in the Assembly Resolution addressing the USAP. The second issue is that two of the five USAP-CMA audit team leaders are secondees. States should also consider how best to regularize all team leader positions within the audit programme.

2.2.6 A further concern of the audit programme is the standardization of interpretation of the audited Standards using the associated PQs. In order to address this problem, the auditor training course was revised in 2017 to include a detailed module on the interpretation of Standards and refresher training is provided during each audit's preparation day. Moreover, additional notes and guidance for the use of auditors is regularly added to the PQs in order to assist in ensuring uniformity during audits. Finally, attention is continuously being paid during the report technical review process to help ensure standardization. In this regard, the SSG on the USAP is looking more closely at this subject to identify other strategies to further strengthen the programme.

2.2.7 Following the recommendation of the Second High-Level Conference on Aviation Security (HLCAS/2), the Secretariat engaged the SSG on the USAP to complete a holistic and fundamental review of the USAP CMA. The review, its recommendations, the action plan developed to address the recommendations, and additional information regarding the evolution of the USAP CMA, based on the outcome of the HLCAS/2, is addressed in a separate dedicated working paper (A40-WP/32 refers). The approved recommendations will be implemented in the coming triennium.

2.2.8 Appendix B outlines USAP-CMA activities conducted during the reporting period (from 1 January 2016 to 31 December 2018), including audits, validation missions, regional seminars and auditor training courses. During the reporting period, a total of 79 USAP-CMA activities impacted the States' oversight indicators. The graphs provide the global oversight and compliance indicators. The CEs with the lowest level of effective implementation are CE-7, quality control obligations (54.98 per cent) and CE-8, resolution of security concerns (63.31 per cent), while the audit areas with the lowest levels of

compliance are quality control functions (70.16 per cent) and cargo, catering and mail security (74.78 per cent).

2.2.9 The SSeC mechanism was introduced in 2010 for USAP audits, but a number of States were audited under the second cycle of audits prior to the introduction of this mechanism. Many of these States were prioritized for a USAP-CMA audit. As a result, a number of SSeCs have been identified. During the reporting period, new SSeCs were identified in five States, while three States managed to resolve their SSeCs. As of 31 December 2018, globally, 13 SSeCs remain unresolved by five States.

3. CONCLUSION

3.1 ICAO's safety and security audit programmes play a vital role in providing objective and independent assessments of Member States' capacity for aviation safety and security oversight, as well as the sustainability of their systems. The audit programmes also provide much-needed assistance in the form of recommendations to guide States in their efforts to improve safety and security systems. In this context, the continued engagement of States in the audit programmes demonstrates the global aviation community's commitment to continued improvement and full implementation of ICAO Standards.

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

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APPENDIX A

DETAILED INFORMATION ON USOAP CMA ACTIVITIES AND DEVELOPMENTS IN THE TRIENNIUM 2016 TO 2018

1. Table 1 below provides detailed information on USOAP CMA activities and developments in the triennium 2016 to 2018. All activity results, except those for the SSPIAs, are available on the USOAP CMA online framework at: https://www.icao.int/usoap.

Activity		Conducted	Comments
1.	**On-site USOAP CMA Activities**		
1.1	***USOAP CMA Audits***		
	Determine States' capabilities for safety oversight by assessing the effective implementation of the critical elements of a State safety oversight system.	All audits are listed in chronological order. 2016: 12 audits were conducted in the following: Kyrgyzstan, Nigeria, Kuwait, Ukraine, Malaysia, Senegal, Morocco, Tajikistan, Honduras, Israel, Cambodia and New Zealand. 2017: 11 audits were conducted in the following: Ukraine, Australia, Uzbekistan, South Africa, Colombia, Germany, Honduras, Lebanon, Bahamas, India and the European Aviation Safety Agency (EASA). 2018: 13 audits were conducted in the following: Denmark, Brazil, Bulgaria, Botswana, Sri Lanka, Kenya, Gambia, Iran (Islamic Republic of), Poland, Qatar, Mauritania, Cambodia and Myanmar.	Total number of audits conducted during the triennium: 36

Activity		Conducted	Comments
1.2	***ICAO Coordinated Validation Missions (ICVMs)***		
	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 any Significant Safety Concerns (SSCs).	All ICVMS are listed in chronological order. 2016: 17 ICVMs were conducted in the following: Uruguay, Zambia, Kazakhstan, Georgia, Lebanon, Togo, Jamaica, Viet Nam, Paraguay, Bolivia, North Macedonia, Sweden, Egypt, Cyprus, Guyana, Guinea and Equatorial Guinea. 2017: 21 ICVMs were conducted in the following: Equatorial Guinea (cost-recovery), Costa Rica, France, Angola, Chile, United Republic of Tanzania, Jordan, Philippines, Trinidad and Tobago, Nepal, Rwanda, Mongolia, Finland, Bangladesh, Panama, Thailand, Australia, Indonesia, Burkina Faso, Kuwait, and Portugal. 2018: 15 ICVMs were conducted in the following: Madagascar, Guatemala, Papua New Guinea, Georgia, Seychelles, Bahrain, Norway, Cabo Verde, Azerbaijan, Bhutan, Peru, Mozambique, Democratic Republic of the Congo, India and Malawi.	Total number of ICVMS conducted during the triennium: 53
1.3	***State Safety Programme Implementation Assessments (SSPIA)***		
	Assess the progress made by States in SSP implementation.	All SSPIAs are listed in chronological order. A total of 5 SSPIAs were conducted in this triennium: United Arab Emirates[1], France[1], China[1], Singapore[1] and Finland[2].	[1]The SSPIAs conducted in these States were on a confidential, voluntary and cost-recovery basis. Results were only made available to the States concerned. [2]This SSPIA was the first one to be performed on a voluntary and non-confidential basis.

Activity		Conducted	Comments
2.	**Off-site USOAP CMA Activities**		
2.1	***Off-site Validation Activities***		
	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, without conducting an ICVM.	All off-site validation activities are listed in chronological order. 2016: 19 off-site validations were conducted in the following: Namibia, Nepal, Germany, Vanuatu, France, Hungary, Paraguay, Indonesia, Australia, Finland, Dominican Republic, Liberia, Togo, Jamaica, El Salvador, Dominican Republic, Ireland, Serbia and Congo. 2017: 23 off-site validations were conducted in the following: Malta, Gabon, Belgium, United Republic of Tanzania, Hungary, Dominican Republic, Chad, Denmark, Lithuania, Equatorial Guinea, Benin, Turkey, Philippines, Mozambique, Fiji, Nicaragua, Chad, Romania, Trinidad and Tobago, Norway, Nicaragua, Bulgaria and Italy. 2018: 20 off-site validations were conducted in the following: Rwanda, South Africa, Uruguay, Chile, Bosnia and Herzegovina, Finland, Ethiopia[1], Mozambique, Malta[1], Slovenia, Bolivia, Senegal, Estonia[1], Greece, Spain, Papua New Guinea, Hungary	Total number of off-site validation activities conducted during the triennium: 62 [1] Two off-site validation activities were conducted each for Estonia, Ethiopia and Malta.
2.2	***Mandatory Information Requests (MIRs)***		
	Request information or documentation needed for USOAP CMA assessment and validation.	All MIRs issued are listed in chronological order. 2016: 3 MIRs were issued to Vanuatu, Liberia and Thailand. 2017: 2 MIRs were issued to Senegal and Bolivia. 2018: 3 MIRs were issued to the Democratic Republic of the Congo, EASA and the Central African Republic.	Total number of MIRs issued during the triennium: 8

Activity		Conducted	Comments
3.	**Training**		
3.1	***Training of Auditor and Subject Matter Expert Nominees***		
	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.	63 nominees qualified for training of auditors and subject matter experts and were enrolled in the USOAP CMA CBT in 2016 to 2018. Since the launch of the CBT in 2011, 435 participants from 73 States and 8 international/regional organizations have completed the CBT. The USOAP CMA roster now includes a total of 114 qualified USOAP auditors.	States and recognized organizations are invited to nominate experts for secondment to ICAO as auditors and subject matter experts, on a long- or short-term basis, in support of the USOAP CMA. During the 2016 – 2018 triennium, France, the Republic of Korea, Malaysia and Singapore provided long-term secondments to support the USOAP CMA.
3.2	***Familiarization Training for State Employees***		
	Provide training to States' National Continuous Monitoring Coordinators (NCMCs) and familiarize States' safety oversight employees with USOAP CMA methodology and activities.	Since the launch of the CBT in 2011, 1,336 participants from 116 States and 15 international/regional organizations have taken the CBT for NCMC and familiarization training.	NCMC 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.
3.3	***Workshops***		
	Assist States in their participation in USOAP CMA and, particularly, preparation for an upcoming USOAP CMA activity.	In the triennium 2016 – 2018, 23 workshops were conducted, with 719 participants from 102 States and 7 international/regional organizations. 8 regional workshops were budgeted and conducted by ICAO, covering all 7 Regional Offices (APAC was visited twice). 15 workshops were conducted on a cost-recovery basis in the following (listed in chronological order): Turkey; Qatar; Jordan; Eastern Caribbean Civil Aviation Authority (ECCAA); Republic of Korea[1]; Kenya, Guyana, Indonesia, Saudi Arabia, North Macedonia, Iran (Islamic Republic of), South Africa, and Canada.	[1] Three cost-recovery workshops were held in the Republic of Korea.

GRAPHIC SUMMARY

2. 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.

3. Since the inception of USOAP, 185 Member States have received a USOAP audit. As of 31 December 2018, the average EI score at the global level was 67.68 per cent. Out of the 185 audited Member States, 135 have an EI of 60 per cent or higher.

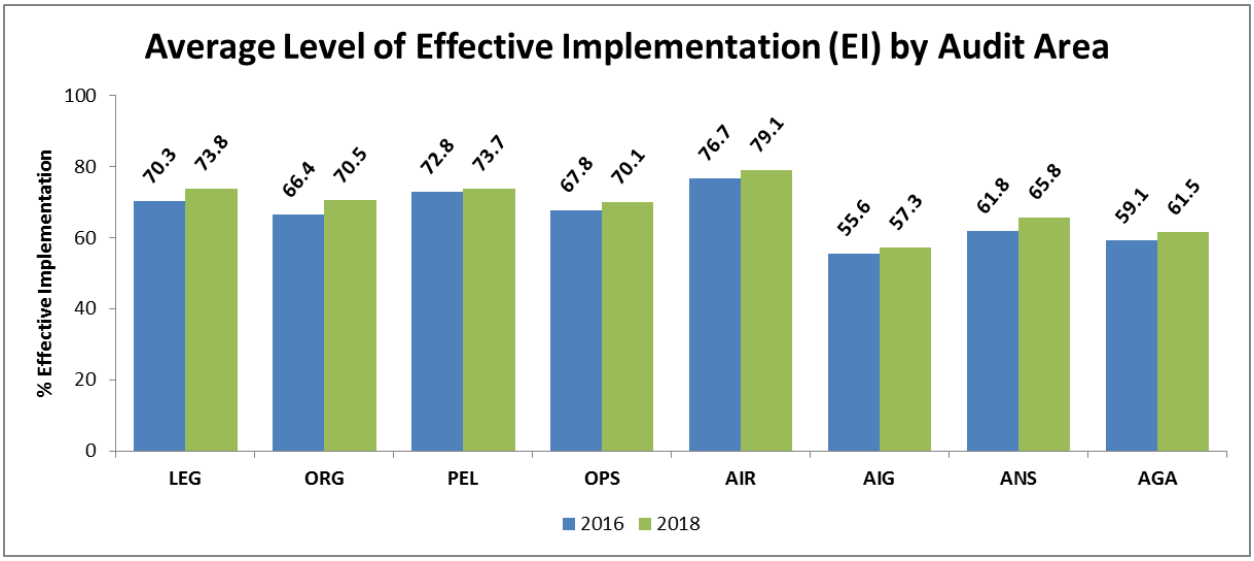

Figure A-1. Average global level of effective implementation (EI) by Audit Area

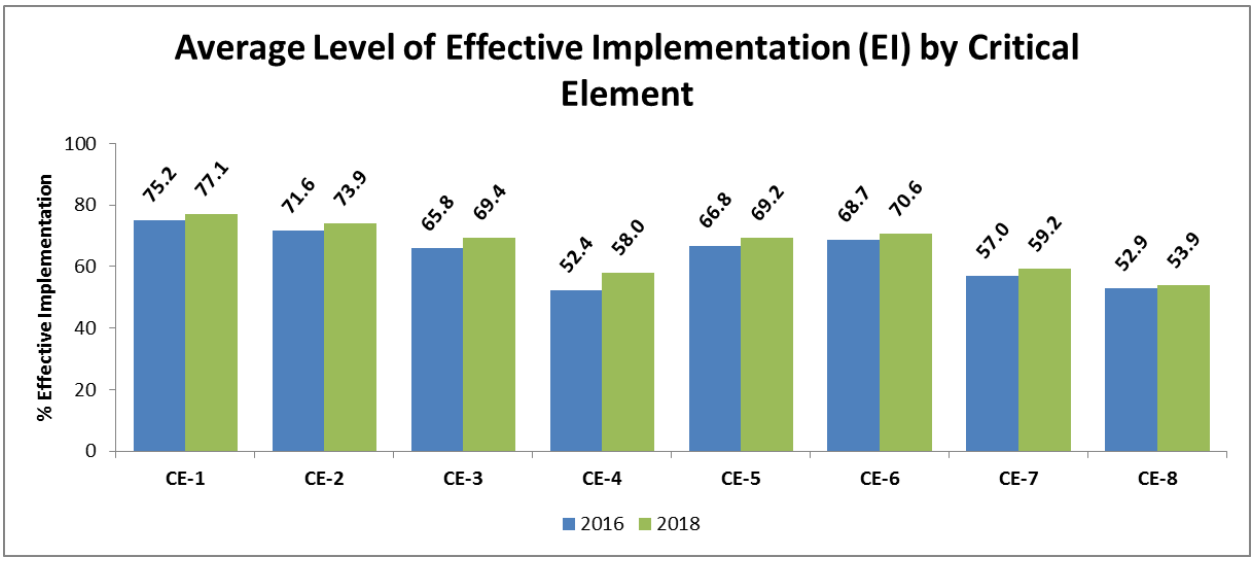

Figure A-2. Average global level of effective implementation (EI) by Critical Element

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APPENDIX B

DETAILED INFORMATION ON USAP-CMA ACTIVITIES AND DEVELOPMENTS IN THE TRIENNIUM 2016 TO 2018

1. The table below provides details on the USAP-CMA activities and developments from 1 January 2016 to 31 December 2018.

Activity		Conducted	Comments
1.	**USAP CMA Activities**		
1.1	***USAP CMA Audits***		
	Determine States' capabilities for security oversight by assessing the effective implementation of the critical elements of a State's aviation security and oversight systems.	2016: 24 audits (3 documentation-based) were conducted in 2016: Albania, Australia, Bahamas, Bosnia and Herzegovina, Botswana, Brunei Darussalam, Burkina Faso, Cambodia, Canada, Congo, Cyprus*, Estonia*, Guyana, Hungary*, Niger, North Macedonia, Oman, Paraguay, Sao Tome and Principe, Solomon Islands, Suriname, Tunisia, United Arab Emirates and Venezuela (Bolivarian Republic of). 2017: 26 audits (7 documentation-based) were conducted in 2017: Belarus, Bolivia (Plurinational State of), Chad, China*, Colombia, Croatia*, Czechia*, Democratic Republic of the Congo, Dominican Republic, Ecuador, Gabon, Indonesia†, Italy*, Jordan, Kazakhstan, Kyrgyzstan, Latvia*, Mexico, Poland*, Qatar, Sao Tome and Principe†, Slovakia*, Thailand, Togo, Uganda and Zambia. 2018: 29 audits (4 documentation-based) were conducted in 2018: Angola, Antigua and Barbuda, Bahrain, Bangladesh, Burundi, Cameroon†, Chile, Denmark*, Djibouti, Gambia, Germany*, Guatemala, Guinea-Bissau, Honduras†, India, Lao People's Democratic Republic,	Audits include documentation-based audits, as well as full and limited scope on-site audits.

* Documentation-based audit
† Limited scope audit

Activity		Conducted	Comments
		Marshall Islands, Mauritania, Micronesia (Federated States of), Myanmar, Namibia, Netherlands*, Philippines, Romania*, Rwanda, Saint Kitts and Nevis, Saint Vincent and the Grenadines, Senegal and Turkmenistan.	
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).	2016: 3 on-site validations missions 2017: 3 on-site validation missions 2018: 1 remote validation mission	
1.3	***Other***		
	Participate as observers in European Commission (EC) airport inspections and appropriate authority inspections.	2016: One airport inspection 2017: One airport inspection 2018: One appropriate authority inspection	
2.	**Training**		
2.1	***Auditor Training Courses***		
	Provide training for potential USAP-CMA auditors in all three audit languages.	2 auditor training courses were conducted between 2016 and 2018, resulting in the successful certification of 25 new USAP-CMA auditors and the re-certification of 3 auditors. The USAP-CMA roster now includes a total of 151 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 2016 – 2018 triennium, France and the United States have provided long-term secondments to support the USAP-CMA.
2.2	***Regional Seminars***		
	Provide training to States' National Coordinators (NCs)	Since 2016, 7 regional USAP CMA seminars have been conducted, covering the APAC, ESAF (2), EUR/NAT (2),	NC and familiarization training allows States to enhance the knowledge and

Activity		Conducted	Comments
	and familiarize States' security oversight employees with the USAP-CMA methodology and activities.	MID, and WACAF ICAO regions, with a total of 281 participants. Since the launch of the USAP CMA, a total of 653 participants have taken part in this training in all ICAO regions.	competency of their aviation security personnel regarding the USAP CMA, particularly for preparing for a scheduled USAP CMA activity. Note: Three additional seminars in the APAC, NACC and SAM Regions planned in 2019.

2. The graphs below provide a summary of the global level of sustainability of a State's aviation security oversight systems, by Critical Element. This global average is the combined result from the 113 USAP-CMA audits conducted to date and the second cycle audit results for the States that have yet to receive a USAP-CMA audit.

3. The current average EI score at the global level is 72.69 per cent. Out of the 181 audited Member States, 120 have an EI of 65 per cent or higher.

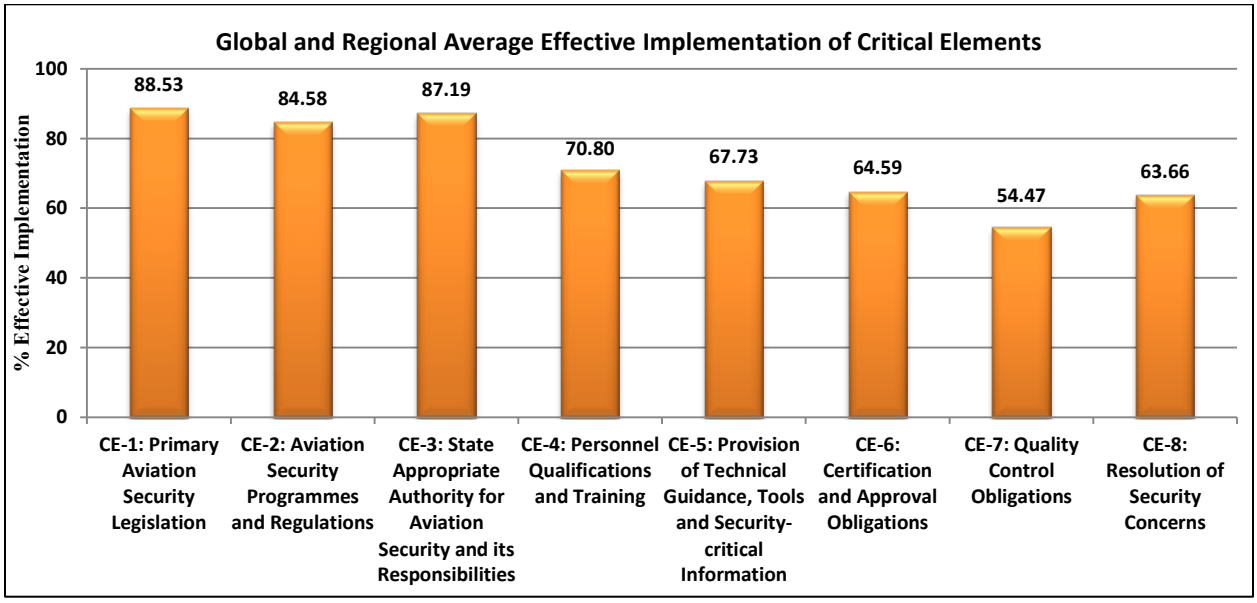

Figure B-1. Average global level of sustainability of a State's aviation security oversight systems, by Critical Element

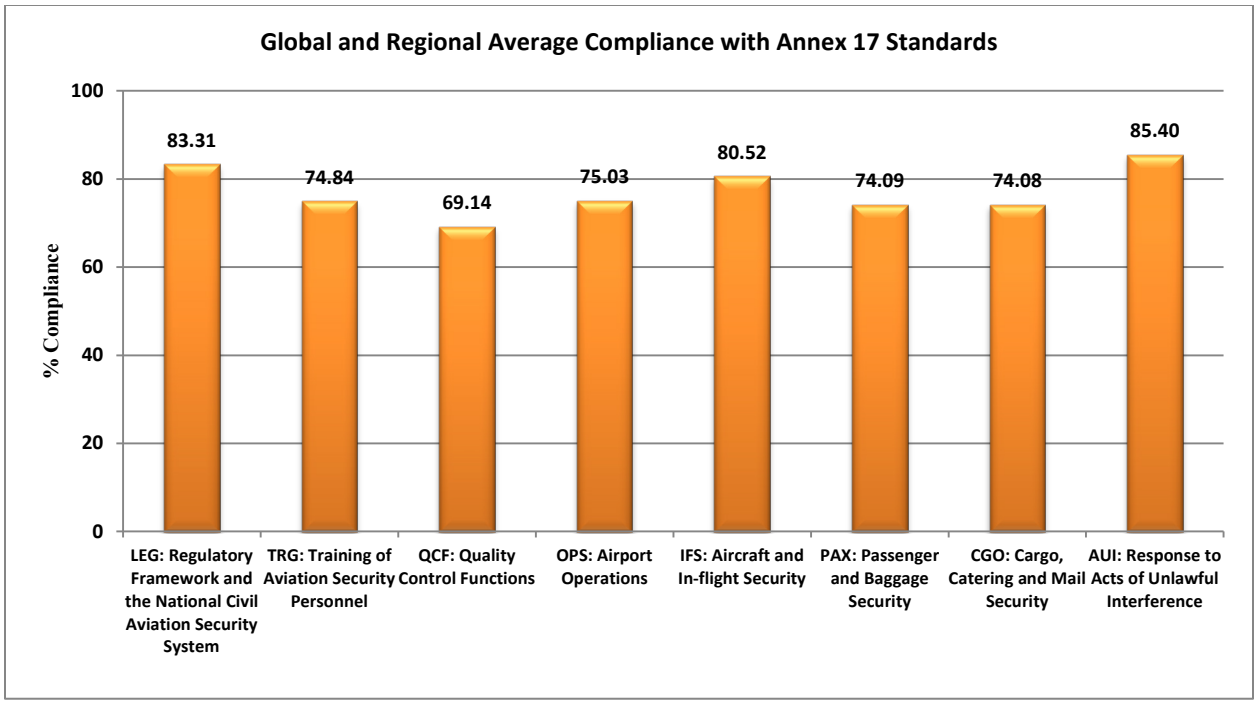

Figure B-2. Average level of compliance by audit area

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APPENDIX C

CRITICAL ASPECTS IDENTIFIED BY THE USOAP CMA IN THE TRIENNIUM 2016 TO 2018

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 2016-2018 (https://www.icao.int/safety/CMAForum/Documents/USOAP_REPORT_2016-2018.pdf). Solutions available through ICAO to address these challenges are presented in A40-WP/4-EX/1.

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

1.1 More than half of States lack comprehensive and appropriate procedures to timely amend their regulatory schemes and bring them into full accord with the Annexes to the Chicago Convention. A significant number of States that ratified Article 83 *bis* do not have an adequate legal framework for the transfer of functions and duties or its recognition. Other critical deficiencies for States in this area are the identification of differences and significant differences between the Standards and Recommended Practices (SARPs) and States' regulations and practices for notification to ICAO and/or publication in the aeronautical information publication (AIP). An important number of States face challenges in granting exemptions supported by an appropriate legal basis or being fully compliant with national regulations and procedures. States also have difficulties in establishing a framework to enable an effective enforcement of primary aviation legislation and specific operating regulations.

2. CIVIL AVIATION ORGANIZATION (ORG)

2.1 An important number of States have yet to clearly define the functions and responsibilities related to safety oversight and accident and incident investigation aiming at avoiding overlaps and establishing proper coordination between relevant authorities. A significant number of States do not ensure that their civil aviation or accident investigation authorities recruit and retain sufficient qualified technical personnel to perform their functions and responsibilities. Likewise, many States have not effectively provided training to their inspectors and/or investigators. The lack of or insufficient number of qualified inspectors remains the main obstacle to the implementation of an effective State safety oversight system.

3. PERSONNEL LICENSING AND TRAINING (PEL)

3.1 More than half of States have not appropriately implemented a training programme for personnel licensing staff and other technical personnel. In addition, an important number of States have not implemented procedures for granting licences and have not effectively implemented a system for the supervision of training programmes related to the first issuance of licences. 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 A third of States have not implemented a thoroughly documented air operator certification (AOC) process and/or have not yet established or properly implemented procedures for the issuance of approvals and authorizations contained in the operations specifications associated with the AOC. A significant number of States have not established and implemented a comprehensive surveillance programme to verify that all AOC holders comply, on a continuing basis, with applicable requirements. In similar numbers, States do not verify that foreign operators comply with applicable international requirements and the provision of their AOCs and associated specifications. Almost half of States have not implemented a system to document, record progress and resolution of deficiencies detected from the surveillance of air operators. A significant number of States lack main elements of an effective system to oversee the transport of dangerous goods.

5. AIRWORTHINESS OF AIRCRAFT (AIR)

5.1 Establishing or implementing surveillance programmes for AOC holders and/or approved maintenance organizations continues to be a common deficiency in almost half of States. Likewise, many States have not effectively conducted ongoing surveillance of air operators' reliability programmes and have deficiencies in taking appropriate actions resulting from reliability monitoring. A large number of audited States do not ensure that operations derived-equipment, which are not part of the type certification of aircraft, are appropriately installed and maintained. 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 More than half of States do not have or 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 not established mechanisms to ensure the cooperation between aircraft accident investigators and judicial authorities, while ensuring the separation between the two types of investigations. Finally, a large number of audited States have not established or effectively implemented comprehensive training programmes and training plans.

7. AIR NAVIGATION SERVICES (ANS)

7.1 Many States do not effectively conduct surveillance over the service providers of instrument flight procedure design, search and rescue, cartography and aeronautical information. A

significant number of States have not implemented a system to take appropriate and timely actions, including enforcement measures, to resolve identified safety issues in the aforementioned areas. A similar number of States do not ensure that safety reviews are conducted regularly by the air traffic services providers. More than half of States have not established or implemented a comprehensive training strategy supported by sufficient financial resources, resulting in insufficient training programmes to ensure that the ANS inspectors acquire and maintain the necessary competencies to effectively perform the related safety oversight functions. Only half of States have documented processes to ensure that the inspectors have satisfactorily completed an on-the-job training before being assigned to perform their tasks and responsibilities.

8. AERODROMES AND GROUND AIDS (AGA)

8.1 Many States have not established a process for the certification of aerodromes and more than half of States have not yet fully implemented the certification requirements. A significant number of States have not developed or implemented a formal surveillance programme for the continuing supervision of the operations conducted by aerodrome operators. Many 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. A large number 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.

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APPENDIX D

CRITICAL AREAS IDENTIFIED BY THE USAP-CMA IN THE TRIENNIUM 2016 TO 2018

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 presented in A40-WP/4-EX/1.

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

1.1 States' national documentation does not always accurately reflect or reference aviation security requirements and measures in effect in audited States, nor does it establish sufficient guidance to ensure the efficient, effective and consistent application of aviation security policies and requirements. Moreover, the lack of qualified national aviation security inspectors, possessing sufficient legal authority and enforcement powers, remains a significant obstacle to the implementation of an effective State aviation security oversight systems. A majority of audited States do not have an appropriate risk assessment methodology or a regularly functioning National Civil Aviation Security Committee.

2. TRAINING OF AVIATION SECURITY PERSONNEL (TRG)

2.1 A large number of audited States do not ensure the development or the implementation of an effective training programme for national aviation security inspectors and almost half of National Civil Aviation Security Training Programmes (NCASTP) lack sufficient detail regarding training requirements for all aviation security personnel. Furthermore, many States have not implemented a system: to ensure that all relevant entities have established training programmes for their staff; to identify training needs; and to ensure that initial, on-the-job and recurrent training is completed as required. A considerable number of audited States have not developed terms and conditions for the certification of aviation security screeners and instructors.

3. QUALITY CONTROL FUNCTIONS (QCF)

3.1 The audit programme has identified that many States have not developed sufficient guidance material, such as audit/inspection checklists and test protocols, for the use of their national aviation security inspectors. 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 aspects of aviation security are not effectively and regularly monitored for compliance with national requirements, and many entities with aviation security responsibilities are not systematically subjected to

oversight. These deficiencies are compounded by the fact that many audited States fail to keep accurate records and to effectively resolve deficiencies identified through their quality control systems.

4. AIRPORT OPERATIONS (OPS)

4.1 A majority of audited States have not implemented a process to ensure that airport security programmes (ASPs) meet the requirements of their National Civil Aviation Security Programme (NCASP). Airport-level coordination and oversight are often ineffective and only less than half of audited States ensure that internal quality control programmes are implemented. Airport personnel identification and vehicle pass systems are another area where deficiencies are frequently identified. A majority of States are also unable 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 and security controls of persons other than passengers, items carried and vehicles being granted access to security restricted areas. In addition, a sizeable minority of States do not ensure 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 in States regarding aircraft and in-flight security is the lack of a process to ensure that aircraft operators establish and maintain written aircraft operator security programmes (AOSPs) that meet the requirements of the NCASP. With regard to aircraft checks and searches, over half of audited States have not completed risk assessments to determine whether an aircraft security check or a search should be conducted, and such activities are often not consistently and effectively implemented.

6. PASSENGER AND BAGGAGE SECURITY (PAX)

6.1 Just over 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 operational 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 and on the issuance of consignment security declarations. Similar deficiencies have been identified with regard to airport-level entities in many States, which also 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. Moreover, in practice many States do not systematically implement procedures for high-risk cargo and mail.

8. RESPONSE TO ACTS OF UNLAWFUL INTERFERENCE (AUI)

8.1 A large number 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 always carried out. A considerable number of States have also not ensured that air traffic service providers operating in their territories have established security provisions appropriate to meet the requirements of their NCASP.

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. A quarter of States have not developed sufficient guidelines for the reporting of Stolen and Lost Travel Documents (SLTD) and a minority of States do not always report this information to the International Criminal Police Organization (INTERPOL) for inclusion in its SLTD database.

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