Ninth Regional Aviation Safety Group — Pan America Plenary Meeting (RASG-PA/9)
Panama City, Panama, 23 June 2016

Agenda Item 9:   **Other Safety Initiatives**

PROGRESS REPORT ON THE IMPLEMENTATION OF THE ICAO UNIVERSAL SAFETY OVERSIGHT AUDIT PROGRAMME CONTINUOUS MONITORING APPROACH (USOAP CMA)

(Presented by the Secretariat)

EXECUTIVE SUMMARY
This paper provides a progress report on the implementation and activities of the Universal Safety Oversight Audit Programme Continuous Monitoring Approach (USOAP CMA) during 2015, and planned for 2016.

Action:	The suggested action is in Section 3.
Strategic Objectives:	• Safety
References:	• Doc 9735 — Universal Safety Oversight Audit Programme Continuous Monitoring Manual (Fourth Edition) • EB 2016/28 - Posting of a Significant Safety Concern (SSC) • EB 2016/20 - ICAO Universal Safety Oversight Audit Programme Report on Universal Safety Oversight Audit Programme Continuous Monitoring Approach (USOAP CMA) Results — 1 January 2013 to • 31 December 2015 • EB 2016/6 - Implementation of the ICAO Universal Safety Oversight Audit Programme — Activity Plan • EB 2015/56 - Roll Out of the State Safety Programme under the ICAO Universal Safety Oversight Audit Programme Continuous Monitoring Approach—Update • EB 2014/61 - Revision of the Universal Safety Oversight Audit Programme (USOAP) Continuous Monitoring Approach (CMA) Protocol Questions (PQs) and Introduction of new Safety Management PQs • Report on Universal Safety Oversight Audit Programme Continuous Monitoring Approach (USOAP CMA) Results 1 January 2013 to • 31 December 2015 • SL AN 8/3-15/46 - Proposals for the Amendment of Annexes 19, 8 and 6, Parts I and III relating to safety management • SL AN 19/34-15/35 - Short-term Secondment of Experts to the USOAP CMA.

1.   Introduction

1.1   This paper provides a progress report on the implementation and activities of the USOAP CMA, highlighting the achieved milestones, conducted activities, and improvements made in 2015, as well as planned activities and developments for 2016.

2.   Discussion

USOAP Milestones in 2015

2.1   The USOAP CMA Online Framework (OLF) continues to be the main platform for ICAO to monitor, evaluate, report States' safety oversight-related information including documentation, track CMA activities and manage USOAP CMA data in 'real time' (http://www.icao.int/usoap). During 2015, the OLF system was improved and migrated to a cloud-based platform and its speed was enhanced. In addition, detailed guidance materials and tutorials were developed and made available to users. States continue to use the OLF to update their information and to prepare for upcoming USOAP CMA activities. The latest version of USOAP CMA Protocol Questions (PQs) is now available on the OLF in English, French, Spanish and Russian. The OLF is also closely integrated with ICAO's iSTARS/SPACE (http://portal.icao.int – group name SPACE) and iSTARS/SPACE applications use live data from the OLF, allowing States to conduct more accurate and timely analyses. iSTARS/SPACE is available to all Member States.

2.2   The new USOAP audit which includes PQs related to State Safety Programme (SSP) and provisions of Annex 19 — *Safety Management* (launched in 2014) was planned to start in January 2016 (EB 2014/61 refers) in States with Effective Implementation (EI) above 60 per cent. Those States had one year until the end of 2015 to conduct self-assessment on the new SSP-related PQs, while all States had to also perform an SSP Gap Analysis using the online tool provided by ICAO on iSTARS/SPACE. However, in practice, very few States have performed a self-assessment on the new SSP-related PQs and recorded results in the OLF.

2.3   In 2015, ICAO started to perform confidential assessments of States' SSP implementation on a cost-recovery basis, using the new SSP-related PQs. These assessments provided ICAO with a better understanding of the challenges faced by States for effective implementation of SSP, as well as with inputs for the revision and improvement of SSP-related PQs.

2.4   Considering the lack of readiness of most States for effective implementation of SSP and the fact that an updated version of the Safety Management Manual (SMM) (Doc 9859) will be published in all ICAO working languages in the second quarter of 2017 (SL AN 8/3-15/46 refers), it was decided to postpone the audit of the new SSP-related PQs to January 2018 (EB 2015/56 refers).

2.5   The increasing efforts of States in resolving their safety deficiencies and improving their EI rates has created more demand for ICAO to validate the progress reported by States. One of the ways for ICAO to respond to this demand in a timely manner is by conducting more off-site validation activities. While these activities are limited to the eligible PQs (PQs that do not require on-site verifications, i.e. mainly those related to the establishment of legislation, regulations, policies and procedures), they are cost effective and can generate results in a shorter time than other USOAP CMA activities, i.e. audits and ICAO Coordinated Validation Missions (ICVMs).

2.6　　　　　Performing an increased number of off-site validation activities requires more resources for the conduct of USOAP CMA activities. As a solution, and following ICAO Council discussions, ICAO invited States to support USOAP CMA by nominating technical experts. To encourage States, ICAO agreed to waive the fee for USOAP CMA Computer-based Training (CBT) for nominated experts that meet defined criteria (SL AN 19/34-15/35 refers). States responded well to ICAO's invitation and, as a result, ICAO's pool of experts to conduct USOAP CMA activities is expanding. Furthermore, the Secretariat is finalizing the development of its designee system as a pragmatic solution to the demand for off-site validation activities, as highlighted by the Air Navigation Commission (ANC) and the ICAO Council. ICAO will use qualified designees in off-site validation activities only.

2.7　　　　　During 2015, ICAO promoted a new initiative to support continuous monitoring in general and off-site validation activities in particular through more active participation of ICAO technical officers from both ICAO Headquarters (HQ) and Regional Offices (ROs), as well as technical experts from international organizations and Cooperative Development of Operational Safety and Continuing Airworthiness Programmes (COSCAPs) that support USOAP CMA. During their visit to a State, these experts collect evidence on implementation of Corrective Action Plans (CAPs) and resolution of USOAP audit findings by the State. However, unlike ICVMs, the experts do not have to fully assess the collected evidence. They submit the collected evidence to ICAO HQ for off-site assessment and validation. As more States request ICAO to validate their progress in a timely manner, this initiative allows ICAO to improve its response time to States' efforts in implementing their CAPs and helps States show the improvements in their EI.

2.8　　　　　The USOAP CMA Quality Management System (QMS) successfully went through its annual surveillance audit in September 2015 to ensure its ongoing compliance with the ISO 9001:2008 standard for Quality Management Systems. The QMS scope includes: the collection, processing and sharing of safety oversight information; the conduct of continuous monitoring activities; and the provision of safety training and seminars for the enhancement of global aviation safety. USOAP CMA procedures, processes and other documentation managed through the QMS were updated, streamlined and standardized, as applicable. Through the USOAP CMA QMS, ICAO collects data from States regarding their satisfaction with USOAP CMA activities. States that provided feedback on CMA activities conducted in 2015 indicate an overall satisfaction rate of 89 per cent.

USOAP CMA Activities in 2015

2.9　　　　　**Appendix A** outlines USOAP CMA activities conducted during 2015 including USOAP CMA audits, ICVMs, off-site validations, Mandatory Information Requests (MIRs) and training. The USOAP CMA Activity Plan, which is issued as an Electronic Bulletin and posted on ICAO-NET twice a year, lists the conducted activities (EB 2016/6 refers).

2.10　　　　　The graphs in **Appendix B** outline some of the improvements in States' EI resulting from the conduct of USOAP CMA activities. Further detailed analyses is also presented in the Report on USOAP CMA Results published at the end of March 2016 (EB 2016/20 refers).

2.11　　　　　The graph in **Appendix C** presents the progress by Region in CAP implementation. As of 6 April 2016, there were ten unresolved SSCs, involving nine States (EB 2016/28 refers).

2.12　　　　　The regional safety briefing presented in **Appendix D** provides a summary of the USOAP status and priority areas for safety improvement for RASG-PA States.

USOAP CMA Activities and Improvements Planned for 2016

2.13　　　ICAO will continue to monitor States' activities through the CMA online framework, prioritizing activities based on risk factors and indicators. The ongoing collection of data from the online framework allows ICAO to determine the appropriate monitoring and assistance activities for each State and to assign resources where required. The criteria used for the selection and planning of USOAP CMA activities are outlined in the Universal Safety Oversight Audit Programme Continuous Monitoring Manual (Doc 9735).

2.14　　　In line with the approved budget and available resources, USOAP CMA activities planned for 2016 include ten USOAP CMA audits, fifteen ICVMs, fifteen off-site validations and two regional Seminar/Workshops. Cost-recovery activities will be conducted as requested by States. The CMA Activity Plan also lists planned activities. USOAP CMA activities can be conducted as full-scope (covering all eight audit areas) or as limited-scope (covering only some of the audit areas).

2.15　　　During 2016 and while ICAO and States with EI above 60 per cent prepare for the audit of SSP-related PQs, ICAO will conduct more cost-recovery assessments of SSP implementation in volunteer States. These assessments may be in conjunction with ICVMs. The results of these assessments will be used to improve SSP-related PQs and their related guidance and to develop a more detailed methodology for auditing the effective implementation of SSP. In the meantime, States with EI above 60 per cent are expected to conduct self-assessment on SSP-related PQs and complete the Annex 19 compliance checklists.

2.16　　　ICAO will continue to develop and implement a plan to prepare and train USOAP CMA auditors to address SSP-related PQs. In 2016, ICAO will provide refresher and standardization training to team leaders of USOAP CMA activities. This will ensure that USOAP CMA team leaders are fully informed about the latest updates and improvements in the USOAP CMA methodology, processes and workflows and that they lead and conduct USOAP CMA activities in a consistent, uniform and standardized manner. This training will be organized in two sessions: one in the first half of 2016 for team leaders from ICAO HQ and one in the second half of 2016 for team leaders from ICAO ROs.

2.17　　　To address the ongoing need of States for timely and actionable advice on resolving USOAP findings, ICAO is developing and will be launching a 'Solution Centre' on iSTARS/SPACE. This application will allow users to view USOAP findings for any State on a graphically-rich dashboard and to drill down to PQ findings and a variety of possible solutions to address each finding. These solutions may include links to official ICAO guidance documents, training courses, partnership programmes and best practices. In addition to USOAP metrics such as the list of PQs, EI by audit area, EI by Critical Element (CE) and SSCs, other metrics only available on the OLF will also be shown on iSTARS/SPACE. These will include information from the State Aviation Activity Questionnaire (SAAQ) and reports on the Electronic Filing of Differences (EFOD). The consolidation of metrics will decrease the overlap among various databases and tools and will make more transparent the actual aviation safety environment, personnel, and resources within each Member State.

3. **Action by the Meeting**

3.1 The meeting is invited to consider adopting the following Draft Conclusion:

CONCLUSION 5/XX **ICAO USOAP CMA IMPLEMENTATION**

That States prioritise and take action as needed to improve safety oversight systems, with particular attention to:

a) the implementation of Corrective Action Plans (CAP) and reporting the progress on the On-line Framework (OLF);

b) the completion of the self-assessments and uploading the relevant evidence on the OLF; and

c) requesting assistance from ICAO, RSOOs and RASG-PA as required.

— — — — — — — — — — —

APPENDIX A
USOAP CMA ACTIVITIES AND DEVELOPMENTS DURING 2015

The table below provides more detail on USOAP CMA activities and developments during 2015.

Activity	Planned/Conducted	Comments
1. **On-site USOAP CMA Activities**		
1.1 *USOAP CMA Audits* Determining States' capabilities for safety oversight by assessing the effective implementation of all safety-relevant ICAO SARPs, associated procedures, guidance material and best safety practices.	As planned for 2015, ten audits were conducted in: Armenia, Azerbaijan, Ethiopia, Guatemala, India, Norway, Panama, Russian Federation, San Marino and Thailand.	Audit results are available on the USOAP CMA online framework at: http://www.icao.int/usoap
1.2 *ICAO Coordinated Validation Missions (ICVMs)* Assessing the status of corrective actions taken by the State to address previously identified findings and determining whether the State has satisfactorily resolved deficiencies, including any SSCs.	Fifteen ICVMs were scheduled for 2015. By the end of the year, eighteen ICVMs were conducted across all ICAO Regions (except MID) in: Austria, Bahamas, Belarus, Botswana, Brazil*, Chad*, Congo*, Ecuador, El Salvador, Equatorial Guinea, Lao People's Democratic Republic, Latvia*, Mali, Mauritius, Niger*, Swaziland, Switzerland and Tajikistan. * ICAO also conducted off-site validation activities for these States (see 2.1 below).	The overall EI for these eighteen States increased from 53.31 per cent to 68.18 per cent. States consider ICVMs a form of ICAO assistance that provides guidance and advice on implementation of their corrective actions. ICVM results are available on the USOAP CMA online framework at: http://www.icao.int/usoap

Activity	Planned/Conducted	Comments
2. **Off-site USOAP CMA Activities**		
2.1 *Off-site Validation Activities* Assessing and validating corrective action plans (CAPs) implemented by a State to address certain eligible findings without conducting an on-site activity, i.e. an audit or ICVM.	The goal was to conduct fifteen off-site validation activities for 2015. By the end of the year, 20 off-site validations were conducted in: Benin (two activities), Brazil*, Cameroon, Chad*, China, Congo*, Finland, France, Germany, Hungary, Ireland, Israel, Italy, Kyrgyzstan, Latvia*, Lithuania, Madagascar, Niger* and Togo. * ICAO also conducted ICVMs in these States in 2015 (see 1.2 above).	The evidence for some of the off-site validation activities were collected during visits of ICAO or the European Aviation Safety Agency (EASA) to States.
2.2 *Mandatory Information Requests (MIRs)* Requesting information or documentation needed for USOAP CMA assessment and validation.	In 2015, three MIRs were issued, with a total of sixteen MIRs to date. Of these, five MIRs remain open.	

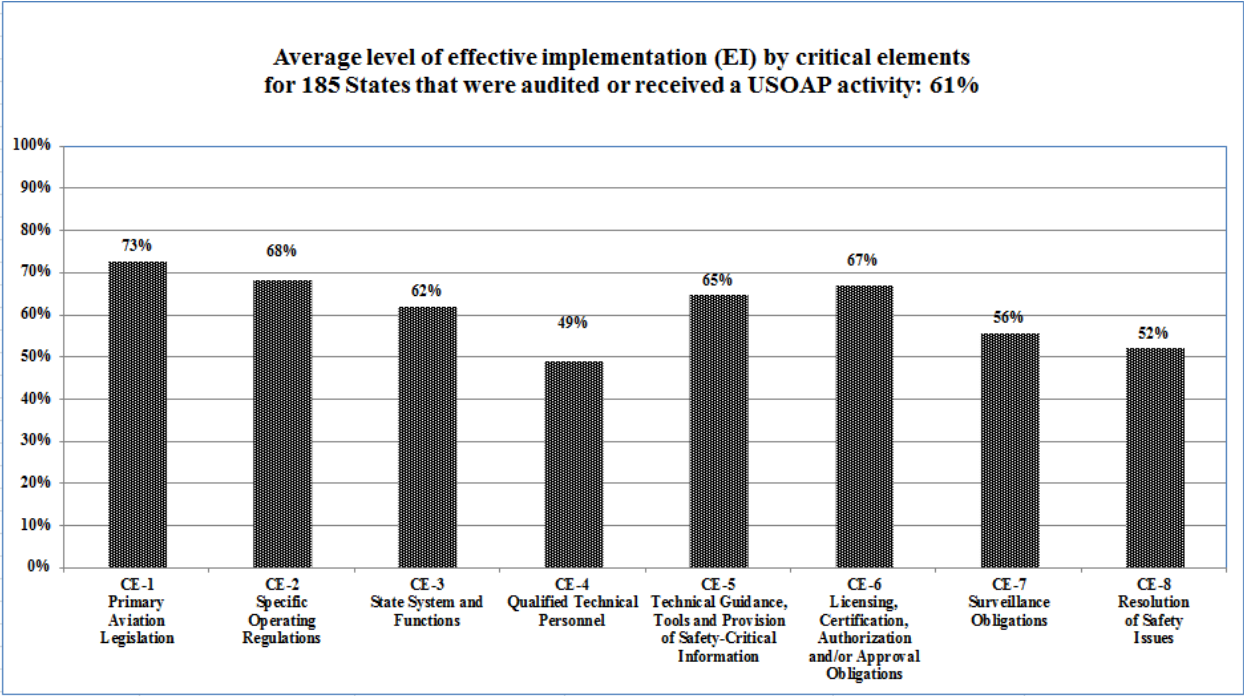| Activity	Planned/Conducted	Comments
3. Training		
3.1 ***Training of Auditor and Subject Matter Expert Nominees*** Prepare aviation experts from States or recognized international/regional organizations as nominees as a prerequisite to be nominated and further trained as auditors and subject matter experts to conduct USOAP CMA audits and ICVMs.	Sixty-two nominees for training of auditors and subject matter experts took the USOAP CMA CBT in 2015. As of December 2015 and since the launch of the CBT in 2011, 326 participants from sixty-seven States and twelve international/regional organizations have taken the CBT as a prerequisite for USOAP auditor and/or ICVM subject matter expert training. The USOAP CMA roster now includes a total of ninety-eight USOAP auditors and/or ICVM experts.	States and recognized organizations are called upon to nominate experts for secondment to ICAO on a long- or short-term basis in support of the USOAP CMA as auditors and subject matter experts. During 2015, France, Malaysia, Republic of Korea and Singapore continued to provide long-term secondments to support the USOAP CMA.
3.2 ***Familiarization Training for State Employees*** Provide training for National Continuous Monitoring Coordinators (NCMCs) and familiarize States' safety oversight employees with USOAP CMA methodology and activities.	As of December 2015 and since the launch of the CBT in 2011, 489 participants from ninety States and twelve 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 to prepare for an upcoming USOAP CMA activity.

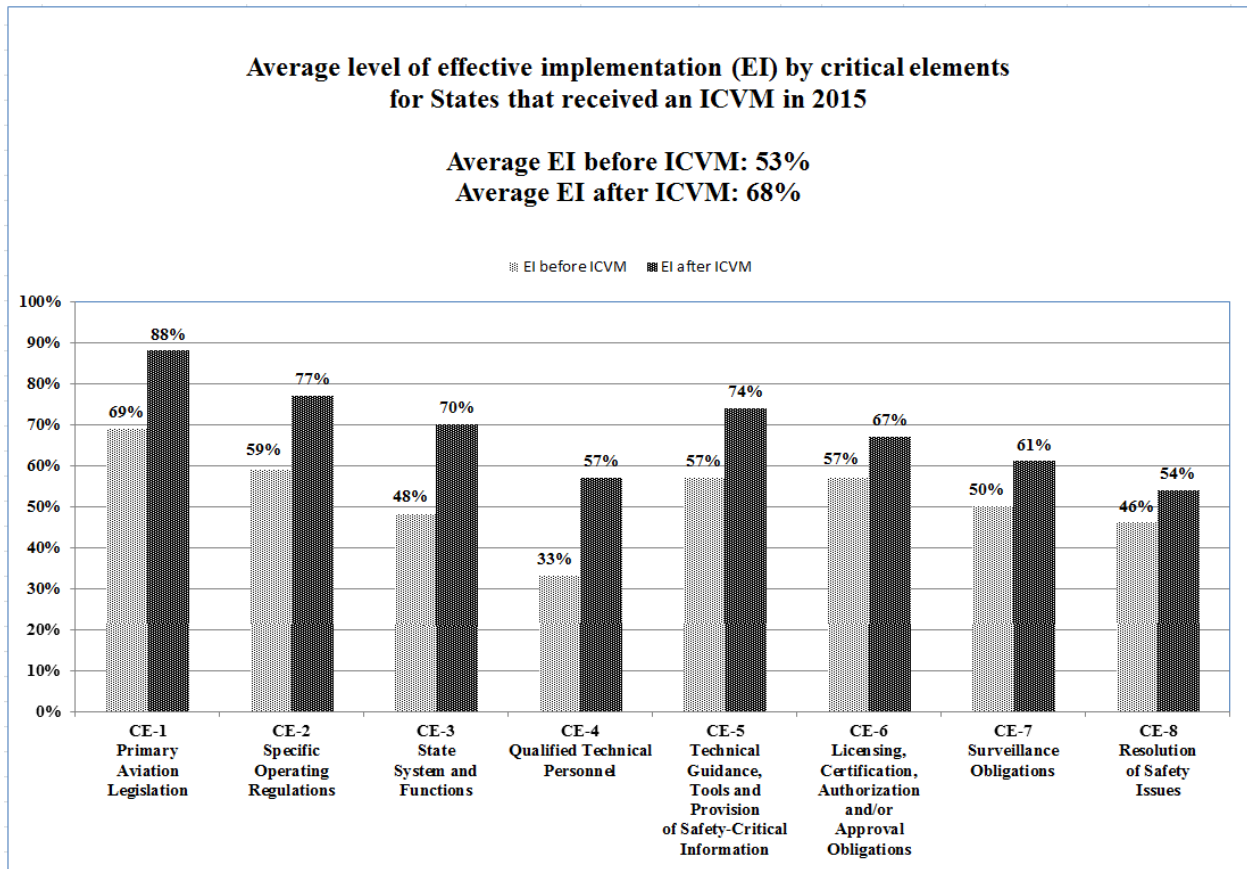|	Activity	Planned/Conducted	Comments
3.3	**_Seminars/ Workshops_** Assist States in their participation in USOAP CMA and, particularly, preparation for an upcoming USOAP CMA activity.	Ten seminars/workshops were conducted with 298 participants from seventy-six States and nine international/regional organizations. Two seminars/workshops were budgeted and conducted by ICAO. One was hosted by the ICAO WACAF Regional Office in Dakar, Senegal for States in the WACAF Region and another was hosted by the Russian Federation in Moscow for the Commonwealth of Independent States (CIS). Eight seminars/workshops were conducted on a cost-recovery basis in: Australia, Austria, Fiji, Finland (hosted for EASA States), Kazakhstan, Kuwait, New Zealand [hosted for the Pacific Aviation Safety Office (PASO) States] and Singapore (including a few neighbouring States).	Since the transition period and launch of USOAP CMA, seminars/workshops have been conducted in all ICAO regions. Currently, ICAO budgets for and conducts two seminars/workshops per year among Regions on a rotating basis.

— — — — — — — — — —

APPENDIX B
IMPROVEMENTS IN STATES' RESULTS
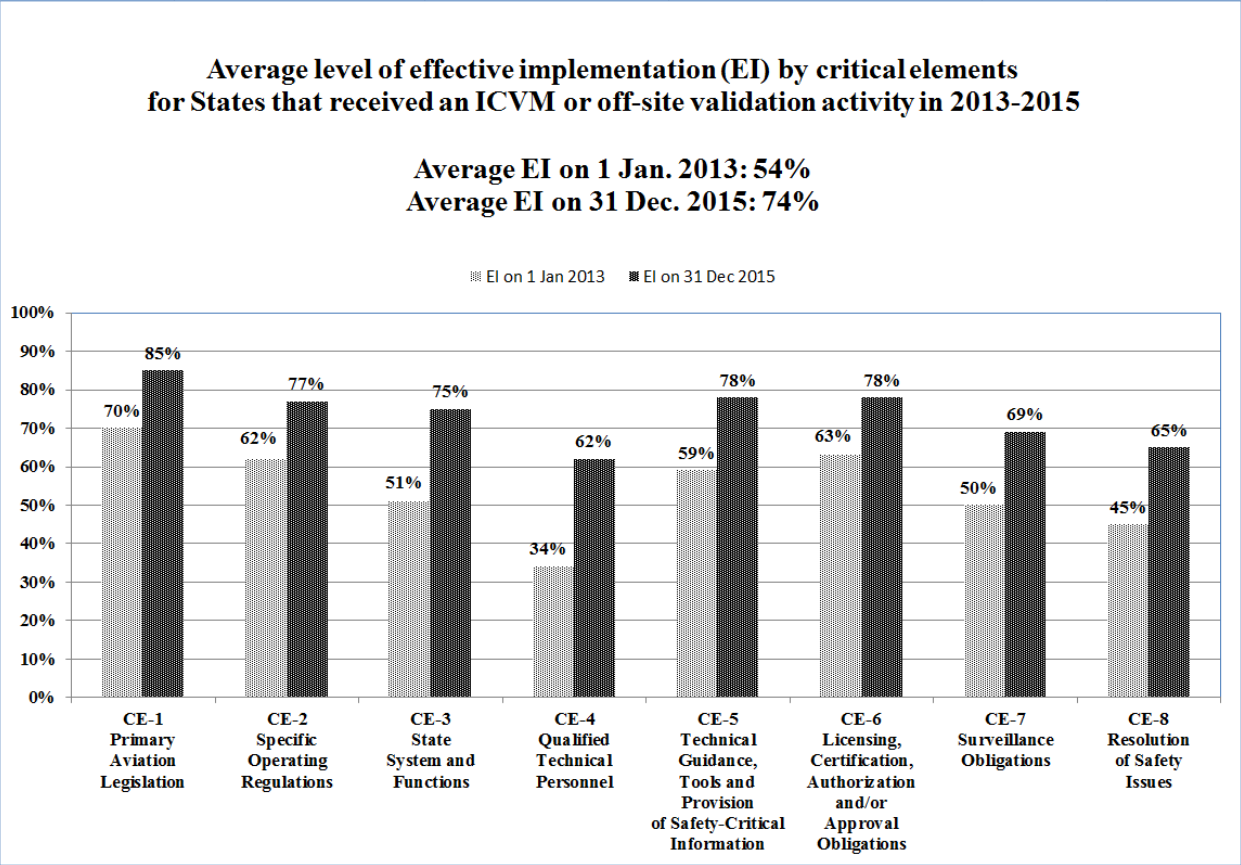
The graphs below outline some of the improvements in States' results that have been achieved through USOAP CMA activities as of 31 December 2015.

Average level of effective implementation (EI) by critical elements
for 185 States that were audited or received a USOAP activity: 61%

Figure B-1. **Average Global Level of Effective Implementation (EI)**

Average level of effective implementation (EI) by critical elements for States that received an ICVM in 2015

Average EI before ICVM: 53%
Average EI after ICVM: 68%

Figure B-2. **Average Level of Effective Implementation (EI) for ICVMs in 2015**

Average level of effective implementation (EI) by critical elements for States that received an ICVM or off-site validation activity in 2013-2015

Average EI on 1 Jan. 2013: 54%
**Average EI on 31 Dec. 2015: 74%**

Figure B-3. **Improvement in Effective Implementation (EI) for States that received an ICVM or Off-site Validation Activity from 1 January 2013 (launch of CMA) to 31 December 2015**

— — — — — — — — — — —

APPENDIX C
PROGRESS IN CAP IMPLEMENTATION

The graph in figure C below outlines the level of implementation of Corrective Action Plans (CAPs) across ICAO regional office accreditation areas, as reported by States on the CMA Online Framework.
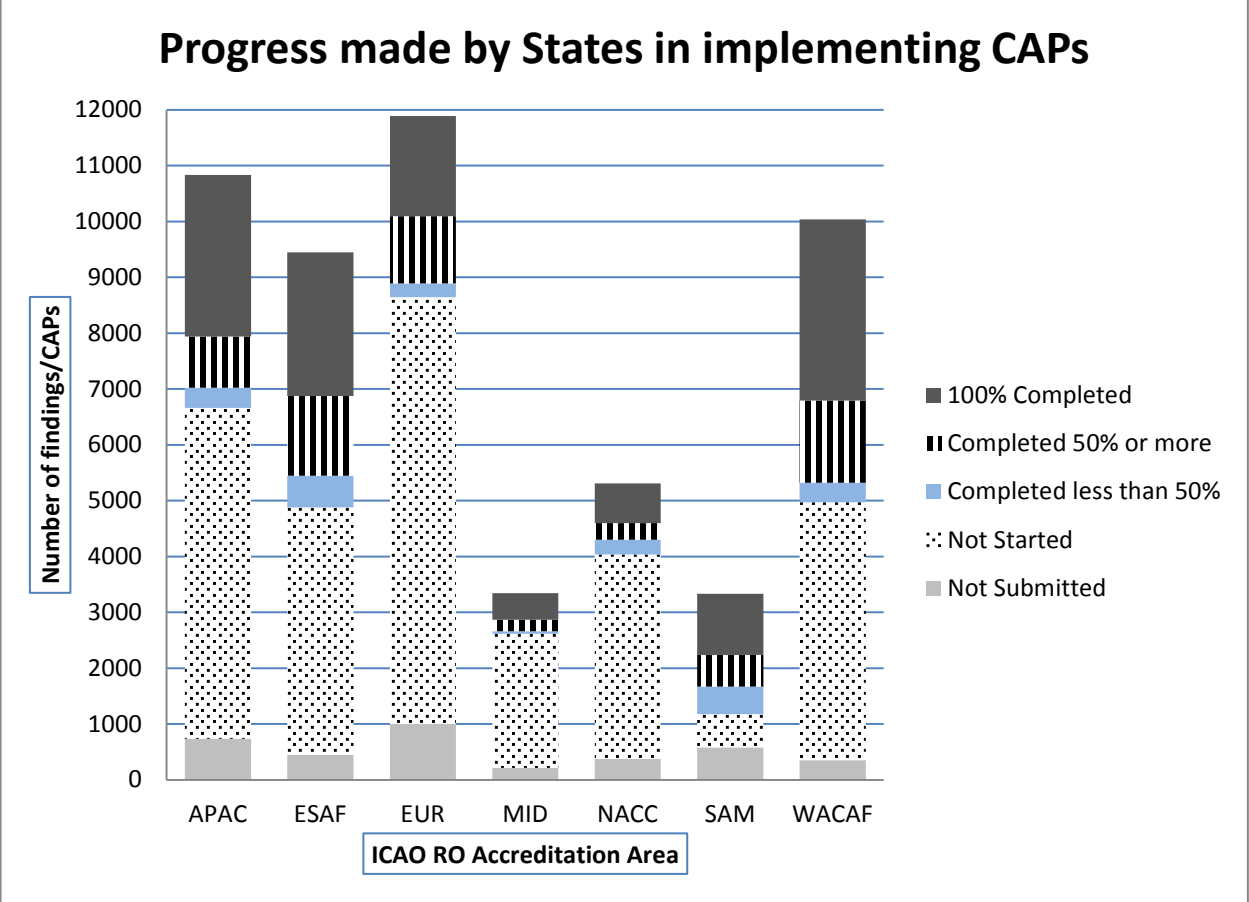
Figure C: **Progress made by States in implementing Corrective Action Plans (CAPs) by ICAO RO Accreditation Areas (as reported by States on the CMA Online Framework)**

— — — — — — — — — — —

ICAO   STATE SAFETY BRIEFING

Regional Safety Briefing

RASG-PA

Automatically Generated by ICAO/ANB 2016-05-30

Dashboard

Indicator	Value
State Safety Oversight - Group Average *Average USOAP Overall EI(%)*	**69.29%**
State Safety Oversight - State Levels *Percentage of States with USOAP Overall EI above 60%*	**61.76%**
Significant Safety Concerns (SSCs) *Number of SSCs*	**1**
Accident Rate *Number of accidents per mil. departures over preceding 5 years*	**3.18**
IOSA - Airlines *Number of IOSA certified airlines in the region*	**89**
IOSA - State Levels *Percentage of States with IOSA certified airlines*	**64.71%**
EU Safety List *Number of States with restrictions*	**1**
FAA IASA *Number of States rated as Category 2*	**2**
PBN Implementation - Runways *Percentage of instrument runways with PBN approaches*	**82.59%**
PBN Implementation - State Levels *Percentage of States having PBN approaches on all instrument runways*	**38.24%**

ICAO   STATE SAFETY BRIEFING

ICAO   STATE SAFETY BRIEFING

Universal Safety Oversight Audit Programme (USOAP)
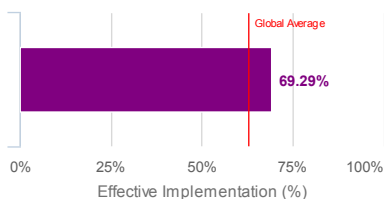
Global USOAP Results
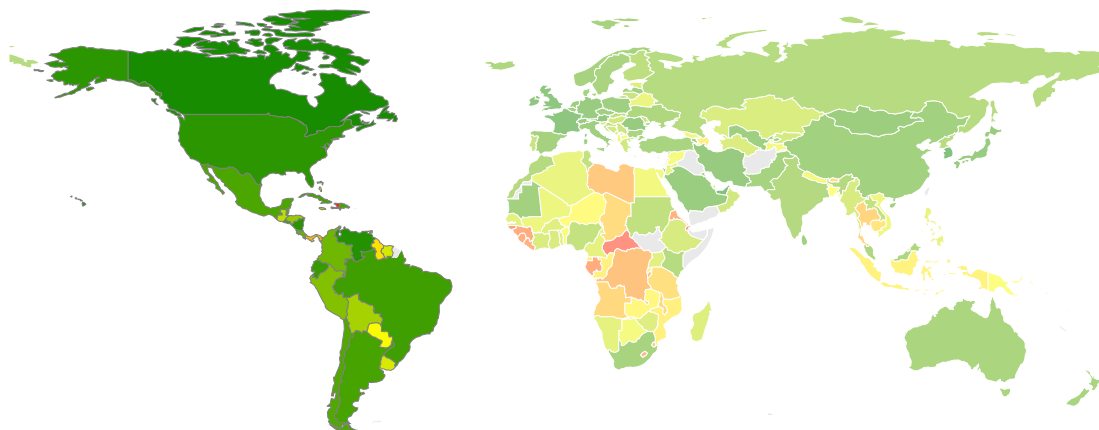
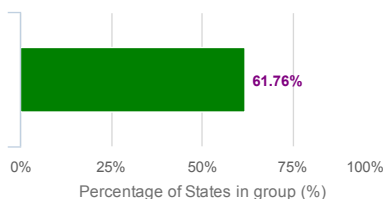RASG-PA contains 34 States. All States in that region have received a USOAP CMA audit.

The current average USOAP score for States in RASG-PA is 69.29% which is above the world average of 62.87%.

61.76% of the States in RASG-PA have achieved the target of 60% EI, as suggested by the Global Aviation Safety Plan (GASP)
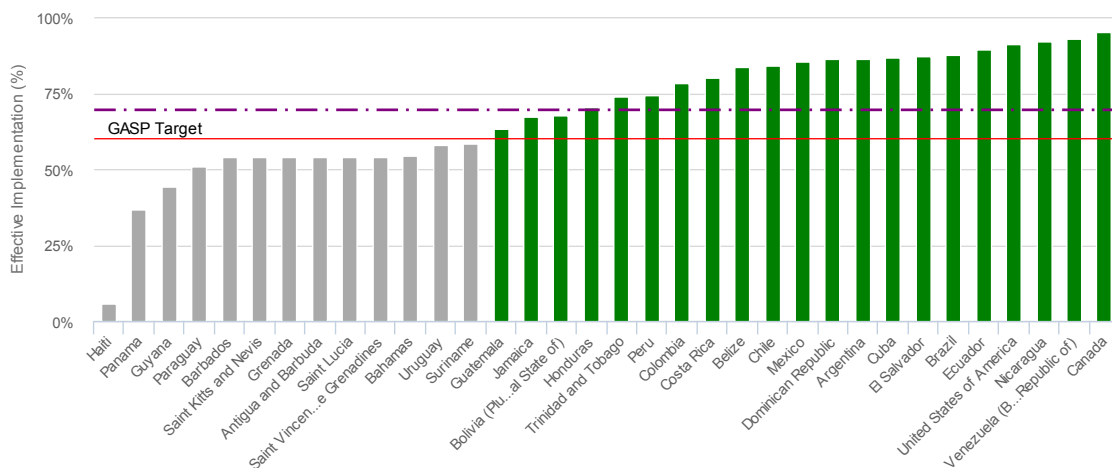
Overall EI

Global Average

69.29%

0%   25%   50%   75%   100%
Effective Implementation (%)

States above 60% EI

61.76%

0%   25%   50%   75%   100%
Percentage of States in group (%)

USOAP Audit Results

GASP Target

Effective Implementation (%)

Haiti, Panama, Guyana, Paraguay, Barbados, Saint Kitts and Nevis, Grenada, Antigua and Barbuda, Saint Lucia, Saint Vincen...e Grenadines, Bahamas, Uruguay, Suriname, Guatemala, Jamaica, Bolivia (Plu...al State of), Honduras, Trinidad and Tobago, Peru, Colombia, Costa Rica, Belize, Chile, Mexico, Dominican Republic, Argentina, Cuba, El Salvador, Brazil, Ecuador, United States of America, Nicaragua, Venezuela (B...Republic of), Canada

ICAO STATE SAFETY BRIEFING

USOAP Results by Area and Critical Element

6 areas and 6 critical elements are above the target of 60% EI.

EI by Area

EI by Critical Element
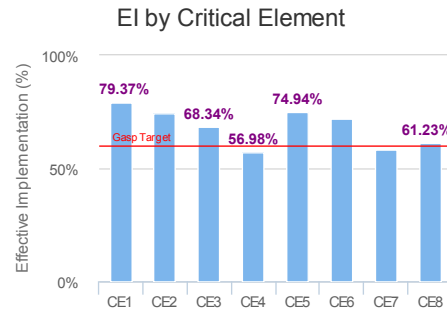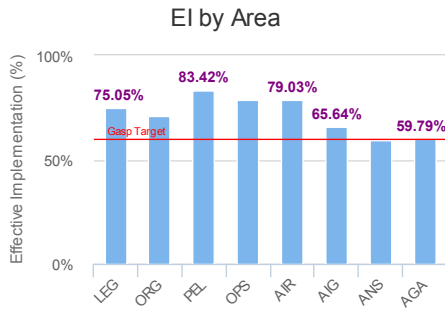
Significant Safety Concerns (SSCs)

SSCs indicate that a State is not providing sufficient safety oversight to ensure the effective implementation of applicable ICAO Standards. SSCs may be issued in the area of operations, air navigation services, aerodromes, airworthiness or licensing.

RASG-PA has 1 State with 1 SSC.

State	SSCs	SSC Areas				
		Airworthiness	**Operations**	**Licensing**	**Aerodromes**	**Air Navigation**
Haiti	❶		✖			

Safety Partner Programs

The Federal Aviation Administration (FAA) rates States through their International Aviation Safety Audit (IASA) programme. This categorization does not allow air carriers from Thailand to operate to the United States of America.

In RASG-PA, 2 States are rated Category 2: Barbados, Uruguay

The European Commission can decide to ban certain airlines from operating in European airspace, if they are found to be unsafe and/or they are not sufficiently overseen by their authorities.

In RASG-PA, 1 State has operational restrictions with regard to European airspace: Suriname
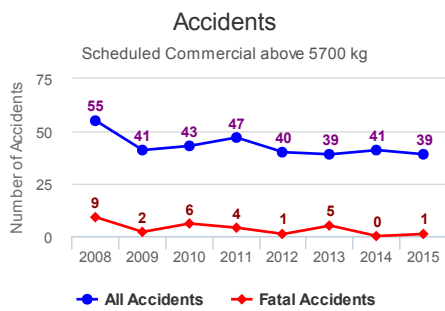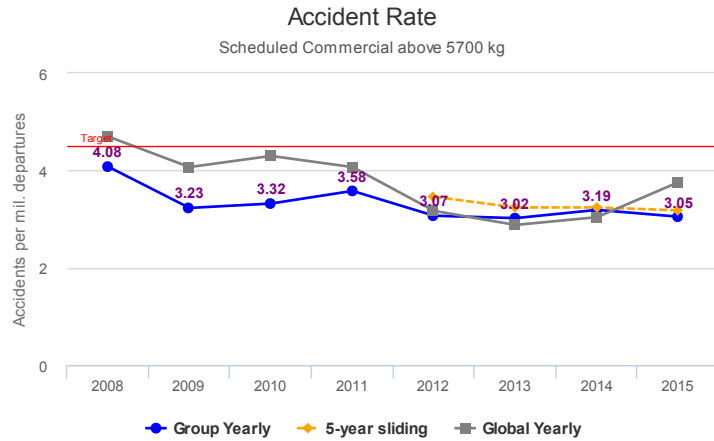
ICAO   STATE SAFETY BRIEFING

Accident Statistics

RASG-PA had 1 fatal accident on scheduled commercial flights with aircraft over 5.7t in 2014. In total, those accidents caused 2 fatalities.

RASG-PA has an accident rate of **3.05** accidents per million departures in 2014 trending down.

To be in line with the global average and taking into account the traffic volume of RASG-PA, the average accident rate for RASG-PA should be between 3.12 and 4.52. The current average accident rate for RASG-PA is **3.18** which is in line with the global average.

Accident Rate
Scheduled Commercial above 5700 kg

Accidents
Scheduled Commercial above 5700 kg

Fatalities
Scheduled Commercial above 5700 kg

ICAO | STATE SAFETY BRIEFING

Regional Priorities

The States are prioritized by considering the level of implementation (EI) as well as the related activity at risk in the areas of operations, air navigation and support functions. The profile of each State is benchmarked against all other ICAO Member States. Priority is given to the least performing areas in ascending order.
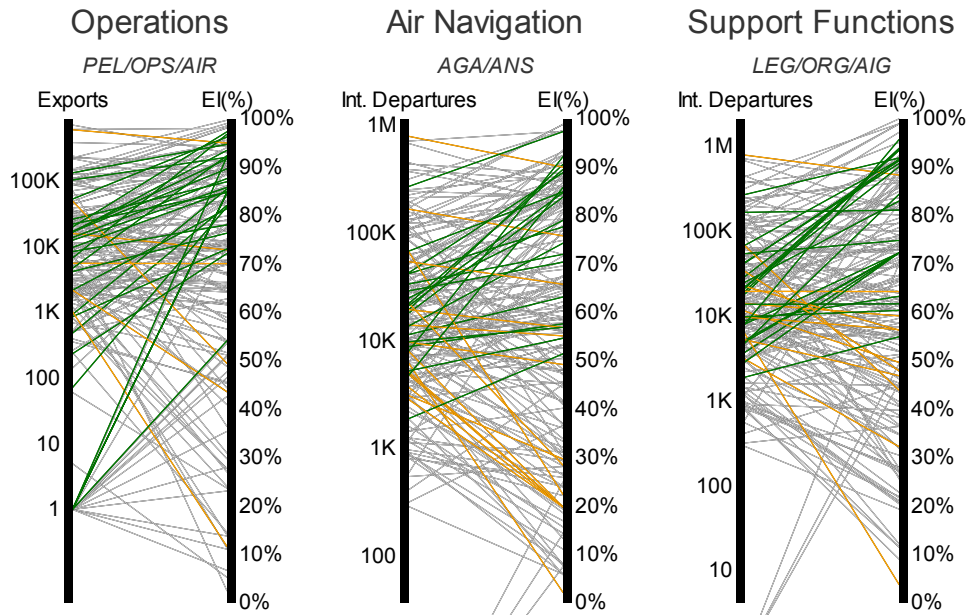
Top-5 States in each Priority area

Operations	Air Navigation	Support Functions
Haiti *Safety margin: -48.55%*	**Panama** *Safety margin: -50.24%*	**Haiti** *Safety margin: -51.93%*
Panama *Safety margin: -33.6%*	**Haiti** *Safety margin: -47.46%*	**Panama** *Safety margin: -29.89%*
Paraguay *Safety margin: -21.03%*	**Bahamas** *Safety margin: -33.54%*	**Peru** *Safety margin: -20.59%*
Bolivia (Plurinational State of) *Safety margin: -3.41%*	**Antigua and Barbuda** *Safety margin: -32.23%*	**Guyana** *Safety margin: -18.13%*
United States of America *Safety margin: -2.75%*	**Saint Lucia** *Safety margin: -27.93%*	**Honduras** *Safety margin: -10.61%*