



INTERNATIONAL CIVIL AVIATION ORGANIZATION

A United Nations Specialized Agency

**CAR/SAM Planning and Implementation Regional Group
(GREPECAS)
MET Programme Projects for the CAR Region Meeting**

Overview of the USOAP CMA

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Monitoring and Oversight (MO)



ICAO Air Navigation Bureau (ANB)



Monitoring & Oversight (MO)



Continuous Monitoring
(Online Framework)

AUGUST 2013

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31									

Planning and
Scheduling



On-site Activities



Off-site Activities



Reports, Analyses
and Working Papers



Training and
Workshops

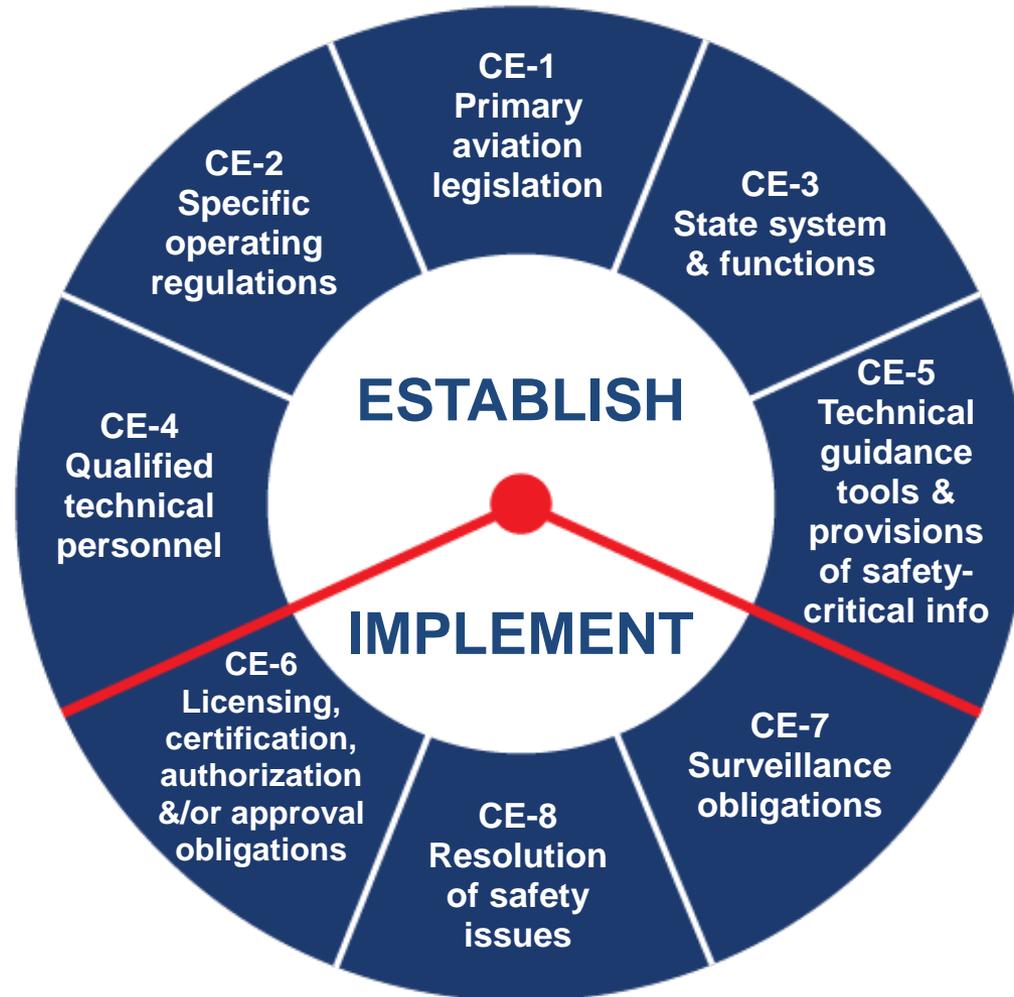


Critical Elements of a State's Safety Oversight System

ICAO carries out audits and other monitoring activities to determine the safety oversight capabilities of its Member States by:

- Assessing their effective implementation of the 8 CEs in 8 audit areas (i.e. LEG, ORG, PEL, OPS, AIR, AIG, ANS and AGA) through Protocol Questions (PQs); and
- Verifying the status of the Member States' implementation of:
 - Safety-related ICAO Standards and Recommended Practices (SARPs);
 - Associated procedures; and
 - Guidance material.

Critical Elements (CEs)



The definitions of the eight CEs of a State's safety oversight system are found in Annex 19, Appendix 1 (2nd edition, July 2016).

Guidance on the eight CEs is provided in the *Safety Oversight Manual, Part A — The Establishment of a State's Safety Oversight System* (Doc 9734).

Note. — An advance unedited English version of Doc 9734, Part A has been published in October 2017 to reflect Amendment 1 of Annex 19, Appendix 1.

USOAP CMA Audit Areas and Protocol Questions (PQs)

USOAP CMA Audit Areas



Primary aviation legislation and
civil aviation regulations (LEG)

Civil aviation organization
(ORG)

Personnel licensing and
training (PEL)
Annexes 1 and 19

Aircraft operations (OPS)
Annexes 6, 9, 18, 19 and
PANS-OPS

Airworthiness of aircraft
(AIR)
Annexes 6, 7, 8, 16 and 19

Aircraft accident and
incident investigation (AIG)
Annexes 13 and 19

Air navigation services (ANS)
Annexes 2, 3, 4, 5, 10, 11, 12,
15, 19 and PANS-ATM

Aerodromes and ground
aids (AGA)
Annexes 14 and 19

Protocol Questions (PQs)

- Primary tool used to assess States' safety oversight capabilities, for each CE.
- Enable standardization in the conduct of USOAP CMA activities.
- Percentage of “Satisfactory” PQs is reflected in the EI.
- Evidence-based approach:
 - **Show me.**
 - **Lack of evidence or lack of sufficient evidence = PQ status will or remains N/S.**
- N/S PQ generates a finding and since 2014, each finding is PQ-specific.

PQ — Example



PQ No.	Protocol Question	Guidance for Review of Evidence	ICAO References	CE
4.129	Has the State promulgated regulations for AOC applicants to establish procedures to ensure that the flight manual is updated by implementing changes made mandatory or approved by the State of Registry?	Verify the establishment and implementation of: a) relevant State regulations; b) applicable certification process; and c) operations inspectors' procedures.	STD A6 Part I, 11.1 Part III, Section II, 9.1 GM A6 Part I, Att. E Part III, Att.	CE-2
4.103	Is the organization of the applicant clearly defined? a) duties, responsibilities and lines of reporting are clearly delineated and duly documented? b) functional tasks and lines of reporting are clearly delineated and duly documented?	1) Verify the establishment and implementation of: a) relevant State regulations; b) applicable certification process; and c) operations inspectors' procedures. 2) Review exchange of letters with the applicant. 3) Verify that the safety management, quality assurance management and emergency management systems have been: a) established; b) documented; and c) implemented.	STD A6 GM Doc 8335 Part II, C2 Part III, C5	CE-6

PQ asked by auditor

Examples of evidence to be presented by State

ICAO References

CE number associated with PQ

PQ Amendment



- MO revises and updates PQs on a periodic basis to:
 - a) reflect the latest changes in ICAO provisions; and
 - b) harmonize and improve PQ references and content.
- Revision of PQs incorporates inputs from:
 - a) States;
 - b) ICAO ANB;
 - c) ICAO ROs;
 - d) USOAP mission team members; and
 - e) external stakeholders.

2017 Edition of the PQs



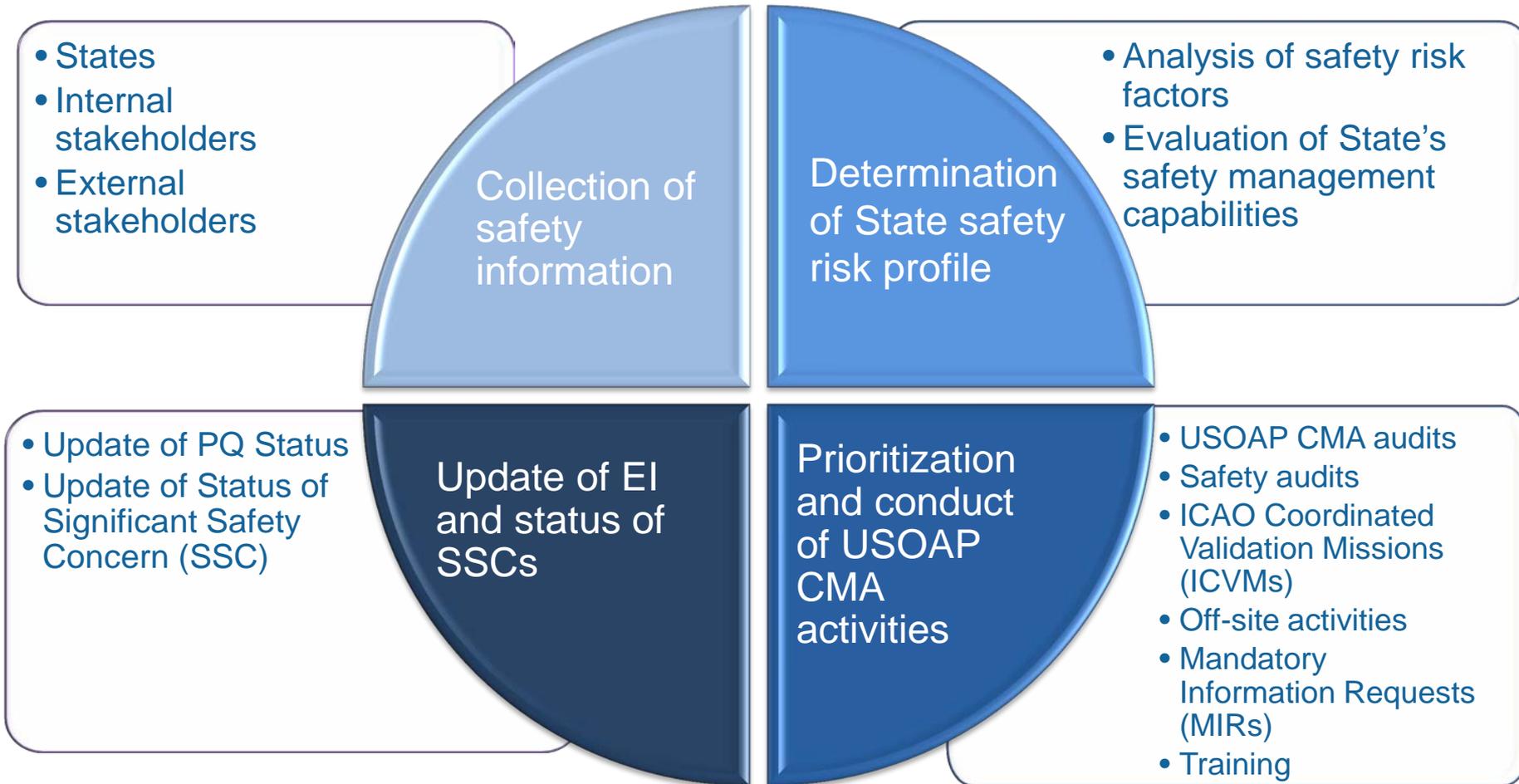
- The 2017 edition of the PQs was posted in November 2017 in the “CMA Library” on the OLF.
(See EB 2018/04, 19 January 2018.)
- The Library copy for each audit area includes an Introduction, Guidelines and Summary of Amendments.
- The 2017 edition is applicable for all USOAP CMA activities starting 1 June 2018.

CMA Library



USOAP CMA Components

USOAP CMA Components



Main Activities under USOAP CMA



- **CMA audit:** On-site, to conduct a systematic and objective assessment of a State's safety oversight system. Can be a full scope or limited scope audit.
- **ICVM:** On-site, to collect and assess evidence of a State's effective correction of previously identified findings (**in one or more audit areas**). Collected evidence is reviewed and validated at ICAO HQ.
- **Off-site validation activity:** to assess a State's effective corrective actions addressing previously identified findings related to PQs not requiring an on-site activity.

A More Recent Type of Validation Activity...



- Off-site validation report resulting from on-site reviews.
- A USOAP CMA limited scope on-site activity, integrated within a scheduled mission in a State by ICAO or its safety partners. During an IVA, SMEs sample, collect and assess evidences provided by the State for identified PQs demonstrating effective implementation of corrective actions to address findings previously identified by ICAO. ICAO validates the collected evidences and information.
- Safety partner: Organizations which may provide technical support to USOAP CMA activities on the basis of a formal agreement with ICAO (e.g. EASA).

Six Criteria for a Good CAP (“RCDSRC”)



- 1) **Relevant:** CAP addresses the *issues* and *requirements* related to the finding and corresponding PQ and CE.
- 2) **Comprehensive:** CAP is *complete* and includes *all elements or aspects* associated with the finding.
- 3) **Detailed:** CAP outlines implementation process using *step-by-step approach*.
- 4) **Specific:** CAP identifies *who will do what, when* and in coordination with other entities, if applicable.
- 5) **Realistic:** In terms of *contents* and *implementation timelines*.
- 6) **Consistent:** In relation to *other CAPs* and with the *State's self-assessment*.

Update of EI



EI calculation:

$$\text{Overall EI (\%)} = \frac{\text{Number of Satisfactory PQs}}{\text{Total Number of Applicable PQs}} \times 100$$

Update of EI



- The validation of collected safety information enables ICAO to continuously update a State's EI.
- State's EI is reported on the Online Framework (OLF) and on iSTARS 3.0, i.e. SPACE.

Significant Safety Concerns (SSCs)

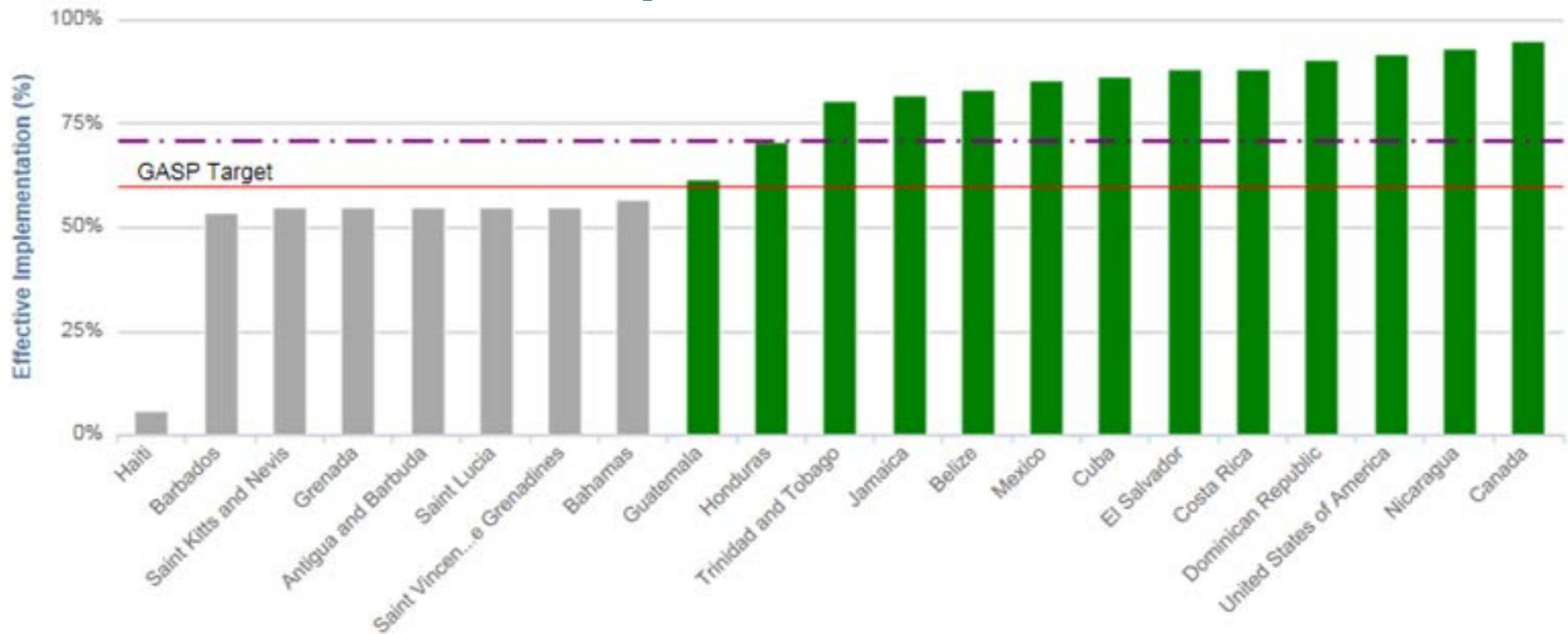


Definition of an SSC

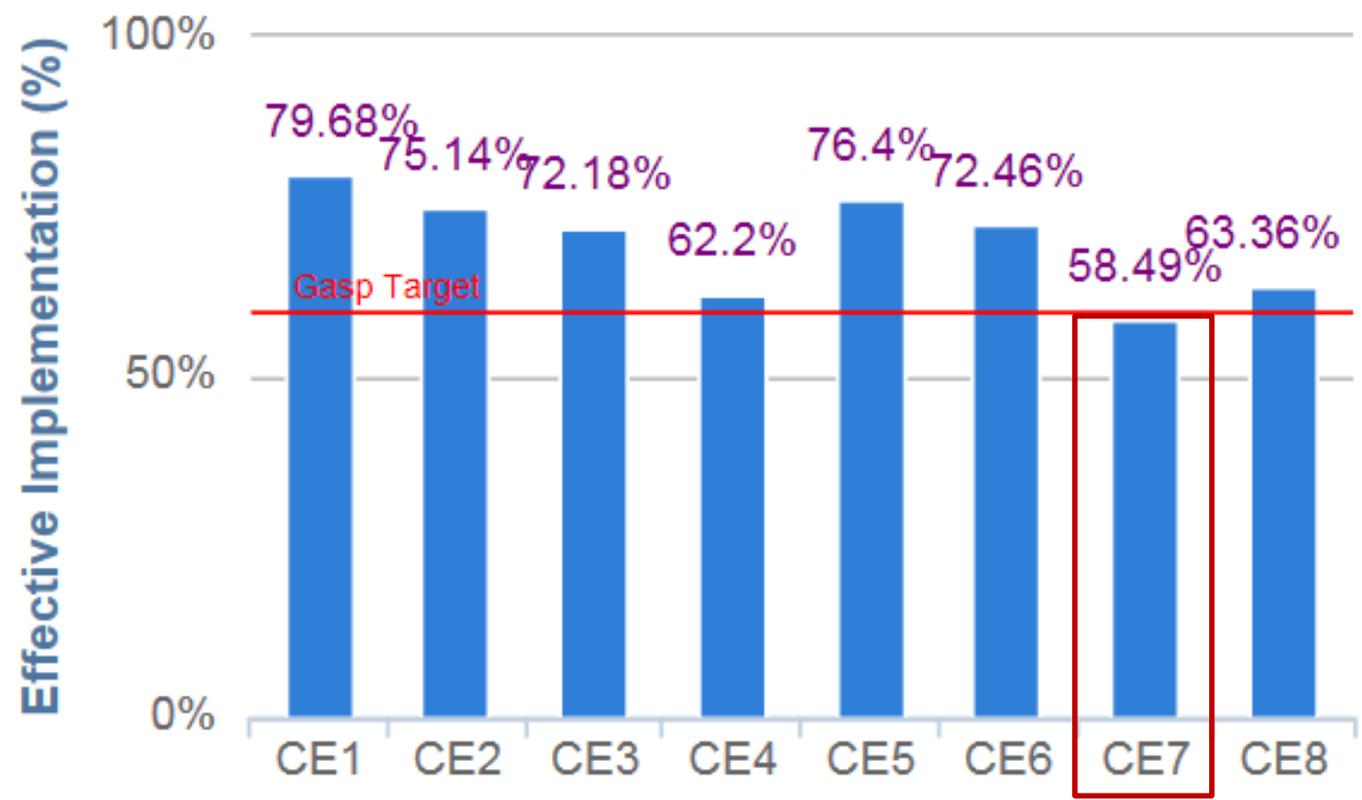
“An SSC occurs when the audited State allows the holder of an authorization or approval to exercise the privileges attached to it, although the minimum requirements established by the State and by the Standards set forth in the Annexes to the Chicago Convention are not met, resulting in an immediate safety risk to international civil aviation.”

Reference: *EB 2010/7* dated 19 February 2010

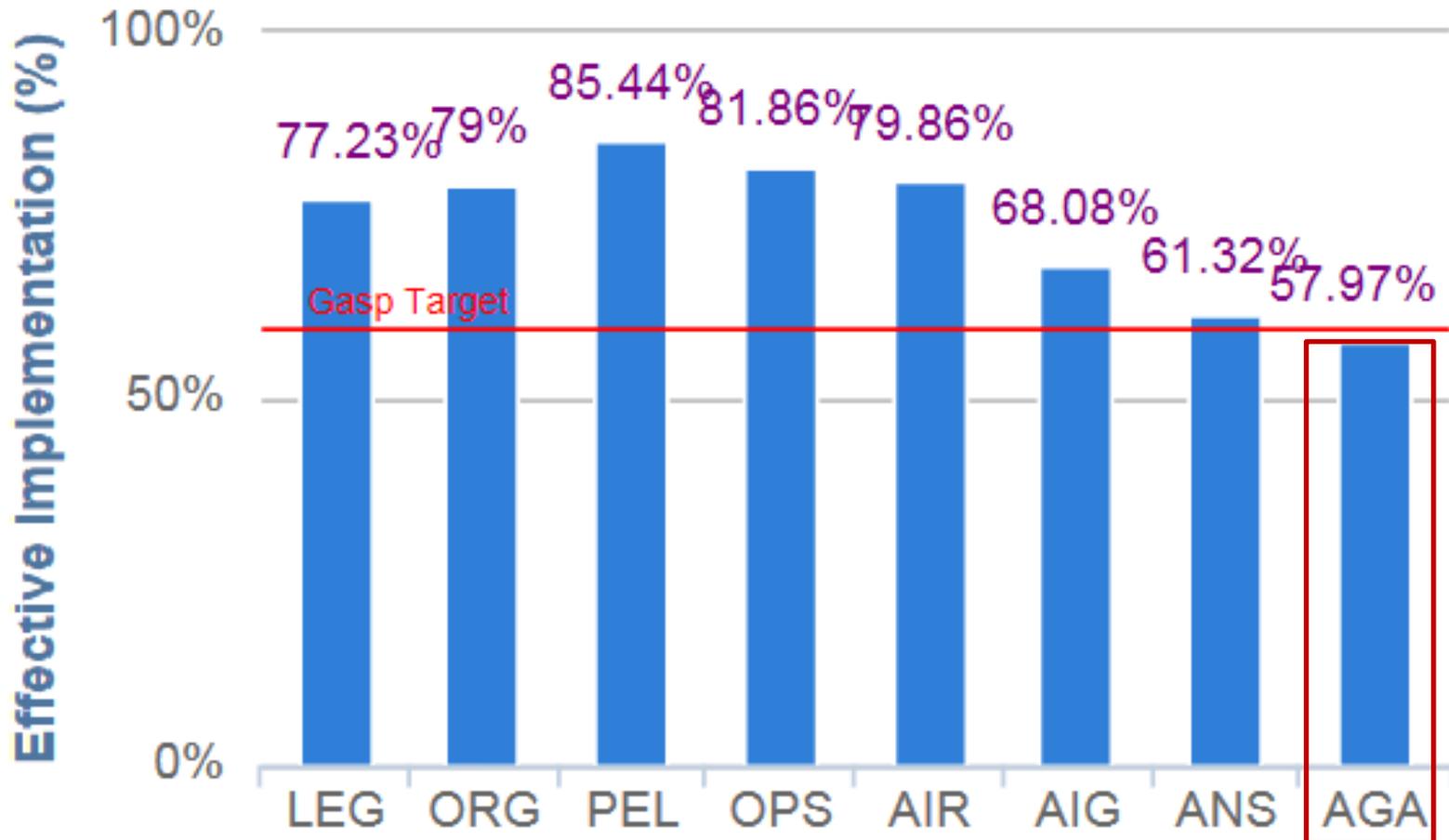
USOAP REGIONAL RESULTS NAM/CAR REGIONS



REGIONAL EI BY CRITICAL ELEMENT (CE)

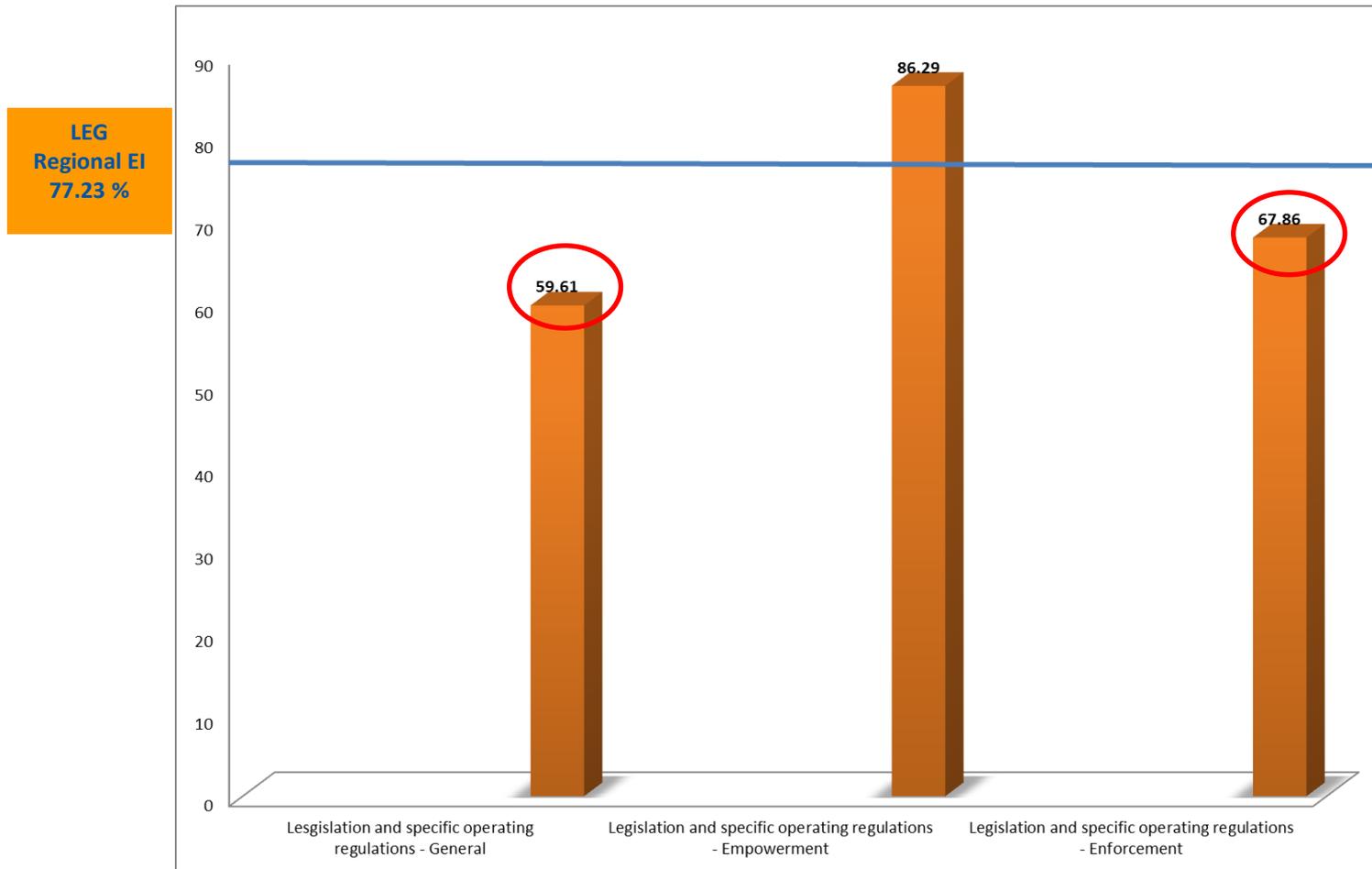


REGIONAL EI BY AUDIT AREA



REGIONAL PERFORMANCE ANALYSIS IN THE NAM/CAR REGIONS PER AUDIT AREA

Primary aviation legislation and civil aviation regulations (LEG)



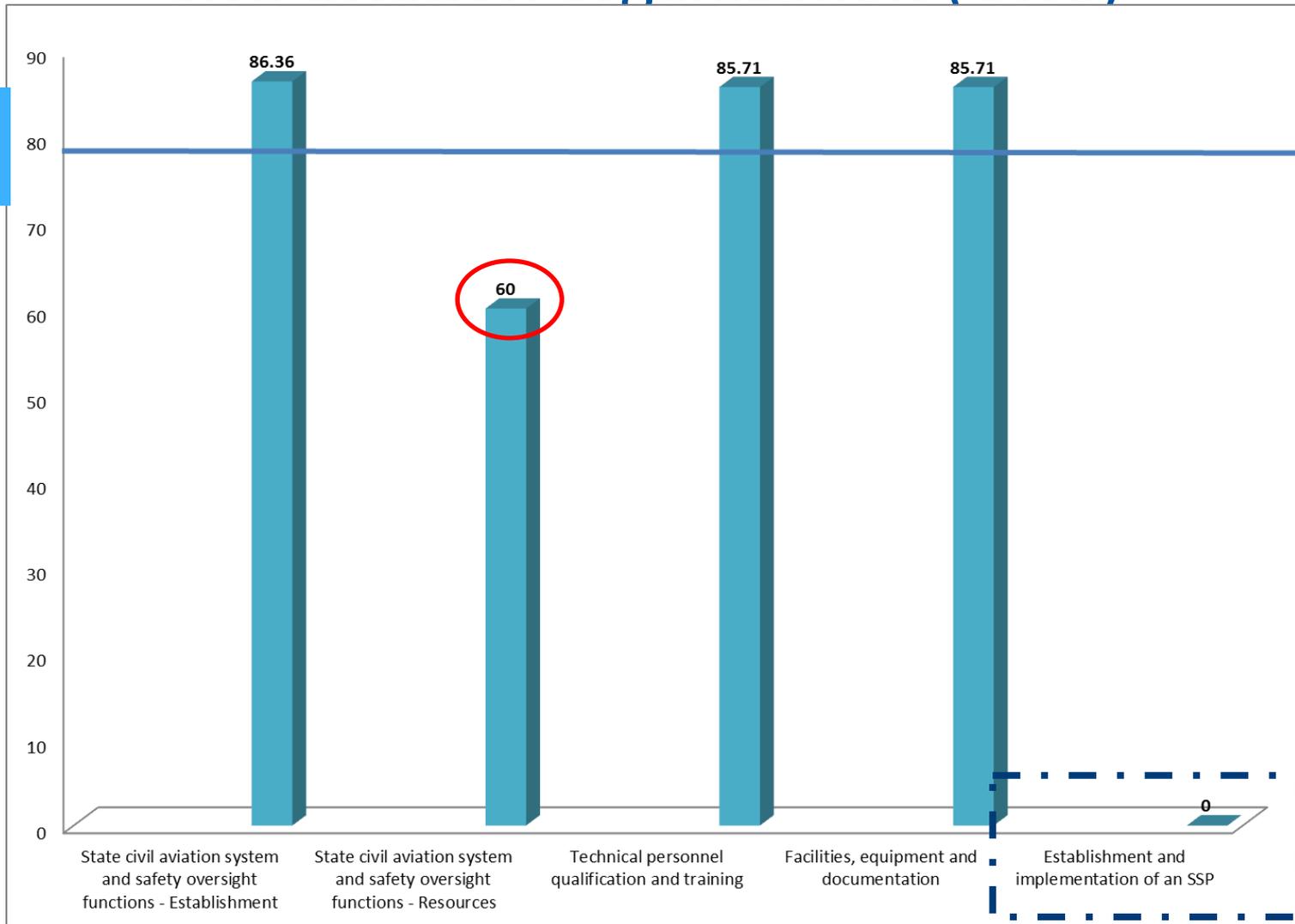
HIGHLIGHTS OF ISSUES LEG AREA

Legislation and specific operating regulations – General:

- 48% of States have not established a process for determining the need to amend its specific operating regulations or its primary aviation legislation, taking into consideration ICAO provisions and their amendments.
- 48% of States have not established procedures for identifying and notifying to ICAO differences between ICAO SARPs and its legislation and practices, if any.
- 53% of States' legal framework lack provisions for the granting of exemptions and/or have not established associated procedures for granting exemptions.
- 73% of States have not implemented provisions to reflect the transfer of the functions and duties as envisaged by Article 83 bis of the Chicago Convention.
- Only 3 States (14% of States) have established and implemented a process to ensure the identification and publication in the State's AIP of significant differences between the SARPs/PANS/SUPPS and the State's regulations and practices.

Civil aviation organization (ORG)

ORG
Regional EI
79 %

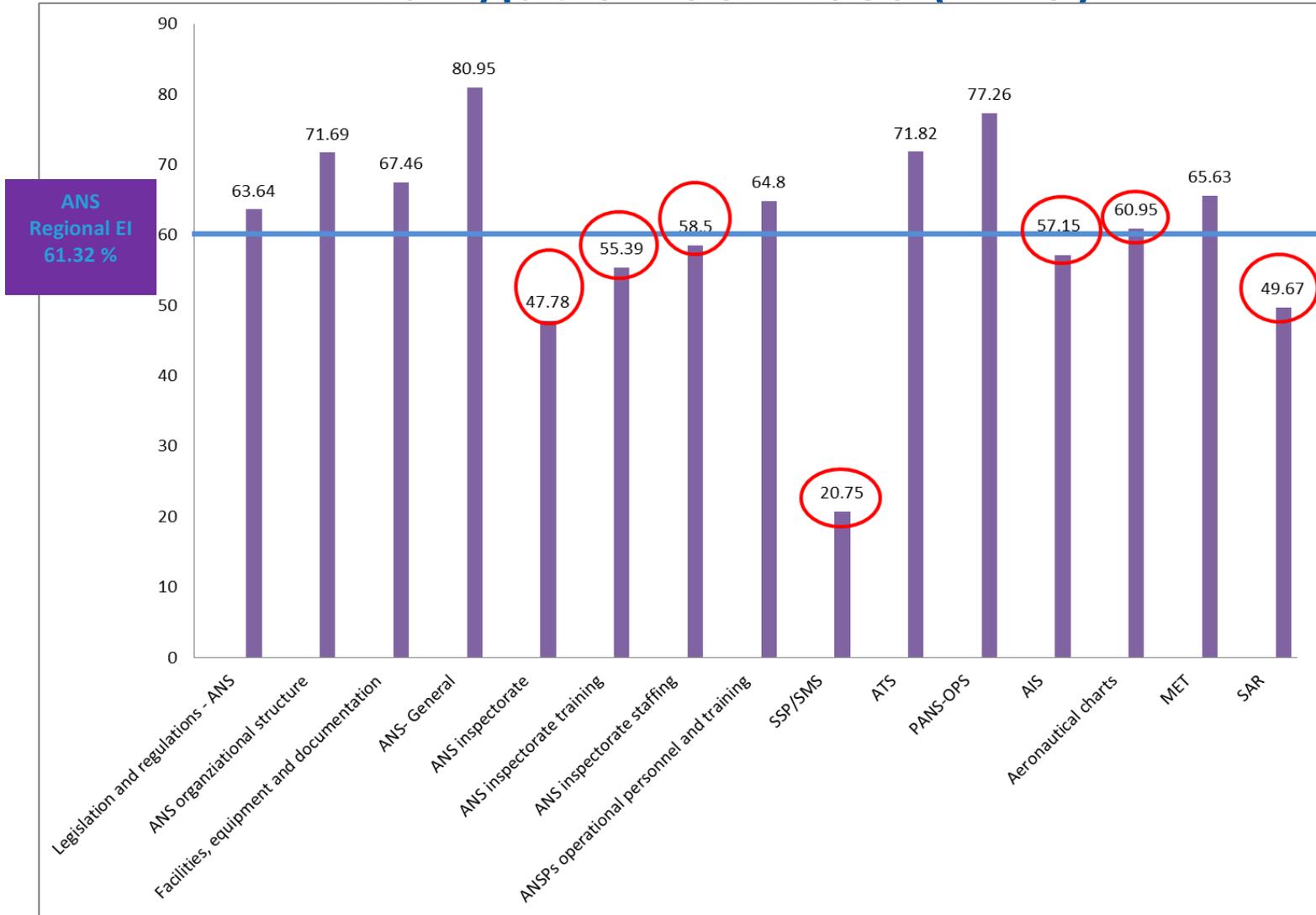


HIGHLIGHTS OF ISSUES ORG AREA

State civil aviation system and safety oversight functions – Resources and Establishment and implementation of an SSP:

- 53% of States have not established a mechanism to ensure that each safety oversight authority has sufficient personnel to meet its respective national and international obligations.
- No State has established and implemented an SSP.

Air navigation services (ANS)



HIGHLIGHTS OF ISSUES ANS AREA

ANS Inspectorate:

- 47% of States have not established and implemented a formal surveillance programme for the continuing supervision of the service provider responsible for air traffic service (ATS).
- 62% of States does not effectively conduct surveillance over its procedures specialists or service providers.
- 48% of States does not effectively conduct surveillance over the entity providing the AIS.
- 52% of States does not effectively conduct surveillance over the entity providing the cartographic service.
- 57% of States does not effectively conduct surveillance over the entity responsible for the maintenance and operation of CNS systems and facilities
- 57% of States does not effectively conduct surveillance over the entity providing the MET service
- 62 % of States does not effectively conduct surveillance over the rescue coordination centre (RCC) and, as appropriate, rescue sub-centre (RSC).

HIGHLIGHTS OF ISSUES ANS AREA

ANS Inspectorate Training:

- Most States have not established a formal training programme detailing the type of training to be provided to its ANS inspectors.
- Most States does not appropriately implement the training programme for the ANS inspectors.

ANS Inspectorate Staffing:

- A significant number of States does not employ a sufficient number of qualified technical staff to carry out its safety oversight tasks and regulatory functions.

SSP/SMS:

- Only 1 State ensures that the air traffic service (ATS) provider has established and implemented an SMS acceptable to the State.
- Only 2 States, as part of their surveillance programme, periodically assess ATS providers' SMS, including its hazard identification and safety risk management processes and its safety performance indicators (SPIs) and their relevant alert and target levels.

HIGHLIGHTS OF ISSUES ANS AREA

AIS:

- 76% of States does not ensure that a properly organized quality management system in the AIS has been established.

SAR:

- 48% of States have not established an entity which provides, on a 24-hour basis, SAR services within its territory and the areas where the State has accepted responsibility to provide SAR to ensure that assistance is rendered to persons in distress.
- 62% of States does not coordinate its SAR organization with those of neighbouring States.
- 48% of States does not ensured that each rescue coordination centre (RCC) and rescue sub-centre (RSC) employ sufficient workforce skilled in coordination and operational functions.



ICAO

North American
Central American
and Caribbean
(NACC) Office
Mexico City

South American
(SAM) Office
Lima

ICAO
Headquarters
Montréal

Western and
Central African
(WACAF) Office
Dakar

European and
North Atlantic
(EUR/NAT) Office
Paris

Middle East
(MID) Office
Cairo

Eastern and
Southern African
(ESAF) Office
Nairobi

Asia and Pacific
(APAC) Sub-office
Beijing

Asia and Pacific
(APAC) Office
Bangkok



THANK YOU