



**INTERNATIONAL CIVIL AVIATION ORGANIZATION**

*A United Nations Specialized Agency*

# **USOAP ANS inspectorate AIM/MET/CNS Audit Matters**

**Safety Oversight Air Navigation Services (ANS) Seminar  
(ICAO NACC Regional Office, Mexico City, Mexico, 12 to 16 May 2014)**

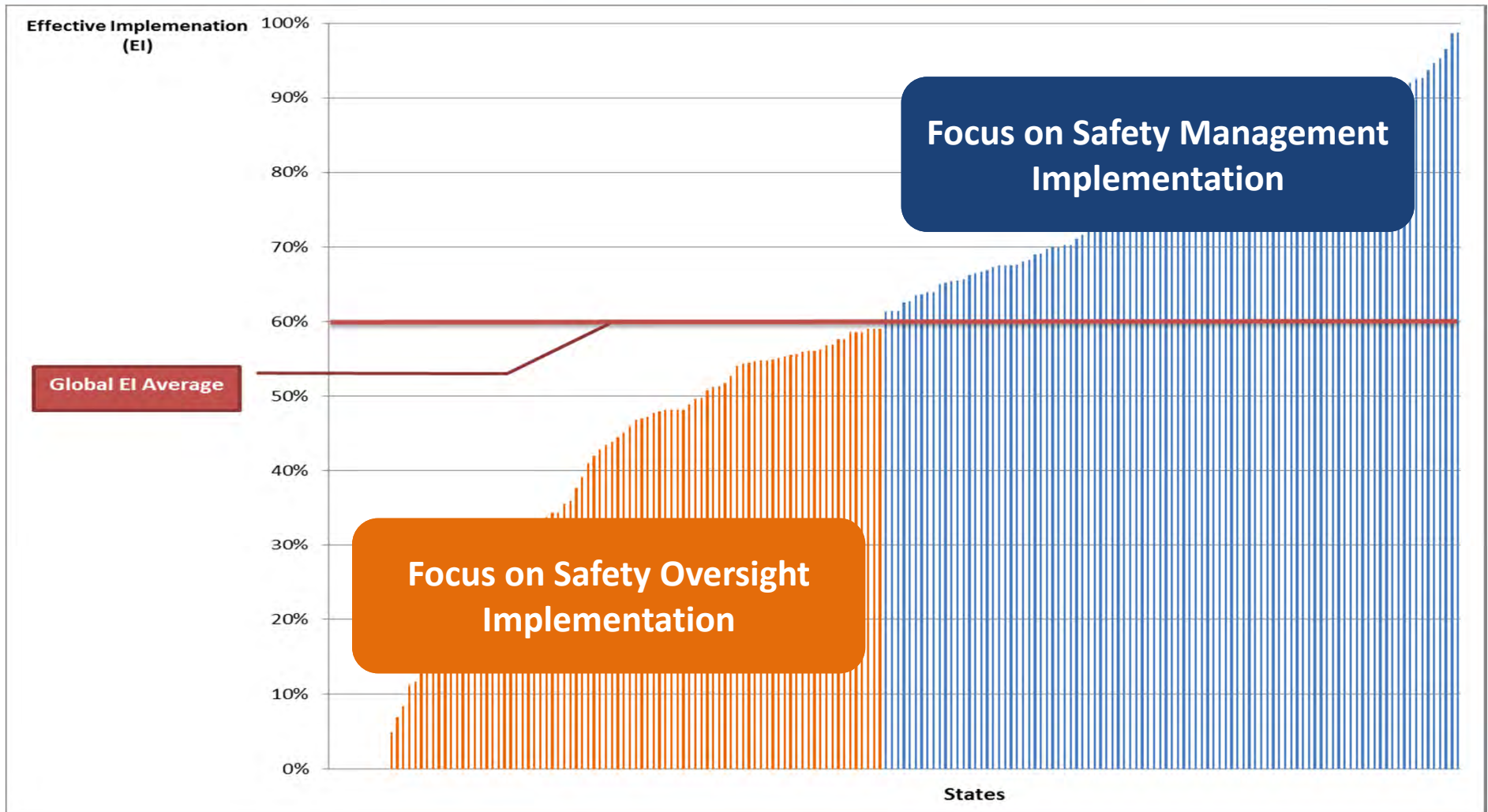
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ICAO NACC Office

# Outline

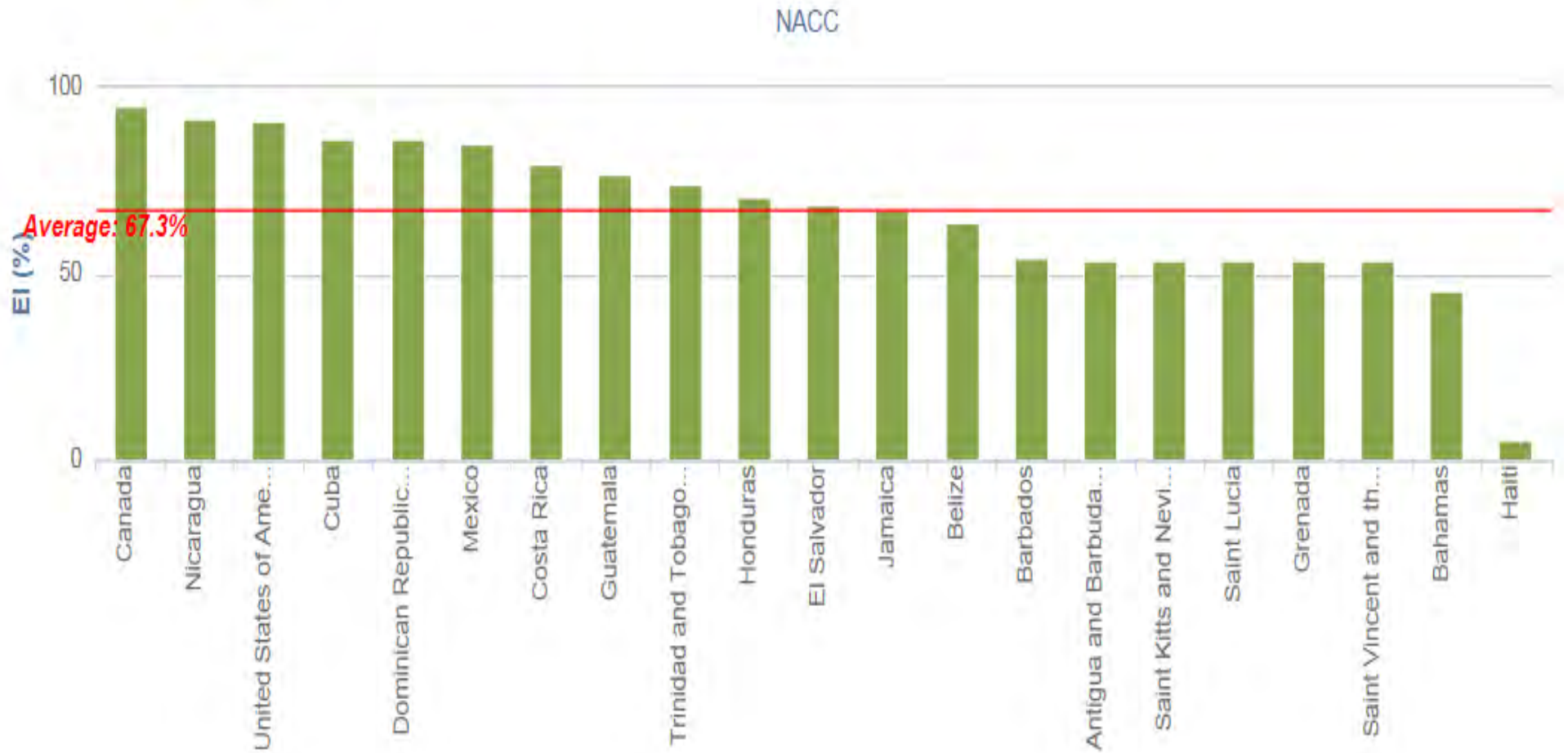


- USOAP NAM/CAR Results
- USOAP Monitoring / Inspectorate activities: AIM
- USOAP Monitoring / Inspectorate activities: CNS
- USOAP Monitoring / Inspectorate activities: MET
- Recommendations

# USOAP NAM/CAR Results - Global results



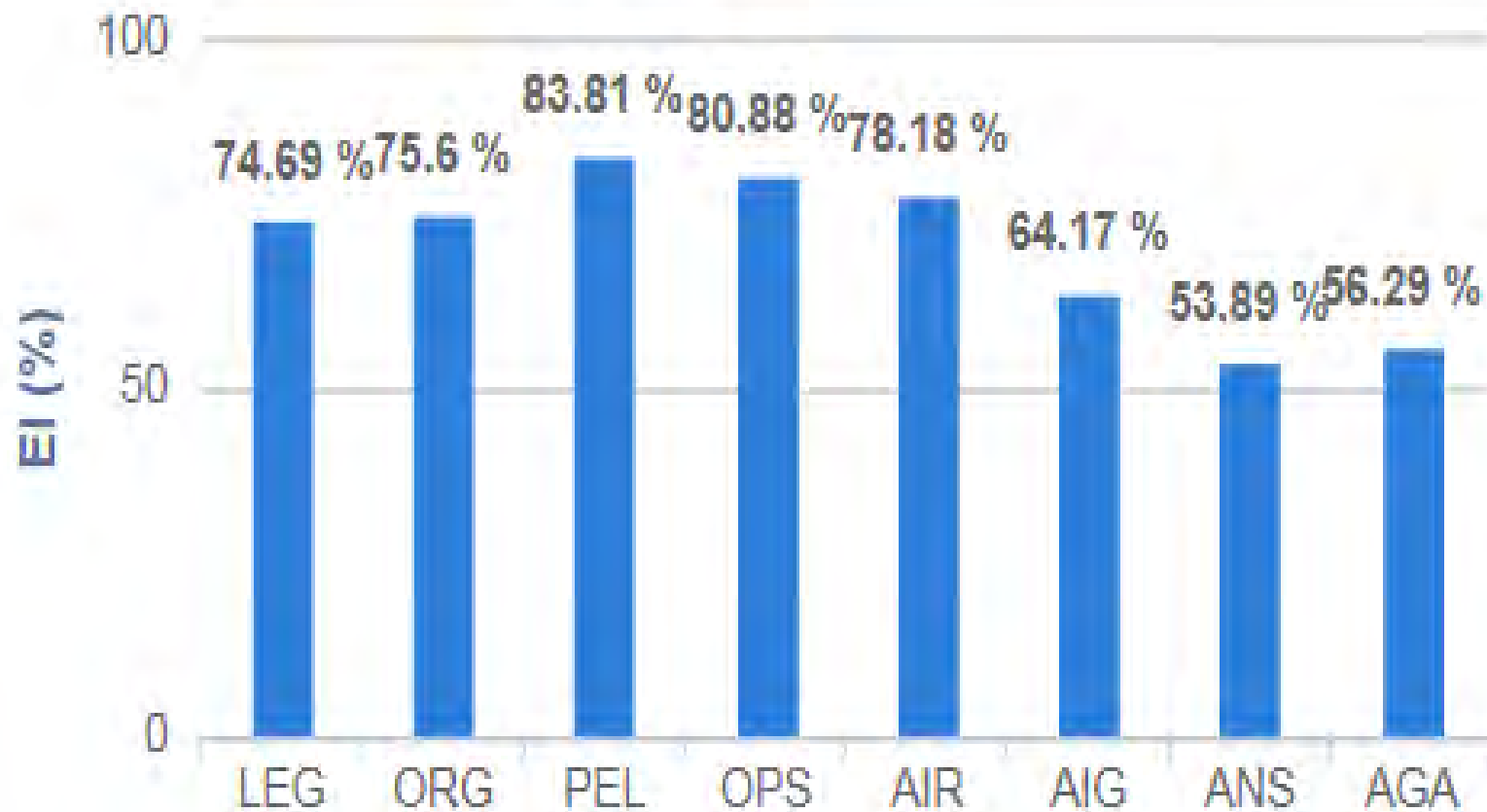
# USOAP NAM/CAR Results - EI By State NACC Region



# USOAP NAM/CAR Results - EI by Area



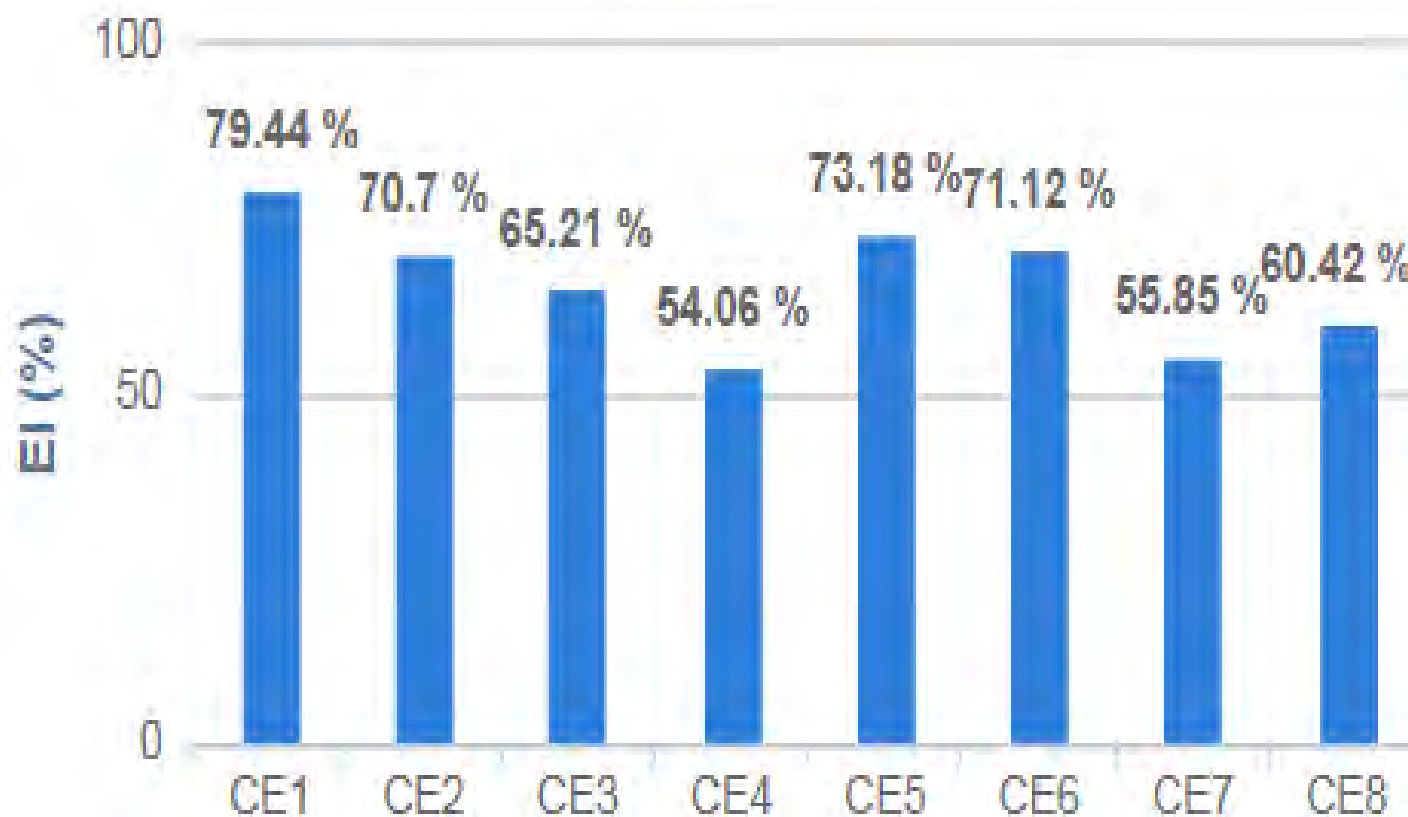
NACC



# USOAP NAM/CAR Results -EI by Critical Element



NACC



# USOAP NAM/CAR Results - NACC Monitoring Activities 2013-2014



YEAR	ICVM	CSA Audit	Off Site Validations	CAP Updates
2013	8	1	-	2
2014	1	-	1	3



# USOAP NAM/CAR Results - ANS Top Findings NACC



DESCRIPTION	EI
Ensuring oversight over procedures specialists or service providers?	14.3
Ensuring that safety reviews are being regularly conducted by the service provider?	14.3
Ensuring that the SMS developed by the air traffic service (ATS) provider includes provisions for safety assessment to be carried out for any significant safety-related change to the ATS system	19
State establish an acceptable level of safety performance to be achieved in the provision of Air Traffic Services (ATS)	19
Ensuring that the entity providing the MET service has established a properly organized quality system	23
Ensuring oversight over the entity providing the cartographic service	23
Ensuring that the air traffic service (ATS) provider has developed and implemented a SMS	23
Has the State established a mechanism/system with time frame for elimination of deficiencies identified by SAR inspectorate staff?	28
Ensuring oversight over the entity operating CNS systems and facilities	28
Ensuring oversight over air traffic service (ATS)	33
Implementation of SMS for the air traffic service (ATS) provider	40



# USOAP NAM/CAR Results- Port of Spain Declaration



## FIFTH NORTH AMERICAN, CENTRAL AMERICAN AND CARIBBEAN DIRECTORS OF CIVIL AVIATION MEETING (NACC/DCA/5) PORT-OF-SPAIN, TRINIDAD AND TOBAGO, 28 TO 30 APRIL 2014

1. The Fifth Meeting of the North American, Central American and Caribbean Directors of Civil Aviation (NACC/DCA/5), held in Port-of-Spain, Trinidad and Tobago, from 28 to 30 April 2014, convened by the ICAO North American, Central American and Caribbean Regional Office, and with the participation of high-level officials representing 22 States and 9 international organizations/industry:

2. Considering that, in accordance with Article 37 of the International Civil Aviation Convention, each contracting State undertakes to collaborate in securing the highest practicable degree of uniformity in regulations, standards, procedures and organization in relation to aircraft, personnel, airways and auxiliary services in all matters in that such uniformity will facilitate and improve air navigation;

3. Noting the objectives to be achieved through the Global Aviation System (GAS) and the Global Air Navigation Plan, recently approved by the ICAO 38th Session of the Assembly:

4. Taking into account the paramount role that civil aviation performance plays in economic and trade development for regional integration;

5. Aware that air transport growth will continue in the region, encompassing worldwide events will be developed in upcoming years requiring action to further improve aviation safety, efficiency and security indicators;

6. Aware that air transport growth poses additional challenges for both air navigation infrastructure;

7. Aware that management of regional processes for implementation of safety and security operational improvements require the establishment of clear goals;

8. Recognizing that the NAM/CAR Regions have successfully implemented technical cooperation mechanisms adopting a joint approach to problem resolution of mutual interest;

### Regional Safety Targets

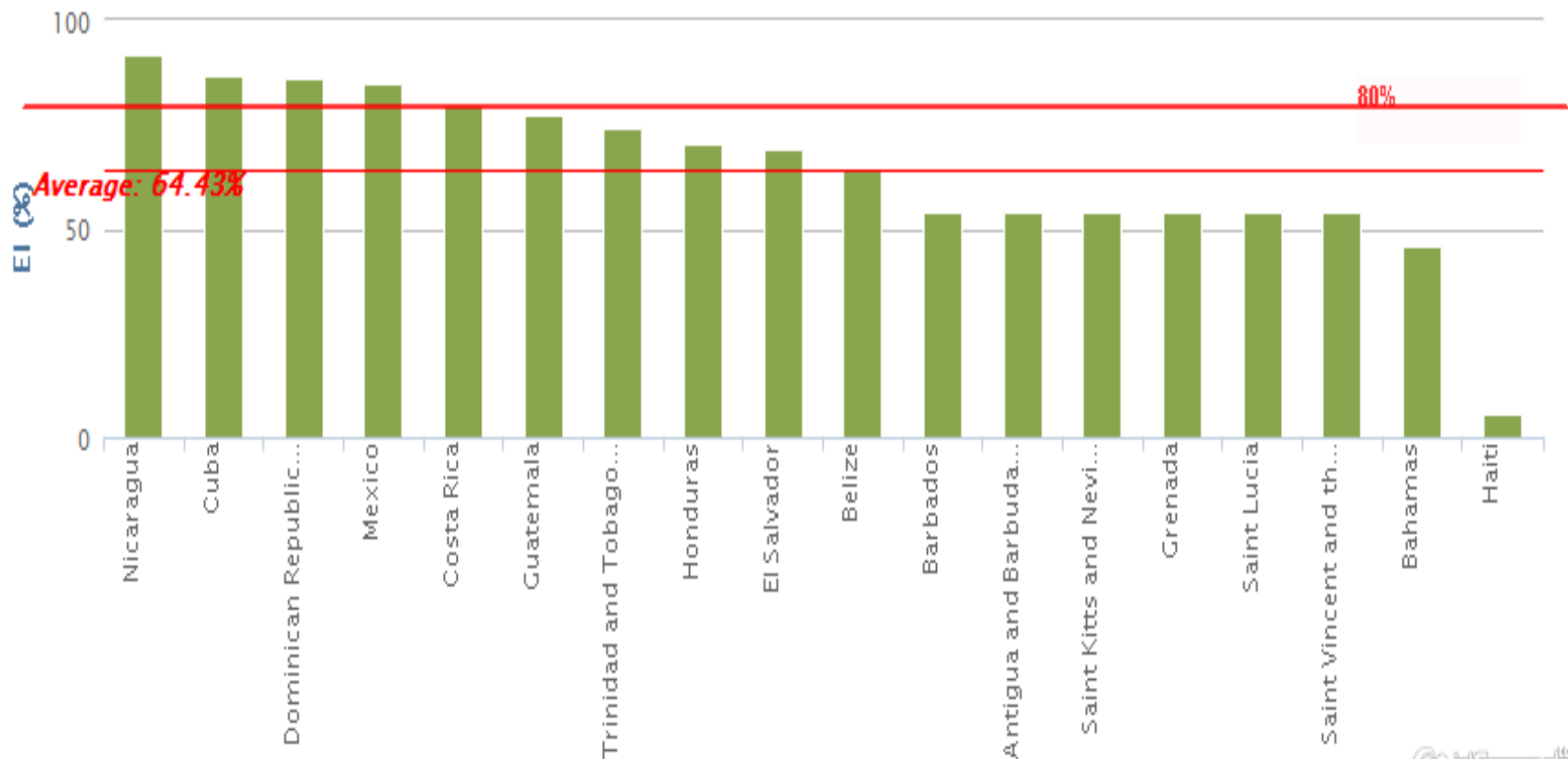
#### 1. Safety Oversight

- 80% Effective Implementation (EI) regional average by December 2016
- No State in the Region to have EI of ICAO USOAP Critical Element 3 (CAA Staff) and Critical Element 4 (Inspector Competency) below 70% by December 2016

# USOAP NAM/CAR Results- Port of Spain Declaration



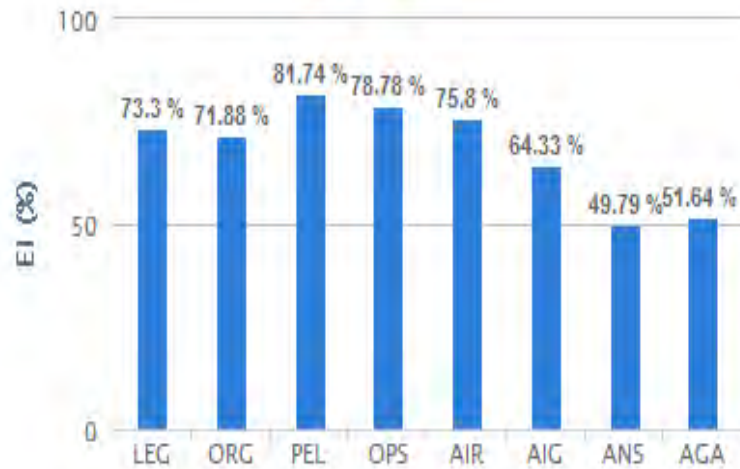
Overall EI by State  
CAR Region



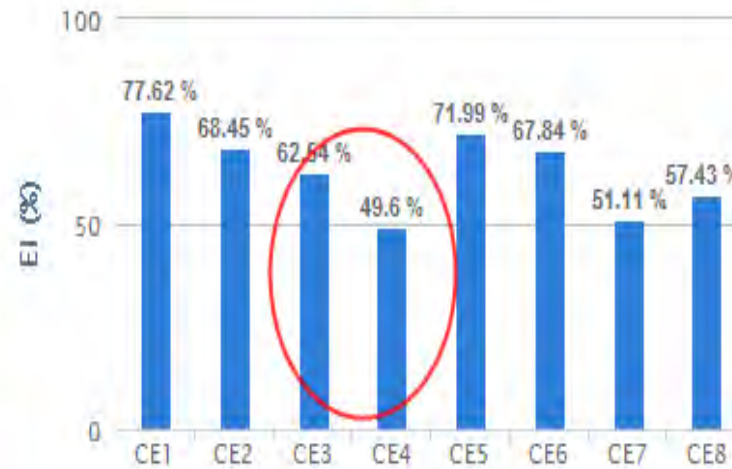
# USOAP NAM/CAR Results- Port of Spain Declaration



EI by Area  
CAR Region

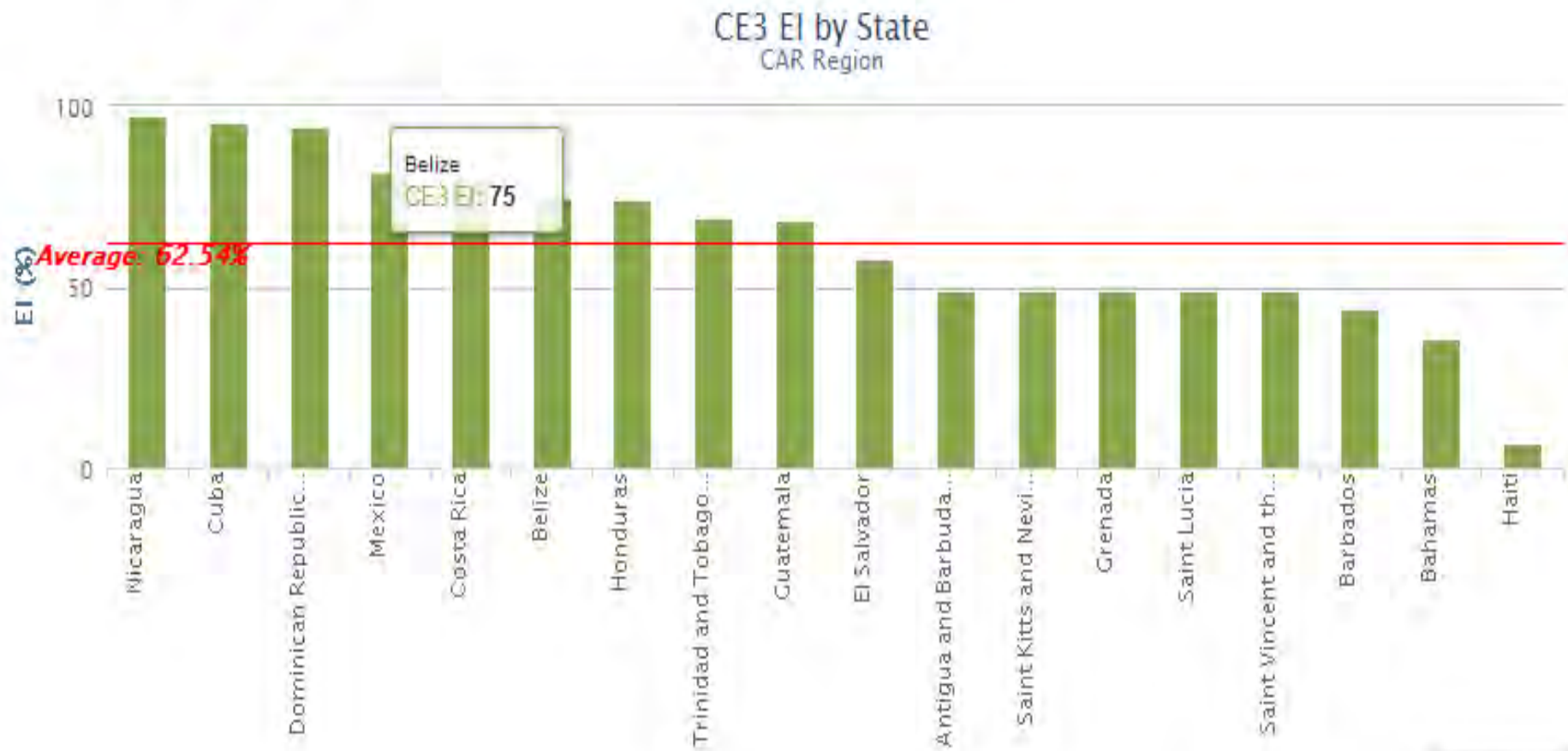


EI by CE  
CAR Region



NOT FOR PUBLICATION

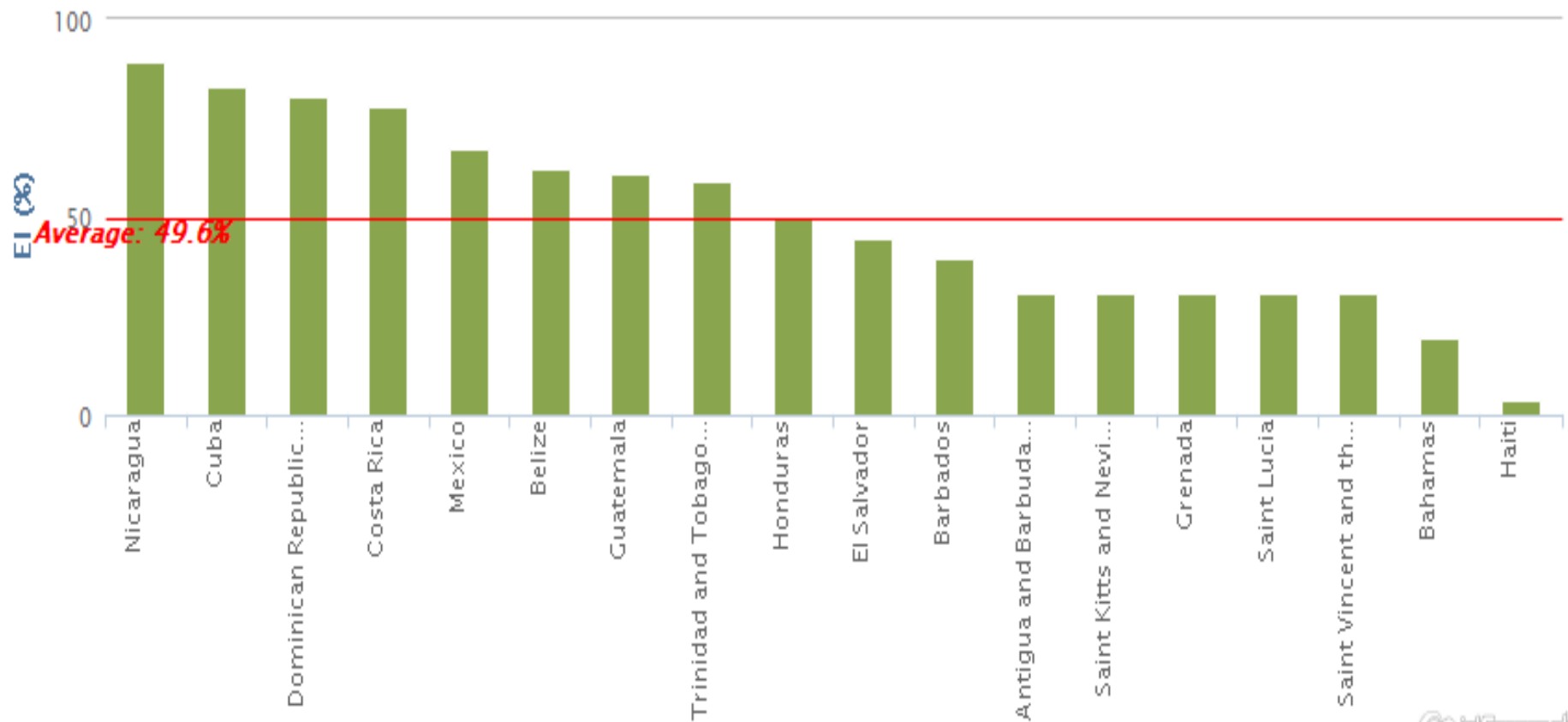
# USOAP NAM/CAR Results- Port of Spain Declaration



# USOAP NAM/CAR Results- Port of Spain Declaration



CE4 EI by State  
CAR Region



# USOAP Monitoring / Inspectorate activities



- The main purpose of the audit protocol questionnaires is to standardize the conduct of audits under the ICAO Universal Safety Oversight Audit Programme (USOAP).
- The audit protocol questionnaires may also be used by States to conduct internal safety oversight audits as a way of preparing for the ICAO USOAP audits and, subsequently, to monitor their own civil aviation safety oversight system.
- When developing the “corrective action plan”, the audited State should refer to the actual protocol questions referenced in each finding and recommendation form of the safety oversight audit report in order to understand what actions are required to fully address each finding and recommendation



# USOAP Monitoring / Inspectorate activities



ANS PQs	Scope of subject
7.001 to 7.019	Legislations for ANS which are not addressed in the Legislation (LEG) PQs or require further evidences
7.031 to 7.045	ANS - General aspects such as organization structure of ANS, establishment of a safety oversight system, the manual for ANS *inspectorate, availability of documents and mechanism for the elimination of deficiencies identified within the framework of Regional Planning Groups (PIRGs)
7.051 to 7.073	ATM - CAA oversight – Organization, staffing and training,
7.081 to 7.189	ATM – Operational aspects such as staffing, implementation, requirements for coordination, communications and information, emergency events and contingency planning and safety management
7.201 to 7.2 55	PANS-OPS (construction of visual and instrument flight procedures) - CAA oversight and operational aspects
7.261 to 7.311	AIS - CAA oversight and operational aspects
7.321 to 7.363	CHARTS- CAA oversight and operational aspects
7.3.71 to 7.405	CNS - CAA oversight and operational aspects
7.411 to 7.475	MET- CAA oversight and operational aspects
7.481 to 7.545	SAR - CAA oversight and operational aspects.



# USOAP Monitoring / Inspectorate activities



- The term “Inspectorate,” refers to “an office, entity, or person designated by the regulatory body to carry out safety oversight of the service providers.”
- In addition, depending on the level of aviation activity in the State, the “inspectorate” could also be assigned other regulatory tasks within the civil aviation system.

# USOAP Monitoring / Inspectorate activities



- ICAO Contracting State to establish and provide air traffic services in flight information regions, control areas or control zones extending over its territory.
- To ensure an adequate level of air traffic services and communications, navigation and surveillance, as well as procedures applicable to the airspace or aerodrome concerned, the appropriate air traffic services authority is required to implement formal and systematic safety management programmes for the services under its jurisdiction.
- When appropriate, these air traffic services (ATS) safety management programmes should be established on the basis of regional air navigation agreements.

# USOAP Monitoring / Inspectorate activities



- The structural organization implemented by States to meet their obligations may vary from State to State, depending on the size and scope of their aviation activities.
- The required services can be provided by the CAA itself or contracted to State-owned or private companies. It remains important that any such arrangement be clearly defined by legislation to ensure that adequate safety oversight authority remains vested in the CAA.



## *Verification of evidence*

Compliance or lack of compliance with some PQs may be verified during industry visits, via mechanisms such as a sampling of the training records of the service provider's staff, recording and retention of air traffic service data (ANS 7.101), read back of air traffic control (ATC) instructions (ANS 7.119), establishment of quality systems by MET (ANS 7.451), location of wind sensors at airports (ANS 7.459) and MET briefing offices (ANS 7.473), and communications set-up in the ATC Centre, ATC Tower, rescue coordination centre (RCC) and CNS provider (ANS 7.091, 7.133, 7.135, 7.157. etc.).

# USOAP Monitoring / Inspectorate activities:



USOAP CMA activities in the ANS area address legislative and regulatory provisions, including operational and oversight activities, in seven fields:

- 1) Air Traffic Management (ATM);
- 2) **Procedures for Air Navigation Services — Aircraft Operations (PANS-OPS);**
- 3) **Aeronautical Information Services (AIS);**
- 4) **Aeronautical Charts (CHART);**
- 5) Communications, Navigation and Surveillance (CNS);
- 6) Aeronautical Meteorology (MET); and
- 7) Search and Rescue (SAR).

# USOAP Monitoring / Inspectorate activities



Doc 9734  
Part A  
2.4.9

ANS 7.051 Is there a distinct separation between the regulatory and the service provision functions for all fields in ANS?

➤ This PQ is linked to ORG 2.021

the organizational structure must show effective separation of regulatory function from service provision functions for air traffic service (ATS), AIS, PANS OPS, CHARTS, CNS, MET, SAR

- ✓ Civil Aviation Act/ Act of Parliament/ Convenio constitutivo
- ✓ Clear functional separation
- ✓ Organizational chart
- ✓ Human Resources Manual

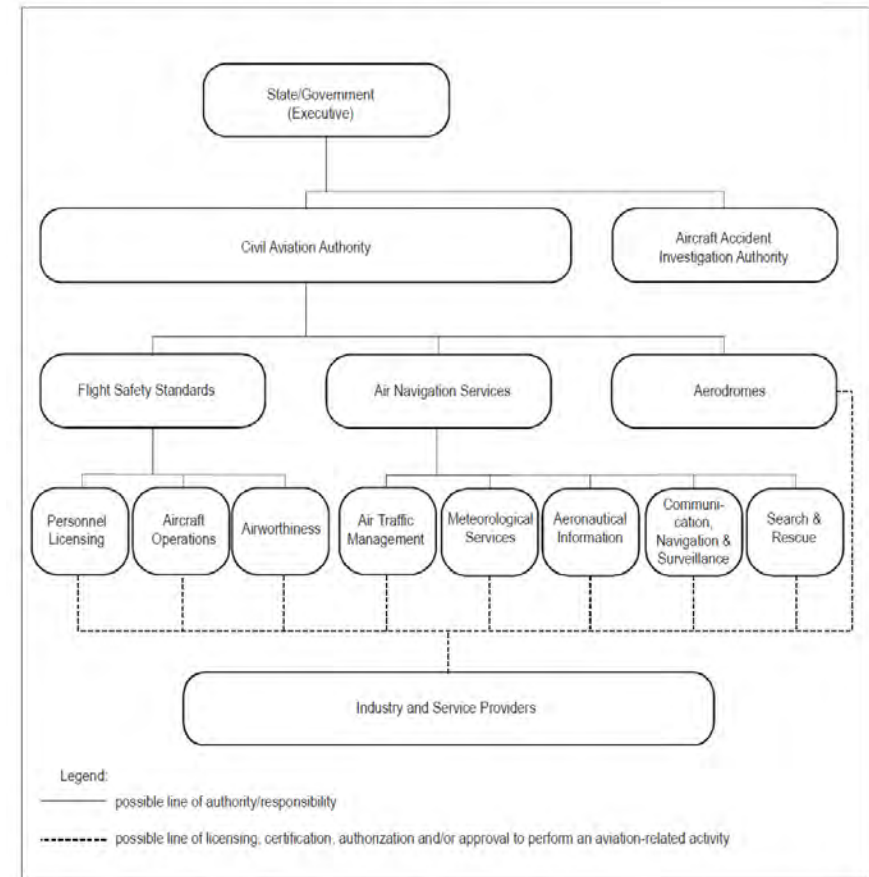


Figure 3-1. Example of the organizational structure of a State civil aviation system

# USOAP Monitoring / Inspectorate activities



A 11 2.27.3& 2.27.4	ANS 7.182 If the provision of AIS, CNS, MET and/or SAR services are under the authority of the air traffic service (ATS) provider, does the State ensure that the scope of the SMS also addresses the provision of these services?
A 11 2.27.3& 2.27.4	ANS 7.184 If the provision of AIS, CNS, MET and/or SAR services are not under the authority of the air traffic service (ATS) provider, does the State ensure that the scope of the SMS includes those aspects of services with direct operational implications?

## Verify the scope of the SMS

- ✓ implement a safety management system acceptable to the State with all areas included
- ✓ clearly define lines of safety accountability
  
- ✓ the SMS requirements will apply to the services that come under the authority of the ATS provider, or those aspects of the services with direct operational implications.



# USOAP Monitoring / Inspectorate activities: AIM



PANS Doc  
8168  
OPS/611  
Vol. II

ANS 7.201 Has the State promulgated regulatory criteria as a basis for procedure design in accordance with ICAO PANS-OPS provisions?

ANS 7.201 ¿Ha promulgado el Estado criterios reglamentarios para el diseño de procedimientos de conformidad con las disposiciones PANS-OPS de la OACI?

Verify regulatory requirements

If criteria other than Doc 8168, Vol. II are used, verify that they provide an equivalent level of safety

Verificar los requisitos reglamentarios

Si se aplican criterios distintos a los del Vol II del Doc 8168, verificar que garanticen un nivel de seguridad operacional equivalente

**ANS 7.200 – PANS-OPS  
(Construction of visual and  
instrument flight procedures) – CAA  
oversight**

**ANS 7.200 — PANS-OPS  
(Construcción de procedimientos de  
vuelo visual y por instrumentos) —  
Vigilancia de la CAA**

# USOAP Monitoring / Inspectorate activities: AIM



GM  
Doc 9734  
Part A

ANS 7.203 Are all the functions and responsibilities of the PANS-OPS inspectorate clearly defined?

ANS 7.203 ¿Están claramente definidas todas las funciones y responsabilidades del cuerpo de inspección de PANS-OPS?

Review document containing functions and responsibilities of the PANS-OPS inspectorate

Examinar el documento que detalle las funciones y responsabilidades del cuerpo de inspección PANS-OPS

# USOAP Monitoring / Inspectorate activities: AIM



Doc 9734 Part A 3.5	ANS 7.211 Has the State developed a formal training programme detailing what type of training should be provided to its PANS-OPS inspectorate staff?	Review contents of training programme
	ANS 7.211 ¿Ha elaborado el Estado un programa oficial de instrucción donde se detalle el tipo de instrucción que debe proporcionarse al personal de inspección de PANS-OPS?	Confirm inclusion of initial, OJT, recurrent and specialized training including time periods to be provided, as applicable
		Examinar el contenido del programa de instrucción
		Confirmar que incluya instrucción inicial, OJT, periódica o especializada, con indicación de su duración, según los casos

# USOAP Monitoring / Inspectorate activities: AIM



STD A6  
Parte I  
4.4.8  
GM Doc  
9734  
Parte A  
3.4

ANS 7.221 Has the State established a flight procedures design office or entity to oversee the process of development and maintenance of visual and instrument flight procedures?

Review the organizational structure including positions

ANS 7.221 ¿Ha establecido el Estado una oficina de diseño de procedimientos de vuelo o una entidad para vigilar el proceso de elaboración y mantenimiento de los procedimientos de vuelo visual y por instrumentos?

Examinar la estructura orgánica y los puestos

# USOAP Monitoring / Inspectorate activities: AIM



GM Doc 9734 Parte A 3.7	ANS 7.245 Does the State ensure that PANS-OPS service providers maintain training records for PANS-OPS technical staff?	Review method used by the State to confirm that training records are maintained
	ANS 7.245 ¿Se asegura el Estado de que los proveedores de servicios PANS-OPS lleven registro de la instrucción que recibe el personal técnico de PANS-OPS?	Examinar el método utilizado por el Estado para confirmar el mantenimiento de registros de instrucción

**ANS 7.240 – PANS-OPS (Construction of visual and instrument flight procedures) – Operational**

**ANS 7.240 — PANS-OPS (Construcción de procedimientos de vuelo visual y por instrumentos) — Asuntos operacionales**

# USOAP Monitoring / Inspectorate activities: AIM



STD A15  
3.2.4

ANS 7.255 Does the State ensure that PANS-OPS service providers retain all procedure design documentation so as to allow any data anomalies or errors found during the production, maintenance or operational use of the procedure to be corrected?

Review mechanism established to ensure effective implementation

Review procedures, working files, documentation and data

ANS 7.255 ¿Se asegura el Estado de que los proveedores de servicios PANS-OPS conserven toda la documentación de diseño de procedimientos a fin de corregir las anomalías o errores en los datos que se detectaran durante las fases de producción, mantenimiento o utilización operacional?

Examinar los mecanismos establecidos para garantizar una implantación eficaz

Examinar los procedimientos, expedientes de trabajo, documentación y datos

# USOAP Monitoring / Inspectorate activities: AIM



STD A15  
3.1

ANS 7.261 Has the State established an aeronautical information service (AIS) office or entity?

Review organizational chart and evidence of the established service

ANS 7.261 ¿Ha establecido el Estado una oficina o entidad a cargo de los servicios de información aeronáutica (AIS)?

Examinar el organigrama y pruebas de los servicios establecidos

**ANS 7.260 – Aeronautical information services – CAA oversight**

**ANS 7.260 — Servicios de información aeronáutica — Vigilancia de la CAA**



# USOAP Monitoring / Inspectorate activities: AIM



GM Doc  
9734  
Parte A  
2.4.9

ANS 7.265 Has the State established a distinct separation between the regulatory body and the entity providing the AIS?

Review the organizational structure and confirm effective separation in respect of regulatory and service provision functions

ANS 7.265 ¿Ha establecido el Estado una separación clara entre el organismo normativo y la entidad que suministra los AIS?

Examinar la estructura orgánica y confirmar la separación efectiva con respecto a las funciones normativas y las de proveedor de servicios

# USOAP Monitoring / Inspectorate activities: AIM



STD A15  
3.2

ANS 7.267 Does the State ensure that a properly organized quality system in the AIS has been established?

ANS 7.267 ¿Se asegura el Estado de que se haya establecido un sistema de calidad debidamente organizado para los AIS?

Review mechanism established to ensure effective implementation

Review documented evidence of established quality system which includes procedures, processes and resources

Examinar los mecanismos establecidos para garantizar una implantación eficaz

Examinar pruebas documentales del sistema de calidad establecido, incluidos procedimientos, procesos y recursos

# USOAP Monitoring / Inspectorate activities: AIM



GM Doc  
9734  
Parte A  
3.5.2

ANS 7.283 Are AIS inspectorate staff required to satisfactorily complete OJT prior to being assigned tasks and responsibilities?

ANS 7.283 ¿Se exige al personal de inspección AIS que complete de manera satisfactoria la OJT antes de que se le asignen tareas y responsabilidades?

Review requirement for the provision of OJT

Verify that OJT is provided by an experienced, senior inspector

Examinar los requisitos de OJT

Verificar que la OJT sea impartida por un inspector con antigüedad y experiencia

# USOAP Monitoring / Inspectorate activities: AIM



GM Doc  
9734  
Parte A  
3.9

ANS 7.287 Does the State effectively conduct oversight over the entity providing the AIS?

ANS 7.287 ¿Realiza el Estado la vigilancia de la entidad proveedora de AIS de manera eficaz?

Confirm inspection procedures and inspection reports

Review checklist used by inspectorate staff

Review inspection schedules

Verificar los procedimientos y los informes de inspección

Examinar la lista de verificación que utiliza el personal de inspección

Examinar los horarios de inspección

# USOAP Monitoring / Inspectorate activities: AIM



GM Doc  
9734  
Parte A  
3.8

ANS 7.305 Does the State ensure that AIS service providers maintain training records for AIS technical staff?

Review mechanism established to ensure effective implementation

Review training records or files

ANS 7.305 ¿Se asegura el Estado de que los proveedores de AIS lleven registro de la instrucción que recibe el personal técnico de AIS?

Examinar los mecanismos establecidos para garantizar una implantación eficaz

Examinar registros o expedientes de instrucción

**ANS 7.300 – Aeronautical information services – Operational**

**ANS 7.300 — Servicios de información aeronáutica — Asuntos operacionales**

# USOAP Monitoring / Inspectorate activities: AIM



STD  
A15  
3.2.9

ANS 7.311 Has the State established a mechanism to ensure that aeronautical data quality requirements related to publication resolution and data integrity are in accordance with the provisions of Annex 15, Appendix 7, Tables A7-1 to A7-5?

Check compliance with Annex 15, Appendix 7, Tables A7-1 to A7-5

ANS 7.311 ¿Ha establecido el Estado un mecanismo para asegurar que los requisitos de calidad de los datos aeronáuticos en lo que atañe a la resolución publicada y a la integridad de los datos se conformen a las disposiciones del Apéndice 7, Tablas A7-1 a A7-5 del Anexo 15?

Comprobar el cumplimiento de Apéndice 7, Tablas A7-1 a A7-5, del Anexo 15

# USOAP Monitoring / Inspectorate activities: AIM



STD  
A4  
1.3.2

ANS 7.321 Has a cartographic service been established by the State?

Review documented evidence of the established service

ANS 7.321 ¿Ha establecido el Estado un servicio de cartografía?

Examinar pruebas documentales del servicio establecido

**ANS 7.320 – Aeronautical charts –  
CAA oversight**

**ANS 7.320 — Cartas aeronáuticas —  
Vigilancia de la CAA**



# USOAP Monitoring / Inspectorate activities: AIM



GM Doc  
9734  
Parte A  
3.4

ANS 7.329 Have job descriptions been developed for cartographic inspectorate staff?

Review job descriptions for cartographic inspectorate staff

ANS 7.329 ¿Se han elaborado descripciones de puestos del personal de inspección de cartografía?

Examinar las descripciones de puestos del personal de inspección de los servicios de cartografía

# USOAP Monitoring / Inspectorate activities: AIM



GM Doc  
9734  
Parte A  
3.5

ANS 7.333 Has the State developed a training programme detailing what type of training should be provided to its cartographic inspectorate staff?

Review contents of training programme

Confirm inclusion of initial, OJT, recurrent and specialized training including time periods to be provided, as applicable

ANS 7.333 ¿Ha elaborado el Estado un programa de instrucción donde se detalle el tipo de instrucción que debe proporcionarse al personal de inspección de los servicios de cartografía?

Examinar el contenido del programa de instrucción

Confirmar que incluya instrucción inicial, OJT, periódica y especializada, con indicación de su duración, según el caso

# USOAP Monitoring / Inspectorate activities: AIM



GM Doc  
9734  
Parte A  
3.5.2

ANS 7.339 Are cartographic inspectorate staff required to satisfactorily complete OJT prior to being assigned tasks and responsibilities?

Review requirement for the provision of OJT

Verify that OJT is provided by an experienced, senior inspector

ANS 7.339 ¿Se exige al personal de inspección de cartografía que complete de manera satisfactoria la OJT antes de que se le asignen tareas y responsabilidades?

Examinar los requisitos de OJT

Verificar que la OJT sea impartida por un inspector con antigüedad y experiencia

# USOAP Monitoring / Inspectorate activities: AIM



GM Doc  
9734  
Parte A  
3.8

ANS 7.343 Does the State effectively conduct safety oversight over the entity providing the cartographic service?

Confirm inspection procedures and inspection reports

Review checklist used by inspectorate staff

Review inspection schedules

ANS 7.343 ¿Realiza el Estado la vigilancia de la seguridad operacional de la entidad proveedora de los servicios de cartografía de manera eficaz?

Verificar los procedimientos y los informes de inspección

Examinar la lista de verificación que utiliza el personal de inspección

Examinar los horarios de inspección

# USOAP Monitoring / Inspectorate activities: AIM



STD A4  
2.17 y Ap.  
6, Tablas 1  
a 5

ANS 7.359 Has the State established a mechanism to ensure that aeronautical data quality requirements related to the data integrity and charting resolution are in accordance with the provisions of Tables 1 to 5 in Appendix 6 of Annex 4?

Check compliance with Annex 4, Appendix 6, Tables 1 to 5

ANS 7.359 ¿Ha establecido el Estado un mecanismo para asegurar que los requisitos de calidad de los datos aeronáuticos en lo que atañe a la integridad de los datos y la resolución de cartas se conformen a las disposiciones del Apéndice 6, Tablas 1 a 5 del Anexo 4?

Comprobar el cumplimiento del Apéndice 6, Tablas 1 a 5 del Anexo 4

**ANS 7.350 – Aeronautical charts – Operational**

**ANS 7.350 — Cartas aeronáuticas — Asuntos operacionales**

# USOAP Monitoring / Inspectorate activities: AIM



STD A4  
1.3.3

ANS 7.361 Has the State taken reasonable measures to ensure that the information it provides and the aeronautical charts made available are comprehensive and accurate and that they are maintained up to date by a revision service?

Review the measures which ensure that the information on charts is comprehensive, accurate and up to date

ANS 7.361 ¿Ha tomado el Estado medidas razonables para garantizar que la información que proporciona y las cartas aeronáuticas facilitadas son integrales y exactas y que se mantienen al día mediante un adecuado servicio de revisión?

Examinar las medidas que aseguren que la información sobre las cartas sea integral, exacta y actualizada

# USOAP Monitoring / Inspectorate activities: AIM



STD y RP A4  
3.2, 6.2,  
7.2, 8.2,  
9.2, 10.2,  
11.2, 12.2,  
13.2, 14.2,  
15.2, 16.2,  
17.2, 18.2,  
19.2 y 21.2

ANS 7.363 Has the State made available to users all charts which are applicable in the State?

ANS 7.363 ¿Ha puesto el Estado a disposición de los usuarios todas las cartas aplicables en el Estado?

Review if the following charts, as applicable, are made available by the State and are published in the AIP in compliance with the Annexes 4 and 15:

- 1...n

Examinar si el Estado ha hecho disponibles y publicado en la AIP, según corresponda, las siguientes cartas de conformidad con los Anexos 4 y 15:

- 1...n



# USOAP Monitoring / Inspectorate activities:



USOAP CMA activities in the ANS area address legislative and regulatory provisions, including operational and oversight activities, in seven fields:

- 1) Air Traffic Management (ATM);
- 2) Procedures for Air Navigation Services — Aircraft Operations (PANS-OPS);
- 3) Aeronautical Information Services (AIS);
- 4) Aeronautical Charts (CHART);
- 5) **Communications, Navigation and Surveillance (CNS);**
- 6) Aeronautical Meteorology (MET); and
- 7) Search and Rescue (SAR).

# USOAP Monitoring / Inspectorate activities: CNS- Civil aviation authority (CAA) oversight



A10 Vol. II 2.4.1	ANS 7.371 Has the State designated the authority responsible for ensuring that the CNS systems and facilities are maintained and operated in accordance with the standards in Annex 10?
Doc 9734 Part A 3.4	

- ✓ Official designation
- ✓ organizational chart with areas of responsibilities
- ✓ ensure all CNS System Service Performance requirements (communication, radio navigation, operation and maintenance, unusual transmission phenomena, automation, etc.)

Confirm documented evidence, including organizational structure and responsibilities

## Requirements:

- 1) aeronautical fixed service (a) ATS direct speech circuits and networks; b) meteorological operational circuits, networks and broadcast, systems; c) the aeronautical fixed telecommunications network (AFTN); e) the air traffic services (ATS) message handling services; and f) the inter-centre communications (ICC).
- 2) aeronautical mobile service (VHF, HF, data, different services- APP/TWR/ENR, CPDLC, D-ATIS, VOLMET, etc.);
- 3) aeronautical radio navigation service (VOR, DME, ILS, GNSS, radar, etc.);
- 4) aeronautical broadcasting service.

# USOAP Monitoring / Inspectorate activities: CNS- Civil aviation authority (CAA) oversight

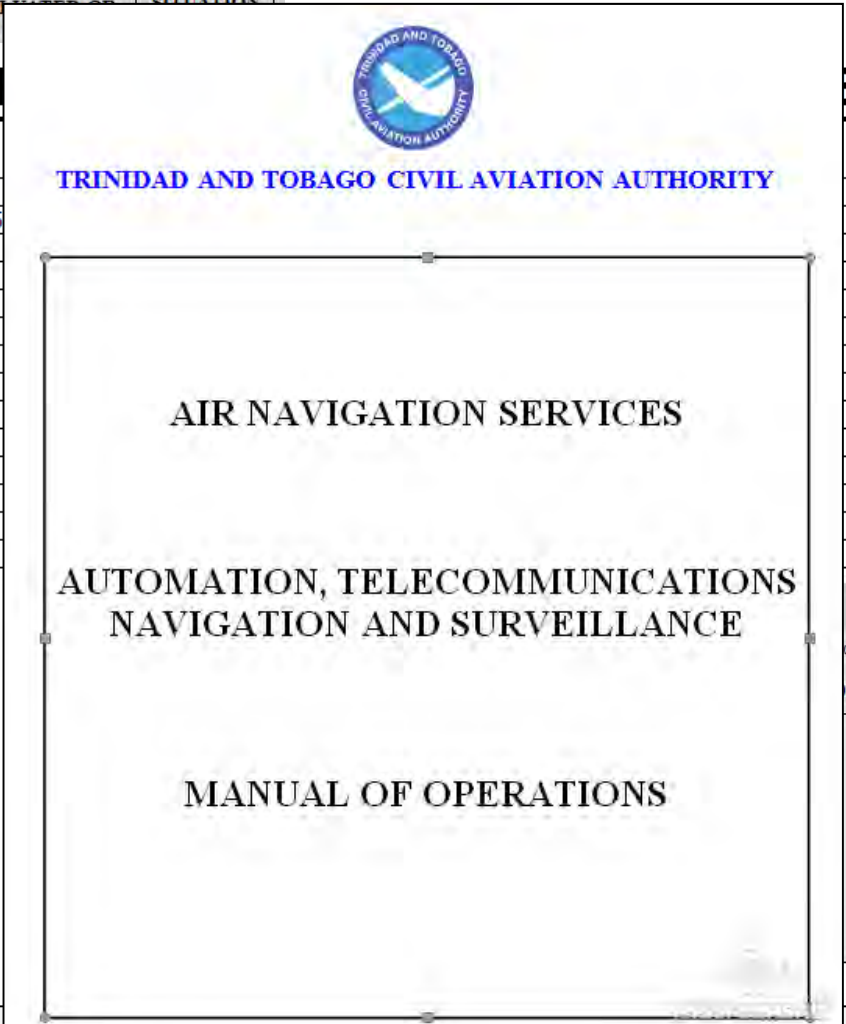


Performance/ compliance checklist

Documentation/ Resources/

Maintenance/operation Plans

SUBJECT	ASPECTS TO BE EVALUATED OR RESPONDED				
YEAR :2014					
MONTH:DEC					
DAY	1	2	3	4	5
COMMS	D	D	D	D	
LOC IPSS					
GP IPOS					
DME IPOS	D	D	D	W	
MARKER PTS					
DVOR					
ICAO and State documents					ocean routes Do u com It co reco com abov Are t impl app
B.5 HF Communications					Hav reco impl Acco cove servi Are t impl



SCHEDULE										
21	22	23	24	25	26	27	28	29	30	31
D	D	D	D	D			D	D	D	D
D	D	D	D	W			D	D	D	D

# USOAP Monitoring / Inspectorate activities: CNS- Civil aviation authority (CAA) oversight



Doc 9734 Part A 3.4	ANS 7.373 Does the State employ sufficient qualified technical staff to carry out its safety oversight tasks over the entity operating CNS systems and facilities?
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- ✓ Quantitative method:
  - ✓ Inspector manuals (checklists, duration, frequency, procedures)
  - ✓ CNS Service Provider inventory
  - ✓ Administrative time and assigned activities
- ✓ Historical of staff
- ✓ turnover rate/ competitive salary
- ✓ Staff Performance evaluation

- Review methodology established for determining staffing needs
- Review ability to attract new inspectors as well as existing vacancies and level of turnover in past years
- Review ability to carry out all safety oversight related tasks, including review and revision of regulations, training of technical staff, development of guidance material, issuance of approvals, conducting of surveillance and resolution of identified safety concerns
- This PQ is linked to ORG 2.053

# USOAP Monitoring / Inspectorate activities: CNS- Civil aviation authority (CAA) oversight



Doc 9734  
Part A  
3.4

ANS 7.375 Are all the functions and responsibilities of the CNS inspectorate clearly defined?

- Review document detailing functions and responsibilities of the CNS inspectorate
- This PQ is linked to the ORG 2.011

- ✓ Functions and responsibilities different based on inspectorate structure
- ✓ To be approved and official: Manual/handbook
- ✓ In accordance to qualifications and job description

## SAMPLE:

### Functions and responsibilities

- Carry out surveillance tasks on CNS service providers, including operational procedures, practices, manpower numbers, equipment/facilities, and personnel training/development/licensing
- Approval of new CNS system based on its safety risk assessment
- Develop surveillance reports that includes all conclusions, recommendations and discrepancies (if applicable)
- Support the surveillance safety unit coordinator in planning the tasks that need to be implemented as part of the unit's responsibilities
- Identify, record and communicate as soon as possible noncompliance with the standards that could have a significant impact on safety for the CNS services
- Review the action plan proposed by the CNS provider in response after a surveillance
- Assess the CNS provider thru inspections to check on the implementation of the action plan and see if any discrepancy has being closed
- Carry out assigned tasks in an effective and efficient manner, keeping confidentiality as one of the priorities.
- Any other related task to the post





# USOAP Monitoring / Inspectorate activities: CNS- Civil aviation authority (CAA) oversight



Doc 9734 ANS 7.377 Have job  
Part A descriptions been  
3.4 developed for CNS  
inspectorate staff?

Review job descriptions for CNS inspectorate staff

#### Job description

Sample:

The communication, navigation and surveillance inspector oversees the provision of communication, navigation and surveillance performed by the CNS Service Providers and any other CNS related Supplier organizations within its ambit in accordance with the applicable National Regulations, by regular audits/inspections, desktop audits of documentation prior to field audit, and ensures compliance through enforcement where required. Incumbent audits and regularly inspects the adequacy of CNS in terms of operational procedures, practices, manpower numbers, equipment/facilities, and personnel training/development/licensing. Also the CNS Inspector designs, develop, promulgate and review CNS safety standards.

Doc 9734 ANS 7.379 Has the State  
Part A established minimum  
3.5 qualifications and  
experience requirements  
for CNS inspectorate staff?

Review qualifications and experience criteria established for technical and managerial posts

Sample:

#### Qualifications

- ✓ Consistency with F&R and tasks (scope and attributes)
- ✓ skills and experience based on ANS scenario
- ✓ Official and approved

- Telecommunication Engineer or ANS Technician with at least 5 years' experience in CNS, Air traffic and/or other ANS fields
- Knowable on System maintenance and operation principles
- Be able to manage and plan activities related with inspections and surveillance activities
- To Know the principles, concepts and how to implement safety
- Good communication skills
- To know and implement correctly safety surveillance techniques and procedures

# USOAP Monitoring / Inspectorate activities: CNS- Civil aviation authority (CAA) oversight



<p>Doc 9734 Part A 3.5</p>	<p>ANS 7.380 Does the State ensure that the established minimum qualification and experience requirements are met by all CNS inspectorate personnel?</p>	<ul style="list-style-type: none"> <li>➤ Sample recruitment files</li> <li>➤ Cross-check with established requirements</li> </ul> <ul style="list-style-type: none"> <li>✓ Check personal files</li> <li>✓ recruitment/performance records</li> </ul>
<p>Doc 9734 Part A 3.5</p>	<p>ANS 7.381 Has the State developed a formal training programme detailing what type of training should be provided to its CNS inspectorate staff?</p>	<ul style="list-style-type: none"> <li>➤ Review contents of training programme</li> <li>➤ Confirm inclusion of initial, on-the-job, recurrent and specialized training, including timelines to be provided, as applicable</li> </ul> <ul style="list-style-type: none"> <li>✓ Training Manual – Training Policy</li> <li>✓ Comprehensive / detailed training for CNS inspector</li> </ul>
<p>Doc 9734 Part A 3.5</p>	<p>ANS 7.383 Does the State develop a periodic training plan detailing and prioritizing the type of training that will be provided during the established period?</p>	<ul style="list-style-type: none"> <li>➤ Review most recent training plan</li> </ul> <ul style="list-style-type: none"> <li>✓ Prioritized training- inspections, type, etc.</li> <li>✓ Training covering all types: refresher courses, etc.</li> </ul>



# USOAP Monitoring / Inspectorate activities: CNS- Civil aviation authority (CAA) oversight



Doc 9734 Part A 3.5	ANS 7.385 Is the training programme appropriately implemented for CNS inspectorate staff?
Doc 9734 Part A 3.5.2	ANS 7.387 Are CNS inspectorate staff required to satisfactorily complete OJT before being assigned their tasks and responsibilities?

- Verify that the type and frequency of training provided (initial, recurrent and specialized) is sufficient to acquire/maintain the required level of knowledge, skills, competence and qualifications in accordance with the duties and responsibilities assigned to each technical staff

- ✓ Training conducted based on Programme
- ✓ Timely and appropriate training

- Review requirement for the provision of OJT
- Verify that OJT is provided by an experienced, senior inspector

- ✓ OJT requirement established in Training Manual
- ✓ OJT record with senior qualified inspector

# USOAP Monitoring / Inspectorate activities: CNS- Civil aviation authority (CAA) oversight



<p>Doc 9734 Part A 3.5</p>	<p>ANS 7.389 Does the CNS inspectorate have a system for the maintenance of training records for its technical staff?</p>	<ul style="list-style-type: none"><li>➤ Review instruction or requirement for the establishment and maintenance of training records</li><li>➤ Verify training records are systematically retained</li></ul> <ul style="list-style-type: none"><li>✓ Formal and systematic system of records</li><li>✓ Check accuracy and traceability of records</li></ul>
<p>Doc 9734 Part A 3.8</p>	<p>ANS 7.391 Does the State effectively conduct oversight over the entity operating CNS systems and facilities?</p>	<ul style="list-style-type: none"><li>➤ Confirm inspection procedures and inspection reports</li><li>➤ Review checklist used by inspectorate staff</li><li>➤ Review inspection schedules</li><li>➤ Confirm that facilities and staff of entity are included</li></ul> <ul style="list-style-type: none"><li>✓ Inspection reports- compliance with checklists and surveillance plan</li><li>✓ carried out by qualified inspectors</li><li>✓ see findings/observations</li></ul>

# USOAP Monitoring / Inspectorate activities: CNS- Civil aviation authority (CAA) oversight

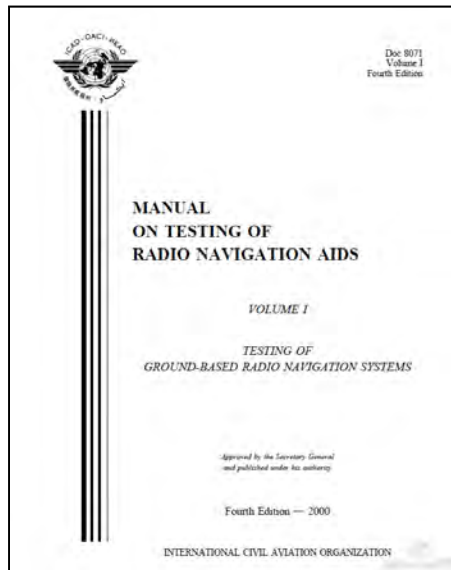


A10  
Vol. I  
2.2, C 3

Doc 8071  
Vol. I  
C1 to 7

ANS 7.393 Does the State ensure that requirements for flight inspection are established and periodical flight inspections are provided for radio navigation aids?

- Review mechanism established to ensure effective implementation
- Review flight inspection regulations and procedures
- Verify flight inspection reports



- ✓ Radio navigation aids available for use by aircraft engaged in international air navigation shall be the subject of periodic ground and flight tests.
- ✓ Periodicity of flight checks and ground checks in accordance to Doc 8071, including evaluation parameters
- ✓ Flight/ground checks requirements (Manual)
- ✓ Check observations/results of reports

FLIGHT INSPECTION REPORT INSTRUMENT LANDING SYSTEM									
1. FLIGHT INSPECTION REPORT HEADER						2. CREW INFORMATION			
IDENT	OWNER	STATE	CTRY	REGION	INSPECTION DATE(S)	PIC	SEC	MS	A/C NO
POS	I		TD		11/15/13	VN283	VN015	VN078	1414
LOCATION	RUNWAY		CATEGORY	INSP TYPE	ACM	FIFO			
PORT OF SPAIN, TRINIDAD	10		I	P		SAC			
3. FACILITY INFORMATION									
LOCALIZER	Inspected	DME	Inspected/Sat	FACILITY STATUS					
OFFSET		COMPASS LOCATOR	Inspected/Sat	F/C	Restricted				
GLIDE SLOPE	Inspected	LIGHTING SYSTEM	Inspected/Sat	G/S	Unrestricted				
LDA		75 MHz MARKERS		B/C					
SDF		SIAP	Sat	ILS CLASS. SYS.	I	B			
TLS		PUBLICATIONS	Sat	INSP. CRITERIA					
OTHER:		COMD WIDTH	3.50	ROLLOUT					
		COMD ANGLE	3.00						
		GLIDE SLOPE TYPE	NR - Null Reference						
4. NOTAMS									
5. REMARKS									
Tower informed us that the OM and MM were decommissioned. Submitted 8240-20 to remove OM, MM and "LOM" word in ASSOC-FACS from data sheet.									

# USOAP Monitoring / Inspectorate activities: CNS- Civil aviation authority (CAA) oversight



Doc 9734  
Part A  
3.9

ANS 7.395 Has the State established a mechanism/system with time frame for elimination of deficiencies identified by CNS inspectorate staff?

- Review list of deficiencies which have been identified by inspection and remedial action planned/taken
- Review problems encountered

- ✓ Review formal established of the procedure
- ✓ Review remedial action per type of deficiency
- ✓ Check for ICAO deficiency CAP
- ✓ Check deficiencies records
- ✓ Review effective and timely response and resolution of deficiencies by ANSP

# USOAP Monitoring / Inspectorate activities: CNS- Operational



Doc 9734 Part A 3.7  
ANS 7.401 Does the State ensure that the entity operating CNS systems and facilities has developed job descriptions for its technical staff?

- Review mechanism established to ensure effective implementation
- Review documented terms of reference and confirm rational application

- ✓ check approved Operation/ ANSP Manuals: Job title
- ✓ Consistency with F&R and tasks (ANSP equipment/services)
- ✓ check staff assignment and personal files
- ✓ skills and experience based on ANS scenario
- ✓ Consistency with equipment/system inventory





# USOAP Monitoring / Inspectorate activities: CNS- Operational



Doc 9734  
Part A  
3.7  
ANS 7.403 Does the State ensure that the entity operating CNS systems and facilities has developed a training programme for its technical staff?

- Review mechanism established to ensure effective implementation
- Review documented training programme and verify if it includes, when applicable, initial, recurrent or specialized training

Doc 9734  
Part A  
3.7  
ANS 7.405 Does the State ensure that the entity operating CNS systems and facilities maintains training records for its technical staff?

- ✓ Training Manual: Programme
- ✓ Check training plans
- ✓ Training covering all types: refresher courses, etc.

- Review method used by State to confirm that training records are maintained

- ✓ Formal and systematic system of records
- ✓ Check accuracy and traceability of records
- ✓ Check records for all staff



# USOAP Monitoring / Inspectorate activities:



USOAP CMA activities in the ANS area address legislative and regulatory provisions, including operational and oversight activities, in seven fields:

- 1) Air Traffic Management (ATM);
- 2) Procedures for Air Navigation Services — Aircraft Operations (PANS-OPS);
- 3) Aeronautical Information Services (AIS);
- 4) Aeronautical Charts (CHART);
- 5) Communications, Navigation and Surveillance (CNS);
- 6) **Aeronautical Meteorology (MET);** and
- 7) Search and Rescue (SAR).



# USOAP Monitoring / Inspectorate activities: MET - Oversight



<p>A3 2.1.3</p>	<p>ANS 7.411 Is the MET authority of the State also the provider of MET services?</p>	<ul style="list-style-type: none"> <li>➤ Review organizational chart and evidence of the established service</li> </ul>
<p>A3 2.1.4  Doc 9734 Part A 3.4</p>	<p>ANS 7.413 If not, has the MET authority of the State delegated the provision of the service to a non-governmental agency or another State?</p>	<ul style="list-style-type: none"> <li>➤ Verify how the responsibility or authority has been delegated to another State or agency</li> <li>➤ Ensure that the delegation is identified in the AIP, Appendix 1, GEN 1.1</li> <li>➤ Review the agreements between the State and the entity providing the service</li> </ul>
<p>A3 4.2 &amp;  Doc 9377 App.2</p>	<p>ANS 7.415 Does the State ensure that an agreement has been established between ATS authorities and MET authorities for the provision of MET services?</p>	<ul style="list-style-type: none"> <li>➤ Review mechanism established to ensure effective implementation</li> <li>➤ Verify existence of any agreements between the two authorities</li> <li>➤ Verify whether the agreement includes the calibration of MET equipment used by ATS</li> </ul>

# USOAP Monitoring / Inspectorate activities: MET - Oversight



<p>A3 2.1.5 GM Doc 9734 Part A 3.4</p>	<p>ANS 7.417 Does the State ensure that the MET authority employs a sufficient number of qualified MET staff in the inspectorate?</p>	<ul style="list-style-type: none"> <li>➤ Review mechanism established to ensure effective implementation</li> <li>➤ Review methodology established for determining staffing needs</li> <li>➤ Review ability to attract new inspectors as well as existing vacancies and level of turnover in past years</li> <li>➤ Review ability to carry out all safety oversight related tasks including reviewing and revising regulations, training of technical staff, development of guidance material, issuance of approvals, conducting surveillance and resolving identified safety concerns</li> </ul>
<p>Doc 9734 Part A 3.4</p>	<p>ANS 7.419 Are all the functions and responsibilities of the MET inspectorate clearly defined?</p>	<ul style="list-style-type: none"> <li>➤ Review document detailing functions and responsibilities of the MET inspectorate</li> </ul>

# USOAP Monitoring / Inspectorate activities: MET - Oversight



Doc 9734 Part A 3.4	ANS 7.421 Have job descriptions been developed for MET inspectorate staff?	➤ Review job descriptions for MET inspectorate staff
Doc 9734 Part A 3.5	ANS 7.423 Has the State established minimum qualifications and experience requirements for MET inspectorate personnel?	➤ Review qualifications and experience criteria established for technical and managerial posts
Doc 9734 Part A 3.5	ANS 7.425 Has the State developed a formal training programme detailing what type of training should be provided to its MET inspectorate staff?	<ul style="list-style-type: none"> <li>➤ Review contents of training programme</li> <li>➤ Confirm inclusion of initial, OJT, recurrent and specialized training including time periods to be provided, as applicable</li> </ul>
Doc 9734 Part A 3.5	ANS 7.427 Does the MET authority develop a periodic training plan detailing and prioritizing what type of training will be provided during the established period?	➤ Review most recent training plan

# USOAP Monitoring / Inspectorate activities: MET - Oversight



<p>Doc 9734 Part A 3.5</p>	<p>ANS 7.429 Is the training programme appropriately implemented for MET inspectorate staff?</p>	<ul style="list-style-type: none"> <li>➤ Verify that the type and frequency of training provided (initial, recurrent and specialized) is sufficient to acquire/maintain the required level of knowledge, skills, competence and qualifications in accordance with the duties and responsibilities assigned to each technical staff</li> </ul>
<p>Doc 9734 Part A 3.5.2</p>	<p>ANS 7.431 Are MET inspectorate staff required to satisfactorily complete OJT prior to being assigned tasks and responsibilities?</p>	<ul style="list-style-type: none"> <li>➤ Review requirement for the provision of OJT</li> <li>➤ Verify that OJT is provided by an experienced, senior inspector</li> </ul>
<p>Doc 9734 Part A 3.5</p>	<p>ANS 7.433 Does the MET inspectorate have a system for the maintenance of training records for its technical staff?</p>	<ul style="list-style-type: none"> <li>➤ Review instruction or requirement for the establishment and maintenance of training records</li> <li>➤ Verify training records are systematically retained</li> </ul>

# USOAP Monitoring / Inspectorate activities: MET – CAA Oversight



<p>Doc 9734 Part A 3.8</p>	<p>ANS 7.435 Does the State effectively conduct safety oversight over the entity providing the MET service?</p>	<ul style="list-style-type: none"> <li>➤ Confirm inspection procedures and inspection reports</li> <li>➤ Review checklist used by inspectorate staff</li> <li>➤ Review inspection schedules</li> </ul>	
<p>Doc 9734 Part A 3.9</p>	<p>ANS 7.437 Has the State established a mechanism/system with time frame for elimination of deficiencies identified by MET inspectorate staff?</p>	<ul style="list-style-type: none"> <li>➤ Review list of deficiencies which have been identified by inspection and remedial action planned/taken</li> <li>➤ Review problems encountered</li> </ul>	

# USOAP Monitoring / Inspectorate activities: MET – Operational



<p>A3 2.2.1  2.2.2 &amp; 2.2.3</p>	<p>ANS 7.451 Does the State ensure that the entity providing the MET service has established a properly organized quality system?</p>	<ul style="list-style-type: none"> <li>➤ Review mechanism established to ensure effective implementation</li> <li>➤ Review documented evidence of established quality system which includes procedures, processes and resources</li> </ul>
<p>A3 5.8 STD A11 2.19 PANS Doc 4444 4.12</p>	<p>ANS 7.463 Does the State ensure that provisions related to special air-reports, including those for volcanic ash, are being adhered to concerning their relay to the relevant MET offices?</p>	<ul style="list-style-type: none"> <li>➤ Review mechanism established to ensure effective implementation</li> <li>➤ Verify the existence of staff instructions at the ATS and MET units regulating the issuance of special air-reports</li> <li>➤ Make sure that the specific case of volcanic ash is covered therein</li> </ul>
<p>A3 7.4.1</p>	<p>ANS 7.465 Does the State ensure that MET offices issue wind shear warnings for aerodromes where wind shear is considered as a safety factor?</p>	<ul style="list-style-type: none"> <li>➤ Review mechanism established to ensure effective implementation</li> <li>➤ Verify the existence of staff instructions concerning the issuance of wind shear warnings</li> </ul>

# USOAP Monitoring / Inspectorate activities: MET – Operational



<p>A3 4.4.1</p>	<p>ANS 7.467 Does the State ensure that the MET authority, in coordination with the ATS authority, has promulgated regulatory criteria for special observations?</p>	<ul style="list-style-type: none"> <li>➤ Review mechanism established to ensure effective implementation</li> <li>➤ Verify regulatory criteria</li> <li>➤ Cross-check with ICAO Annex 3 compliance checklist</li> </ul>
<p>A3 4.1.3, 4.3.1, 4.3.2 &amp; 4.4.2</p>	<p>ANS 7.469 Does the State ensure that the MET offices issue local routine and special reports?</p>	<ul style="list-style-type: none"> <li>➤ Review mechanism established to ensure effective implementation</li> <li>➤ Review examples of the most recent local routine and special reports</li> </ul>
<p>A3 4.1.3, 4.3.1, 4.3.2, 4.4.2 &amp; 6.2.1</p>	<p>ANS 7.471 Does the State ensure that the MET offices issue METAR, SPECI and TAF?</p>	<ul style="list-style-type: none"> <li>➤ Review mechanism established to ensure effective implementation</li> <li>➤ Request examples of METAR, SPECI and TAF issued over the last seven days</li> </ul>
<p>A3 3.3.2</p>	<p>ANS 7.473 Are MET offices readily accessible to provide briefing, consultation and flight documentation to flight crew members and/or other flight operations personnel?</p>	<ul style="list-style-type: none"> <li>➤ Review the location and accessibility of the facility for provision of the flight documentation</li> </ul>



# USOAP Monitoring / Inspectorate activities: MET – Operational



<p>A3 4.5.1 &amp; 11.1.9 App. 3 2.1.1, 2.1.2 &amp; 3.1 App. 5 1.1 &amp; 1.6 App. 6 1.1.1 &amp; 1.2 App. 6 1.1.1 ,1.2, 2.1.1, 2.2, 5.1.1&amp; 6.2.1</p>	<p>ANS 7.475 Does the State ensure that the following reports are issued in accordance with the format in Annex 3?</p> <ol style="list-style-type: none"><li>1. Local routine and local special reports</li><li>2. METAR and SPECI</li><li>3. TAF</li><li>4. SIGMET and AIRMET</li><li>5. Aerodrome warning and wind shear warning</li></ol>	<ul style="list-style-type: none"><li>➤ Review mechanism established to ensure effective implementation</li><li>➤ Compare with templates in Tables A3-1, A3-2, A3-4, A3-5, A5-1, A6-1, A6-2, A6-3 and A6-4</li><li>➤ Check availability of reliable AFS communications means</li></ul>
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# Recommendations



- States to update their corrective action plans if not already done.
- Develop an ANS Inspectorate Handbook/Manual as regional reference
- Identified obstacles for compliance and progress for CE-1 to CE-5: use OLF validation
- Encourage that each State shall ensure that the designated meteorological authority seek the means to implement the quality management system in order to comply with the provisions contained in Annex 3, Chapter 2, paragraph 2.2.2
- Promote the sharing of ANS inspectors
- Urge SMS/SSP implementation
- The majority of States in the Region to perform a self assessment on all Protocol Questions, particularly the new questions related to recent Annex amendments and now Annex 19 related to safety management provisions and the establishment of an SSP.