



ICAO

INTERNATIONAL CIVIL AVIATION ORGANIZATION

A UN SPECIALIZED AGENCY

State safety oversight system (SSO)



Safety Management

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Second Meeting of the North American, Central American and Caribbean Working Group (NACC/WG) Aeronautical Meteorology (MET) Task Force (TF) (MET/TF/02)

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OBJECTIVE



- Examine the responsibilities, functions and duties of a State, regarding safety oversight,
- To recognize the critical elements of an effective and sustainable State safety oversight system (SSO),
- Examine the activities of establishing and implementing an SSO, to exercise active control on the provision of meteorological service for international air navigation.

General obligations under the Chicago Convention

- ✈ Collaborate to the highest degree to achieve **standardization and harmonization** in the regulations, rules, standards procedures and practices
- ✈ Conduct all civil aviation operations under **internationally accepted minimum operating standards**, procedures and practices
- ✈ Establish and implement a **system** that enables it to **satisfactorily discharge** its international obligations and responsibilities to develop and conduct civil aviation in a safe and orderly manner

Safety Oversight responsibilities

Regulate and supervise all their aviation activities to ensure the safe, efficient and regular operation of air services

Art. 12

Implement and enforce the SARPs contained in the Annexes

Art. 37

collaborate in securing the highest practical degree of uniformity in regulations, standards, procedures and organization

Art. 38

immediate notification to ICAO of the differences between its own practice and that established by the international standard

What does it mean to comply with ICAO SARPs?

Promulgate Primary Aviation Legislation and Specific Operating Regulations (legislation) to enable State to address its obligations as a signatory to the CC.

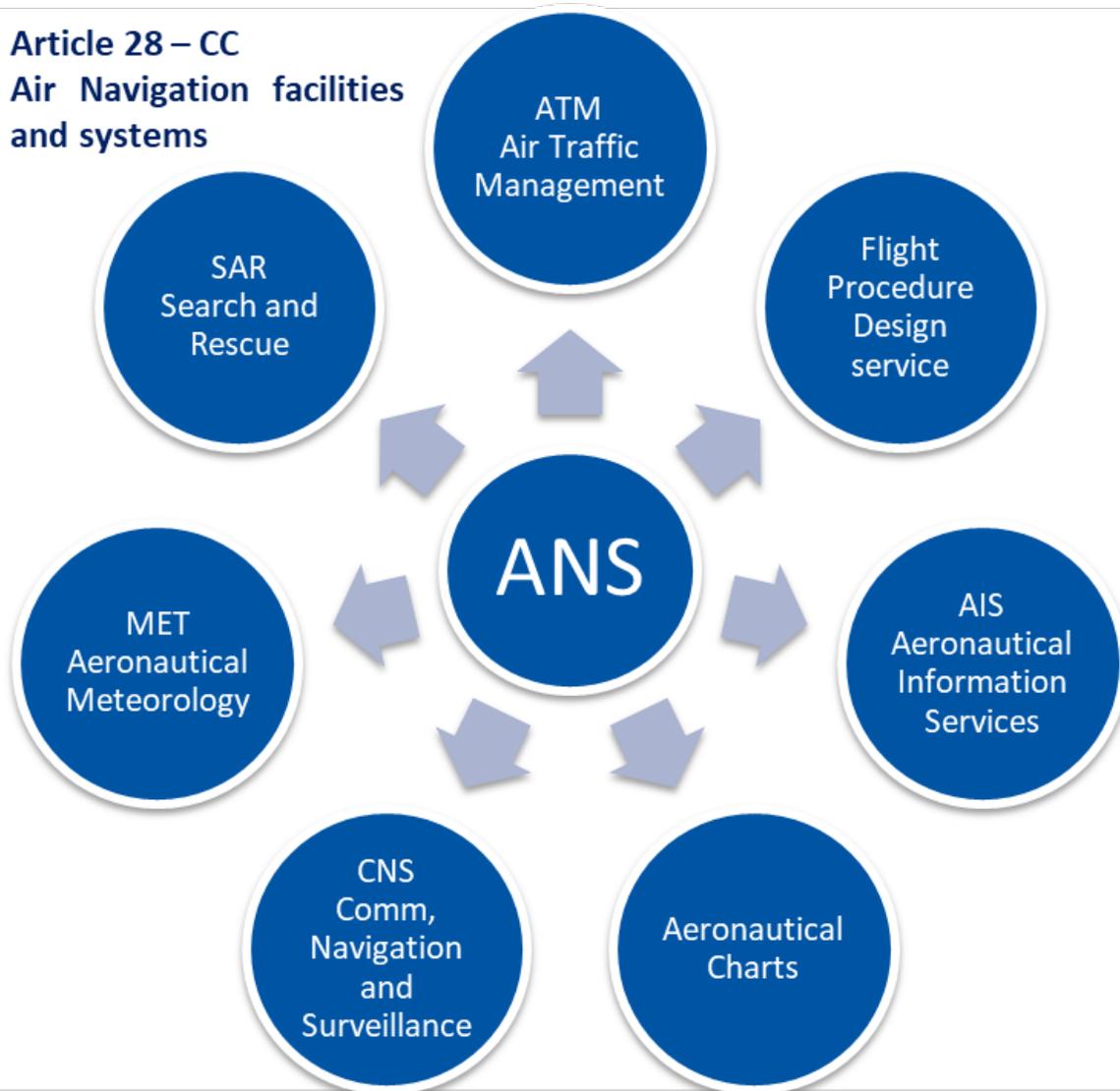
Provide instruments for the introduction / adoption and subsequent promulgation of specific operating regulations at least covering all 19 ICAO Annexes and PANS

Establishment of a rulemaking process to enable the timely development and promulgation of specific operating regulations in compliance with ICAO Annexes and its amendments

Establishment of policy and procedures for the enforcement of applicable legislation

Seven AN fields - 9 Annexes and 4 PANS

Article 28 – CC
Air Navigation facilities
and systems



Annex 2

- Rules of the Air

Annex 3

- Meteorological Service for International Air Navigation

Annex 4

- Aeronautical Charts

Annex 5

- Units of Measurement to be Used in Air and Ground Operations

Annex 10

- Aeronautical Telecommunications

Annex 11

- Air Traffic Services

Annex 12

- Search and Rescue

Annex 15

- Aeronautical Information Services

Annex 19

- Safety Management

PANS

- ATM
- OPS
- AIM
- MET

What is Safety Oversight?

A function performed by a State' CAA to ensure that individuals and organizations performing an aviation activity comply with safety-related national laws and regulations.

Essential Responsibilities:

- ✈ Establish rules
- ✈ Perform surveillance
- ✈ Resolve safety concerns



Basic safety oversight activities

1) surveillance

- ✈ monitor (safety performance)
- ✈ audit
- ✈ inspect
- ✈ assess (risk, personnel competencies)
- ✈ evaluate (safety-related data, effectiveness)

2) write regulations

3) write technical guidance material and procedures

4) train the inspectorate body (OJT,)

5) grant authorization and approvals

6) contribute/resolve safety issues

7) issuing licenses and certificates

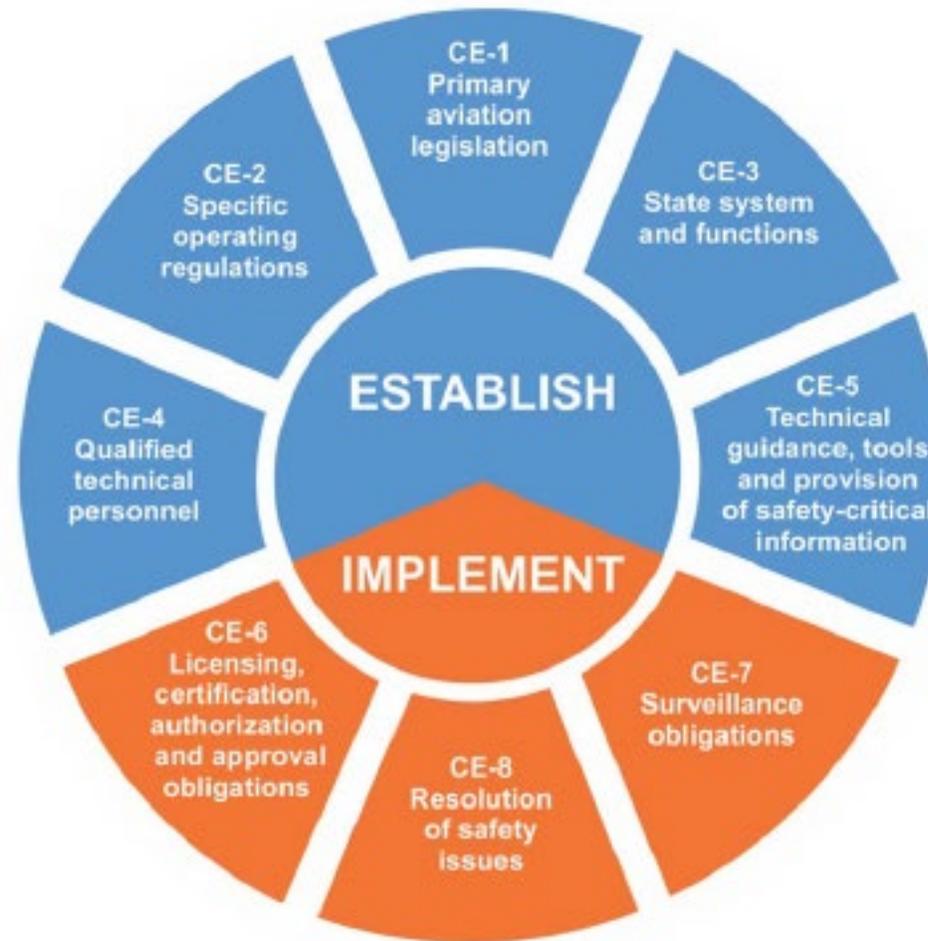
8) cooperation with other safety and ANSP entities

Critical Elements (CEs) of a State 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 OF A STATE SAFETY OVERSIGHT SYSTEM



1. Primary aviation legislation (CE-1)

1.1 States shall promulgate a comprehensive and effective aviation law, **commensurate with the size and complexity of their aviation activity** and consistent with the requirements contained in the Convention on International Civil Aviation, to enable the oversight and management of civil aviation safety and the enforcement of regulations through the relevant authorities or agencies established for that purpose.

1.2 The aviation law shall provide **personnel performing safety oversight functions access to** the aircraft, operations, facilities, personnel and associated records, as applicable, of individuals and organizations performing an aviation activity.

2. Specific operating regulations (CE-2)

States shall promulgate regulations to address, at a minimum, national requirements emanating from the primary aviation legislation, for standardized operational procedures, products, services, equipment and infrastructures in conformity with the Annexes to the Convention on International Civil Aviation.

3. State system and functions (CE-3)

3.1 States shall establish relevant authorities or agencies, as appropriate, supported by sufficient and qualified personnel and provided with adequate financial resources for the management of safety.

3.2 States authorities or agencies shall have stated safety functions and objectives to fulfil their safety management responsibility.

7.421	Has the State established for MET inspectors: a) job descriptions; b) appropriate minimum qualifications; and c) experience requirements?	1) Review job descriptions for MET inspectors. 2) Verify that qualifications criteria include: a) certificates or academic degrees that are commensurate with their job responsibilities, and b) operational and technical work experience that are compatible with the activities they are required to perform.	GM Doc 9734 Part A, C3		CE-3
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4. Qualified technical personnel (CE-4)

4.1 States shall establish minimum qualification requirements for the technical personnel performing safety-related functions and provide for appropriate initial and recurrent training to maintain and enhance their competence at the desired level.

4.2 States shall implement a system for the maintenance of training records for technical personnel.

7.429	Is the training programme appropriately implemented for MET inspectors?	<ol style="list-style-type: none"> 1) Review the most recent training plan. 2) Verify that the most recent training plan is in accordance with the programme and includes: <ol style="list-style-type: none"> a) Detailed training types; b) Priorities; and c) Time frames. 	GM Doc 9734 Part A, C3		CE-4
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5. Technical guidance, tools and provision of safety-critical information (CE-5)

5.1 States shall provide appropriate facilities, comprehensive and up-to-date technical guidance material and procedures, safety-critical information, tools and equipment, and transportation means, as applicable, to the technical personnel to enable them to perform their safety oversight functions effectively and in accordance with established procedures in a standardized manner.

5.2 States shall provide technical guidance to the aviation industry on the implementation of relevant regulations.

6. Licensing, certification, authorization and approval obligations (CE-6)

States shall implement documented processes and procedures to ensure that individuals and organizations performing an aviation activity meet the established requirements before they are allowed to exercise the privileges of a licence, certificate, authorization or approval to conduct the relevant aviation activity.

7.415	Does the State ensure that an agreement has been established between ATS and MET authorities?	<ol style="list-style-type: none"> 1) Review mechanism established to ensure effective implementation. 2) Verify existence of any agreements between the two authorities. 3) Verify whether the agreement includes the calibration of MET equipment that provides the information to support displays used by ATS. 	STD A11 2.21 RP A3 4.2 GM Doc 9377 C5 & App. 2	CE-6
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7. Surveillance obligations (CE-7)

States shall implement documented surveillance processes, by defining and planning inspections, audits and monitoring activities on a continuous basis, to proactively assure that aviation licence, certificate, authorization and approval holders continue to meet the established requirements. This includes the surveillance of personnel designated by the Authority to perform safety oversight functions on its behalf

7.477	Does the State ensure that the aeronautical meteorological stations are inspected at sufficiently frequent intervals?	Review mechanism established to ensure effective implementation of the calibration and maintenance of the automatic meteorological observing systems at aerodromes.	STD A3 C4, 4.1.4 GM Doc 9837		CE-7
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8. Resolution of safety issues (CE-8)

8.1 States shall use a documented process to take appropriate actions, up to and including enforcement measures, to resolve identified safety issues.

8.2 States shall ensure that identified safety issues are resolved in a timely manner through a system which monitors and records progress, including actions taken by individuals and organizations performing an aviation activity in resolving such issues.

7.437	Has the State established and implemented a mechanism/system with time frame for elimination of deficiencies identified by MET inspectors?	<p>1) Review list of deficiencies that have been identified by inspection and the remedial actions planned/taken.</p> <p>2) Review mechanism to advise, establish deadlines, <u>review</u> and accept, and follow up on actions to verify effective implementation of corrective action plans (CAPs).</p> <p>3) Review effective resolution of safety issues or appropriate enforcement (commensurate with the safety risk).</p>	GM Doc 9734 Part A, C3		CE-8
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Protocol Questions (PQs);

EI	7.412	7.415	7.451	7.459	7.461	7.463	7.465	7.467	7.475	7.476
0	⊘	✖	✖	✖	⊘	✖	✖	✖	✖	⊘
44.44	✔	✔	✖	✔	✖	✖	✖	✔	✖	⊘
77.78	✔	✖	✖	✔	✔	✔	✔	✔	✔	⊘
88.89	✔	✔	✖	✔	✔	✔	✔	✔	✔	⊘
88.89	✔	✔	✔	✔	✔	✔	✔	✔	✖	⊘
66.67	⊘	✔	✖	✔	⊘	✔	✔	✔	✔	⊘
100	✔	✔	✔	✔	✔	✔	✔	✔	✔	⊘
NaN	⊘	⊘	⊘	⊘	⊘	⊘	⊘	⊘	⊘	⊘
88.89	✔	✔	✖	✔	✔	✔	✔	✔	✔	⊘
100	✔	✔	✔	✔	✔	✔	✔	✔	✔	⊘
0	⊘	✖	✖	✖	⊘	✖	✖	✖	✖	⊘
77.78	✔	✔	✖	✔	⊘	✔	✔	✔	✔	⊘
0	✖	✖	✖	✖	✖	✖	✖	✖	✖	⊘
66.67	✔	✔	✖	✔	✔	✖	✖	✔	✔	⊘
100	✔	✔	✔	✔	✔	✔	✔	✔	✔	⊘
88.89	✔	✔	✖	✔	✔	✔	✔	✔	✔	⊘
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100	✔	✔	✔	✔	✔	✔	✔	✔	✔	⊘

MET GENERIC	CE-6	7.412	Has the State designated a meteorological authority to provide or <u>made arrangements</u> for the provision of MET services in accordance with Annex 3?
MET AMO MWO	CE-6	7.415	Does the State ensure that an agreement has been established between ATS and MET services providers?
MET OBSERVATIONS AND REPORTS	CE-6	7.459	Does the State ensure that the wind sensors for local routine reports are appropriately sited to give the best practicable indication of conditions along the runway/touchdown zone?
MET OBSERVATIONS AND REPORTS	CE-6	7.467	Does the State ensure that the MET service provider has established criteria for special observations and reports?
AERODROME METEOROLOGICAL WARNINGS	CE-7	7.465	Does the State ensure that MET offices issue wind shear warnings for aerodromes where wind shear is considered as a safety factor?
MET GENERIC	CE-7	7.451	Does the State ensure that the entity providing the MET service has established a properly organized quality system?
SIGMET	CE-7	7.461	Does the State ensure that SIGMETs are issued in accordance with Annex 3 provisions?
AIREP	CE-7	7.463	Does the State ensure that provisions related to special air-reports, including those for volcanic ash, are followed with respect to their relay to the relevant MET offices?
MET OBSERVATIONS AND REPORTS; METAR/SPECI; TAF; SIGMET; AIRMET; AERO. MET. WARNINGS	CE-7	7.475	Does the State ensure that meteorological reports are issued in accordance with the related technical specifications outlined in Annex 3?
MET GENERIC	CE-7	7.476	Does the State ensure that the meteorological personnel providing service for international air navigation comply with the requirements of the World Meteorological Organization (WMO) in respect of <u>qualifications, competencies</u> and education?
MET AMO WMO	CE-7	7.477	Does the State ensure that the aeronautical meteorological stations are inspected at sufficiently frequent intervals?

Average EI of selected PQs(11) for NACC: 64.77%





Thank You!