



# ICAO

International Civil Aviation Organization  
North American, Central American and Caribbean Office

WORKING PAPER

NACC/WG/8 — WP/08  
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**Eighth North American, Central American and Caribbean Working Group Meeting (NACC/WG/8)**  
Mexico City, 29 August - 1 September 2023

**Cuestión 3 del  
Orden del Día:**

**Seguimiento al plan de acción 2022-2023 del NACC/WG**

**3.1 Presentación por parte de los Grupos de Tarea (TF) del análisis de los Elementos constitutivos básicos (BBB) en las diferentes áreas de navegación aérea.**

### **PRESENTATION OF THE BBB IMPLEMENTATION ANALYSIS IN THE AGA AREA**

(Presented by the Secretariat)

#### **EXECUTIVE SUMMARY**

This working paper presents the Basic Building Blocks (BBB), in the AGA area, according to the new version of the Global Air Navigation Plan (GANP) Seventh Edition, its relationship with the ICAO Universal Safety Oversight Audit Programme (USOAP) and its need as a mandatory implementation in all ICAO State Members.

<b>Action:</b>	See section 4.
<i>Strategic Objectives:</i>	<ul style="list-style-type: none"><li>• Safety</li><li>• Air Navigation Capacity and Efficiency</li></ul>
<i>References:</i>	<ul style="list-style-type: none"><li>• Global Air Navigation Plan (GANP) Seventh Edition</li><li>• <a href="https://www4.icao.int/ganportal">https://www4.icao.int/ganportal</a></li></ul>

## **1. Introduction**

1.1 The Basic Building Block (BBB) framework outlines the foundation of any robust air navigation system. It is nothing new but the identification of the services to be provided to the international civil aviation in accordance with ICAO Standards is essential. These essential services are defined in the areas of aerodromes, air traffic management, search and rescue, meteorology and information management.

1.2 The BBBs are considered an independent framework and not a block of the ASBU framework, as they represent a baseline rather than an evolutionary step. This baseline is defined by essential services recognized by ICAO Member States as necessary for international civil aviation to develop in a safe and orderly manner.

1.3 To set a baseline for the system envisioned in the GANP and to ensure a robust foundation for the global air navigation system, an effective process should be established to verify, pursuant to Article 37 of the Chicago Convention, that the essential air navigation services identified in the BBB framework are provided.

1.4 It is important to highlight that this process should focus on verifying the implementation of the essential air navigation services outlined in the BBB framework, as the capability of the States to oversight these services is covered by the ICAO USOAP.

1.5 To avoid duplications and to align global and regional planning, the process for verifying the implementation of these essential services should be embedded within the methodology for the identification of deficiencies against the regional air navigation plans.

## 2. Regional Strategy for the Evaluation of BBBs in the AGA area

2.1 The Second Meeting of Rapporteurs of the North American, Central American and Caribbean Working<sup>1</sup> (NACC/WG/RAP/02) established a regional strategy for the assessment of BBBs in all areas. Regarding the area of aerodromes, it is important to observe that the 17 elements of the BBBs are contained in the Basic Module of “Aerodrome Certification”, therefore the certification of aerodromes is essential for compliance with the BBBs (See figure below):

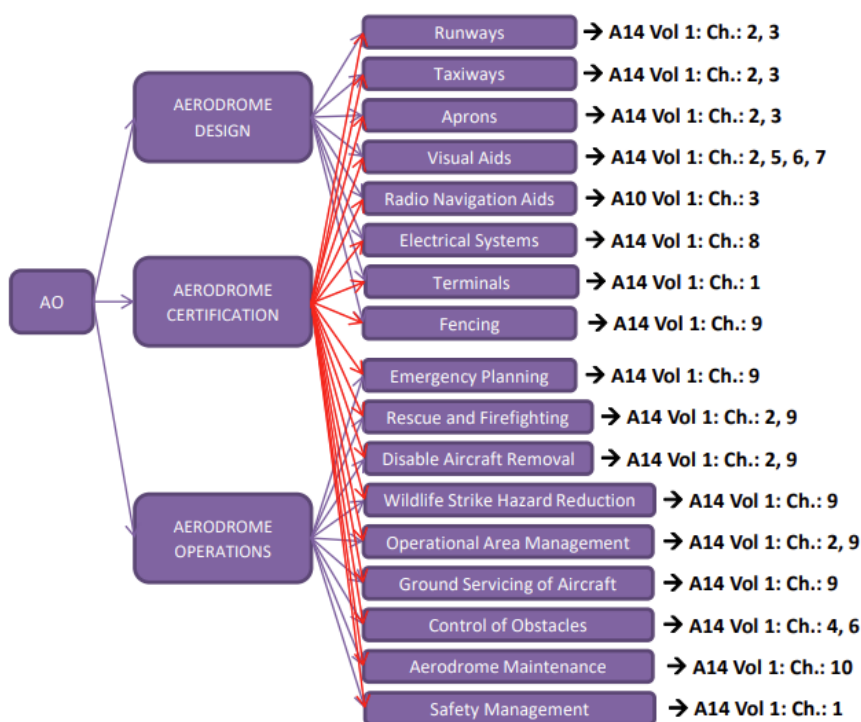


Figure 01. Basic Module and Elements BBBs with the references of ICAO SARPs.

<sup>1</sup> [NACC/WG/RAP/02 \(icao.int\)](http://NACC/WG/RAP/02(icao.int))

2.2 In this context, to support the States and Territories in the process of evaluating the BBBs, the ICAO NACC Regional Office developed a new format for the evaluation of these mandatory services in AGA area, which can be found on page 77 of the Final Report<sup>2</sup> of the NACC/WG/RAP/02 meeting. The format includes, in addition ICAO documentation references, the USOAP Protocol Questions (PQs) related to the implementation of these services.

2.3 The States of Costa Rica, Cuba, Honduras and Saint Lucia submitted the completed form, regarding BBBs in the area of aerodromes, for evaluation and follow-up to the Aerodromes and Ground Aids Task Force (AGA/TF) of NACC/WG.

### 3. Challenges of the CAR Region regarding BBBs in AGA area

3.1 As previously mentioned, there is a strong correlation between the analysis of the BBBs in AGA area and the certification of aerodromes, based on this, it is possible to observe the level of service provided by the BBBs by the number of certified international airports in the CAR Region.

3.2 In this case, the status of aerodromes certification in the CAR Region in 2023 shows a slight increase in the number of certified aerodromes. There are 98 certified aerodromes in the CAR region, which represents 66%.

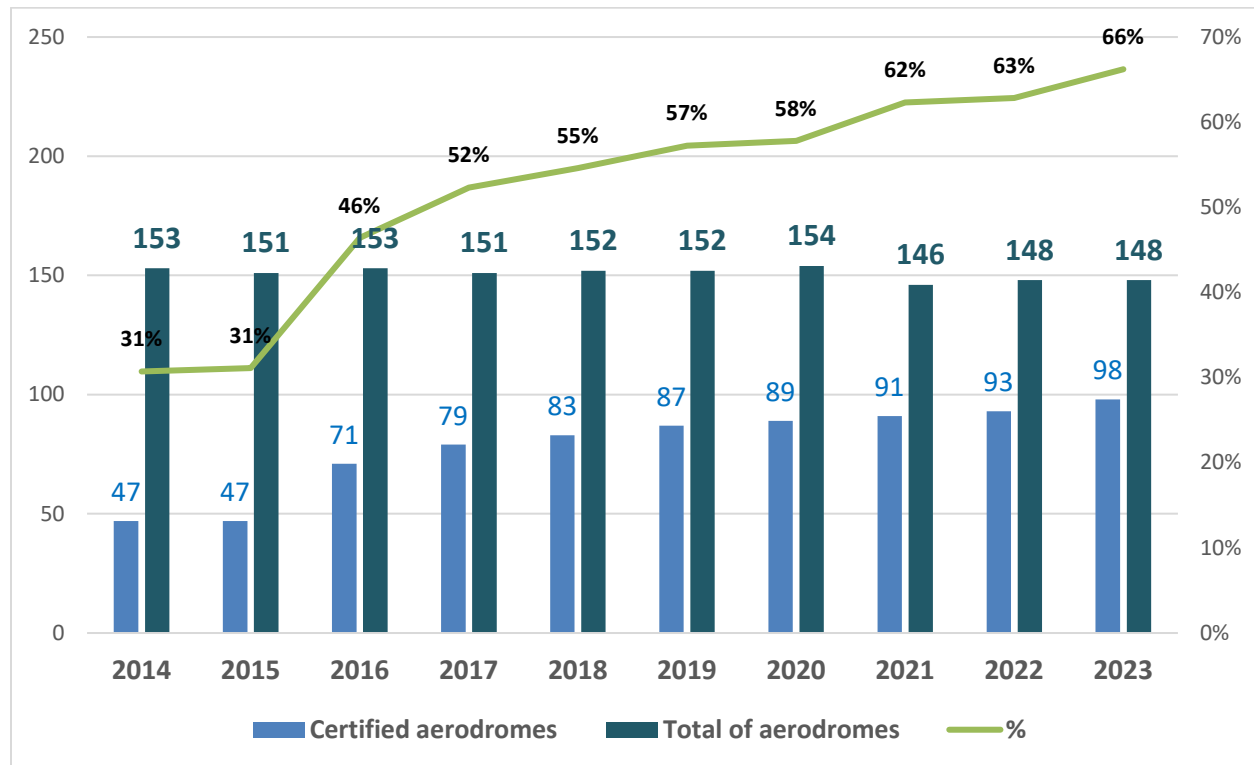


Figure 1: History of the airport certification process in the CAR region

Source: Aerodrome Certification Implementation Plan - CAR Region (Doc 8733, Vol. II, FASID, Table AOP 1)

<sup>2</sup> [NACCWGRAP02-FinalReport.pdf \(icao.int\)](https://www.icao.int/NACCWGRAP02-FinalReport.pdf)

3.3 Another possible analysis is through the USOAP PQs versus BBBs. In this case, the **Appendix** presents the table with BBBs versus USOAP PQs with Percentage of Compliance by CAR Region States and Territories, in AGA area.

3.4 It is observed in the Appendix, that the greatest deficiencies of the CAR Region are correlated with the following PQs:

- Does the State ensure that aerodrome operators have a process for determining and providing relevant information that a runway, or part of, may be slippery wet, and when the friction level of a paved runway or portion thereof is less than the minimum friction level specified by the State?
- Has the State established and implemented a mechanism to assess the outcomes of the conduct of risk assessments or aeronautical studies?
- Does the State ensure that aerodrome operators provide training for firefighting personnel, including live fire drills?
- Does the State ensure that aerodrome operators establish and implement procedures for the timely removal of contaminants?
- Does the State require and ensure the provision of runway end safety areas (RESA) at aerodromes?

3.5 In these cases, 75% of the States and Territories in the CAR Region do not comply with these PQs in the AGA.

3.6 In addition, it is observed that these States and Territories comply with around 50% of the BBBs, referring to the essential services provided by the airports for international civil aviation in accordance with ICAO Standards.

#### **4. Suggested Actions**

4.1 The Meeting is invited to:

- a) Take note of the information presented in this WP;
- b) request that States certify all their international airports and report to the Secretariat;
- c) request that States send completed BBBs evaluation forms with information about your international airports; and
- d) other actions that the meeting considers necessary.

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**AIRPORT BBBS VERSUS USOAP PQs WITH PERCENTAGE OF COMPLIANCE BY CAR REGION STATES AND TERRITORIES**

<b>BBBs</b>	<b>PQ</b>	<b>Protocol Question of USOAP</b>	<b>CE</b>	<b>No. of PQs with answer SAT or NOT SAT</b>	<b>No. of PQs NOT SAT</b>	<b>% PQ NOT SAT</b>
AERODROME CERTIFICATION	8.091	Does aerodrome certification staff track compliance with the initial certification requirements using appropriate checklists?	CE-6	<b>22</b>	<b>10</b>	<b>45%</b>
AERODROME CERTIFICATION	8.093	Does the scope of the certification process explicitly include referral to competent State entities and coordination with elements of air traffic service (ATS) for the local airspace of an aerodrome?	CE-6	<b>21</b>	<b>11</b>	<b>52%</b>
AERODROME CERTIFICATION	8.085	Does the aerodrome regulatory authority require that a prospective aerodrome operator complete and submit a formal application form for obtaining an aerodrome certificate?	CE-6	<b>22</b>	<b>6</b>	<b>27%</b>
AERODROME CERTIFICATION; AERODROME OPERATIONS	8.111	Does the State ensure that aerodrome operators develop and submit an aerodrome manual to the appropriate State authority for approval/acceptance prior to certification?	CE-6	<b>22</b>	<b>9</b>	<b>41%</b>
AERODROME CERTIFICATION; AERODROME OPERATIONS	8.113	As part of the certification process, does the State assess both initial and continuing organizational competence to ensure that the aerodrome operator's staff has the necessary competence and experience to operate and maintain the aerodrome properly?	CE-7	<b>22</b>	<b>13</b>	<b>59%</b>
AERODROME DESIGN (RWYS, TAXIWAYS, APRONS)	8.137	Does the State ensure that aerodrome operators comply with the requirements for the determination and reporting of pavement bearing strengths?	CE-6	<b>22</b>	<b>3</b>	<b>14%</b>
AERODROME MAINTENANCE	8.323	Does the State ensure that aerodrome operators establish and implement procedures for the timely removal of contaminants?	CE-6	<b>9</b>	<b>7</b>	<b>78%</b>
AERODROME MAINTENANCE	8.251	Does the State ensure that aerodrome operators develop and implement aerodrome maintenance programmes at all aerodromes in the interests of safety, efficiency and regularity of aircraft operations?	CE-6	<b>22</b>	<b>11</b>	<b>50%</b>
AERODROME MAINTENANCE	8.253	Does the State ensure that the aerodrome operators' maintenance programme include precautions for runway, taxiway and apron pavements and taxiway shoulders in relation to surface debris and regularity?	CE-6	<b>22</b>	<b>12</b>	<b>55%</b>

BBBs	PQ	Protocol Question of USOAP	CE	No. of PQs with answer SAT or NOT SAT	No. of PQs NOT SAT	% PQ NOT SAT
AERODROME MAINTENANCE	8.257	Has the State established and implemented a mechanism to ensure that aerodrome operators maintain good friction characteristics and low rolling resistance on runways?	CE-7	22	15	68%
AERODROME MAINTENANCE; OPERATIONAL AREA MANAGEMENT; SAFETY MANAGEMENT	8.143	Does the State ensure that aerodrome operators inspect the movement areas at the appropriate frequency, and monitor and report the condition of the movement areas and operational status of related facilities?	CE-7	22	10	45%
AERODROME MAINTENANCE; VISUAL AIDS	8.259	Does the State ensure that aerodrome operators: a) define maintenance performance level objectives for visual aids as part of their preventive maintenance programme, and b) restrict construction or maintenance activities in the proximity of aerodrome electrical systems during low visibility operations?	CE-6	22	13	59%
AERODROME OPERATIONS	8.087	Does the aerodrome regulatory authority review the organizational competence and level of resources of prospective aerodrome operators or certificate holders and ensure that they employ competent personnel to perform all critical activities for aerodrome operations and maintenance?	CE-6	21	13	62%
AERODROME OPERATIONS	8.115	Does the State ensure that: a) aerodrome manuals are reviewed periodically; b) the information contained in the manual remain correct; and c) up-to-date copies of approved aerodrome manuals are kept by the aerodrome regulatory authority?	CE-7	22	15	68%
AERODROME OPERATIONS	8.133	Has the State established coordination between aerodromes/heliports and AIS to ensure up-to-date information of aerodrome safety-related conditions?	CE-6	22	10	45%
CONTROL OF OBSTACLES	8.273	Does the State ensure that aerodrome operators implement the requirements that runway strips are free of objects unless they are needed for air navigation purposes and meet frangibility requirements?	CE-7	22	13	59%
CONTROL OF OBSTACLES	8.277	Does the State ensure the implementation of requirements relating to the group of obstacle limitation surfaces (OLS) at and around aerodromes?	CE-7	22	9	41%

BBBs	PQ	Protocol Question of USOAP	CE	No. of PQs with answer SAT or NOT SAT	No. of PQs NOT SAT	% PQ NOT SAT
CONTROL OF OBSTACLES	8.387	Does the State ensure the implementation of requirements relating to the obstacle limitation surfaces (OLS) and sectors?	CE-7	3	0	0%
CONTROL OF OBSTACLES; SAFETY MANAGEMENT	8.223	Does the State ensure that aerodrome operators/competent State authority comply with regulations relating to marking and lighting obstacles, both on the aerodrome and in the vicinity of aerodromes, which could otherwise present a hazard to aircraft?	CE-7	22	9	41%
CONTROL OF OBSTACLES; VISUAL AIDS	8.279	Has the State established and implemented a process to ensure that the siting or performance of visual and non-visual aids to navigation is not adversely affected by objects under the approach surface?	CE-7	22	8	36%
DISABLE AIRCRAFT REMOVAL	8.151	Does the State ensure that aerodrome operators provide contact information and aerodrome's capability for the removal of disabled aircraft?	CE-6	22	9	41%
DISABLE AIRCRAFT REMOVAL	8.321	Does the State ensure that the aerodrome has plans for the removal of disabled aircraft, including arrangements for designation of coordinators, the rapid availability and deployment of salvage and removal equipment between aerodromes, and the protection of evidence, custody and the removal of aircraft in accordance with Annex 13?	CE-6	22	8	36%
ELECTRICAL SYSTEMS	8.177	Where a runway forming part of a standard taxi-route is provided with runway lighting and taxiway lighting, does the State ensure that aerodrome electrical systems are interlocked to preclude the possibility of simultaneous operation of both forms of lighting?	CE-6	5	0	0%
ELECTRICAL SYSTEMS; AERODROME MAINTENANCE	8.175	If the aerodrome operators use runways when runway visual ranges are less than 550 m, does the State ensure that the electrical systems are designed so that an equipment failure will not leave the pilot with inadequate visual guidance?	CE-6	6	1	17%
ELECTRICAL SYSTEMS; AERODROME MAINTENANCE	8.173	Does the State ensure that aerodrome operators comply with regulations for the provision of primary and secondary power supplies?	CE-6	22	10	45%

BBBs	PQ	Protocol Question of USOAP	CE	No. of PQs with answer SAT or NOT SAT	No. of PQs NOT SAT	% PQ NOT SAT
EMERGENCY PLANNING	8.291	Does the State ensure that aerodrome operators/competent State authority develop emergency plans, including appropriate cooperation and coordination with other entities involved in the provision of emergency services and the development of the plans?	CE-6	22	10	45%
EMERGENCY PLANNING	8.293	Does the State ensure compliance with requirements for the periodic testing and review of aerodrome emergency plans?	CE-7	22	12	55%
EMERGENCY PLANNING	8.299	Does the State ensure the implementation of requirements for the establishment and manning of emergency operations centres and mobile command posts, and for communication between them?	CE-6	22	10	45%
EMERGENCY PLANNING	8.313	Does the State ensure that emergency access roads are provided at aerodromes?	CE-6	21	9	43%
EMERGENCY PLANNING; RESCUE AND FIREFIGHTING	8.297	Does the State ensure the implementation of requirements for the availability and coordination of specialist rescue services to be included in the emergency plans of aerodromes close to water, swampy areas or difficult terrain?	CE-6	22	11	50%
FENCING	8.183	Does the State ensure that aerodrome operators comply with regulations for providing a fence or suitable barriers to aerodromes and off-aerodrome ground installations and facilities, including sewers, ducts and tunnels as well as the requirements for the lighting of security fences and barriers?	CE-6	22	9	41%
GROUND SERVICING OF AIRCRAFT	8.349	Has the State established and implemented a mechanism to ensure the availability of fire extinguishing equipment and trained personnel during ground servicing of aircraft?	CE-7	22	10	45%
OPERATIONAL AREA MANAGEMENT	8.221	Does the State ensure that an aerodrome's surface movement guidance and control system (SMGCS) is designed to assist in the prevention of inadvertent incursions of aircraft and vehicles onto an active runway or taxiway, and collisions on any part of the movement area?	CE-6	22	14	64%
OPERATIONAL AREA MANAGEMENT	8.287	Does the State ensure that aerodrome operators control the use of vehicles on aerodromes, including the restriction on the use of airside roads?	CE-6	22	8	36%



<b>BBBs</b>	<b>PQ</b>	<b>Protocol Question of USOAP</b>	<b>CE</b>	<b>No. of PQs with answer SAT or NOT SAT</b>	<b>No. of PQs NOT SAT</b>	<b>% PQ NOT SAT</b>
OPERATIONAL MANAGEMENT AREA	8.341	If an apron management service is not provided, does the State ensure the safety of aircraft operations on apron areas, considering the movement of vehicles?	CE-7	12	6	50%
OPERATIONAL MANAGEMENT AREA	8.345	Does the State ensure that aerodrome operators restrict the operation of personnel and vehicles on an apron during low visibility operations?	CE-6	10	1	10%
OPERATIONAL MANAGEMENT AREA	8.347	Does the State ensure that aerodrome operators provide for visual monitoring of aircraft stand clearances and the control of vehicle movement on aprons?	CE-6	22	8	36%
OPERATIONAL MANAGEMENT AREA	8.209	Does the State ensure that aerodrome operators comply with the regulations for the provision of a surface movement guidance and control system (SMGCS) and that signs shall be provided to convey a mandatory instruction, information on a specific location or destination on a movement area?	CE-6	22	16	73%
OPERATIONAL MANAGEMENT; SAFETY MANAGEMENT AREA	8.144	Does the State ensure that personnel assessing and reporting runway surface conditions are trained and competent to perform their duties?	CE-6	0	0	
OPERATIONAL MANAGEMENT; SAFETY MANAGEMENT AREA	8.145	Does the State ensure that aerodrome operators establish and implement procedures to assess and report runway surface condition through a runway condition code (RWYCC) and a description using the appropriate terms?	CE-6	22	14	64%
OPERATIONAL MANAGEMENT; SAFETY MANAGEMENT AREA	8.147	Does the State ensure that aerodrome operators have a process for determining and providing relevant information that a runway, or part of, may be slippery wet, and when the friction level of a paved runway or portion thereof is less than the minimum friction level specified by the State?	CE-7	22	19	86%
OPERATIONAL MANAGEMENT; SAFETY MANAGEMENT AREA	8.157	Does the State ensure that aerodrome operators make available information about visual approach slope indicator system installations?	CE-6	22	4	18%
OPERATIONAL MANAGEMENT; SAFETY MANAGEMENT AREA	8.225	Does the State ensure that aerodrome operators develop and implement procedures to mark permanent and temporary movement area closures and meet location and characteristic specifications?	CE-6	22	12	55%

BBBs	PQ	Protocol Question of USOAP	CE	No. of PQs with answer SAT or NOT SAT	No. of PQs NOT SAT	% PQ NOT SAT
RESCUE AND FIREFIGHTING	8.301	Does the State ensure the implementation of requirements for the provision of rescue and firefighting (RFF) services at all aerodromes, which takes into account the aerodrome location and the surrounding terrain?	CE-7	21	8	38%
RESCUE AND FIREFIGHTING	8.305	Has the State established and ensured implementation of rescue and firefighting (RFF) extinguishing agent specifications, including quantities and discharge rates?	CE-7	22	9	41%
RESCUE AND FIREFIGHTING	8.307	Has the State promulgated and ensured implementation of regulations prescribing the minimum number of rescue and firefighting (RFF) vehicles, together with the associated building facilities and their location?	CE-7	22	9	41%
RESCUE AND FIREFIGHTING	8.309	Does the State ensure that aerodrome operators provide a discrete communication system and an alerting system among vehicles, fire stations and aerodrome control towers?	CE-6	22	8	36%
RESCUE AND FIREFIGHTING	8.311	Has the State established and implemented a mechanism to ensure the implementation of requirements for minimum response times by the rescue and firefighting (RFF) services?	CE-7	22	10	45%
RESCUE AND FIREFIGHTING	8.315	Does the State ensure that aerodrome operators provide training for firefighting personnel, including live fire drills?	CE-7	22	18	82%
RESCUE AND FIREFIGHTING	8.317	Does the State ensure that all responding firefighting personnel are equipped with the necessary protective clothing and respiratory equipment?	CE-7	22	8	36%
RESCUE AND FIREFIGHTING	8.319	Does the State ensure that there are sufficient trained personnel to operate all the necessary RFF equipment at maximum capacity, meet the minimum response times and maintain continuous agent application at the appropriate rate?	CE-7	22	9	41%
RESCUE AND FIREFIGHTING; SAFETY MANAGEMENT	8.153	Does the State ensure that aerodrome operators provide information concerning the level of protection available at an aerodrome for aircraft rescue and firefighting (RFF) purposes?	CE-6	22	2	9%

BBBs	PQ	Protocol Question of USOAP	CE	No. of PQs with answer SAT or NOT SAT	No. of PQs NOT SAT	% PQ NOT SAT
RESCUE AND FIREFIGHTING; SAFETY MANAGEMENT	8.155	Does the State ensure that aerodrome operators notify changes in the level of aircraft rescue and firefighting (RFF) protection normally available at an aerodrome to air traffic service (ATS) and AIS?	CE-7	22	10	45%
RUNWAYS; SAFETY MANAGEMENT	8.163	Does the State require and ensure the provision of runway end safety areas (RESA) at aerodromes?	CE-6	22	17	77%
RUNWAYS; TAXIWAYS; APRONS	8.227	Does the State ensure that aerodrome operators use taxi side stripe markings on taxiways, runway turn pads, holding bays and aprons in order to distinguish non-load-bearing surfaces and unserviceable areas from load-bearing areas?	CE-6	22	9	41%
RUNWAYS; VISUAL AIDS; CONTROL OF OBSTACLES	8.191	Does the State ensure that aerodrome operators comply with the frangibility and height restriction requirements for equipment or installations located near or on a runway, on the non-graded portion of a runway strip, on precision approach runways, or for obstacles of operational significance?	CE-6	22	10	45%
SAFETY MANAGEMENT	8.171	Whenever a change to the aerodrome physical characteristics, facilities or equipment is proposed, does the aerodrome regulatory authority ensure that the aerodrome operator has a procedure for evaluating the impact of this change on the safety of the existing operation?	CE-7	22	13	59%
SAFETY MANAGEMENT	8.204	Does the State ensure that aerodrome operators comply with requirements related to runway safety, including the establishment of a runway safety team?	CE-6	0	0	
SAFETY MANAGEMENT	8.233	Does the State ensure that aerodrome operators/competent State authority comply with regulations on the requirement to extinguish, screen or otherwise modify non-aeronautical lights which could present a hazard to aircraft safety?	CE-7	21	12	57%
SAFETY MANAGEMENT	8.365	Has the State promulgated and ensured implementation of a regulation to require aerodrome operators to ensure that organizations performing activities at the aerodrome comply with the aerodrome safety requirements?	CE-6	22	14	64%

BBBs	PQ	Protocol Question of USOAP	CE	No. of PQs with answer SAT or NOT SAT	No. of PQs NOT SAT	% PQ NOT SAT
SAFETY MANAGEMENT	8.375	Has the State established and implemented a mechanism to assess the outcomes of the conduct of risk assessments or aeronautical studies?	CE-7	22	19	86%
SAFETY MANAGEMENT; CONTROL OF OBSTACLES	8.385	Does the State ensure the implementation of requirements for safety areas surrounding final approach and take-off areas (FATOs) for helicopters?	CE-7	3	0	0%

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