ICAO

SAFETY

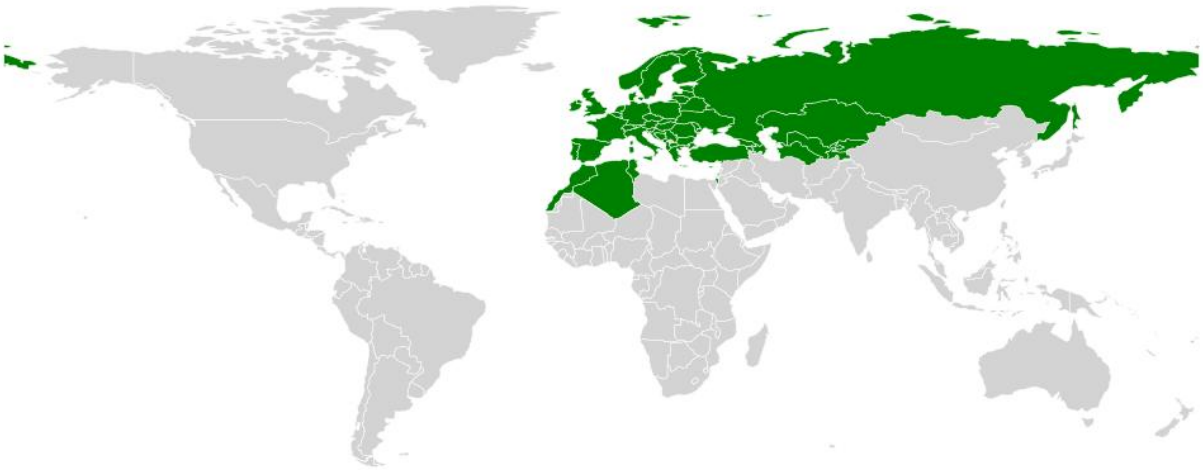
EUROPEAN AVIATION SYSTEMS PLANNING GROUP

EUR 2019 Annual Safety Report

European and North Atlantic Office

European Aviation Systems Planning Group

EUR ANNUAL SAFETY REPORT 2019



Foreword

The European Air Navigation Planning Group (EANPG) and European Regional Aviation Safety Group (RASG -EUR) decided during the combined EANPG/60 and RASG-EUR/07 meeting in November 2018 to unite their activities under the new European Aviation Systems Planning Group (EASPG).

The first meeting of the European Aviation System Planning Group (EASPG), which merged the former EANPG and RASG-EUR, took place from 2 to 5 December 2019 at the ICAO EUR/NAT Office in Paris, France. This is a new beginning in the ICAO EUR working structure. The intent is to improve coordination between air navigation and aviation safety-related activities, enabling an aviation system-level approach to managing safety and leading to enhanced efficiencies and synergies.

The EASPG Terms of Reference (ToR) were approved by the ICAO President of the Council on 11 September 2019. The objectives of the EASPG include the monitoring of progress in the GANP and GASP implementation and reporting to the ICAO Council. This EUR Annual Safety Report supports the EASPG Work Programme by facilitating the sharing of, and discussion on safety information, safety related matters and experiences among all stakeholders.

Members of EASPG are States within the area of accreditation of the European and North Atlantic (EUR/NAT) Office of ICAO in the EUR Region. EASPG observers include international organizations like EASA, EUROCONTROL, IAC, ACI, CANSO, IATA, IBAC, ICCAIA, IFALPA, IFATCA, IFALDA and two States outside the EUR accreditation area: Iceland and the United States.

The report is developed fully in line with ICAO's "No Country Left Behind" goals to support aviation improvement projects and to optimize collaboration between States, ICAO, regional stakeholders and industry.

The Annual Safety Report and other EASPG related documentation can be downloaded at: https://www.icao.int/EURNAT/Pages/EUR-and-NAT-Document.aspx

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Executive Summary

The number of accidents involving scheduled commercial operations with aircraft of maximum mass of over 5700 kg and occurring in one of the 55 States in the EUR Region has increased in 2019 compared to 2018: 29 of such accidents occurred in 2019, including three fatal accidents resulting in 55 fatalities. Over the same period there was an increase in scheduled commercial departures which results in a regional accident rate of 2.96 accidents per million departures, up 8% from the 2018 rate of 2.74 accidents per million departures.

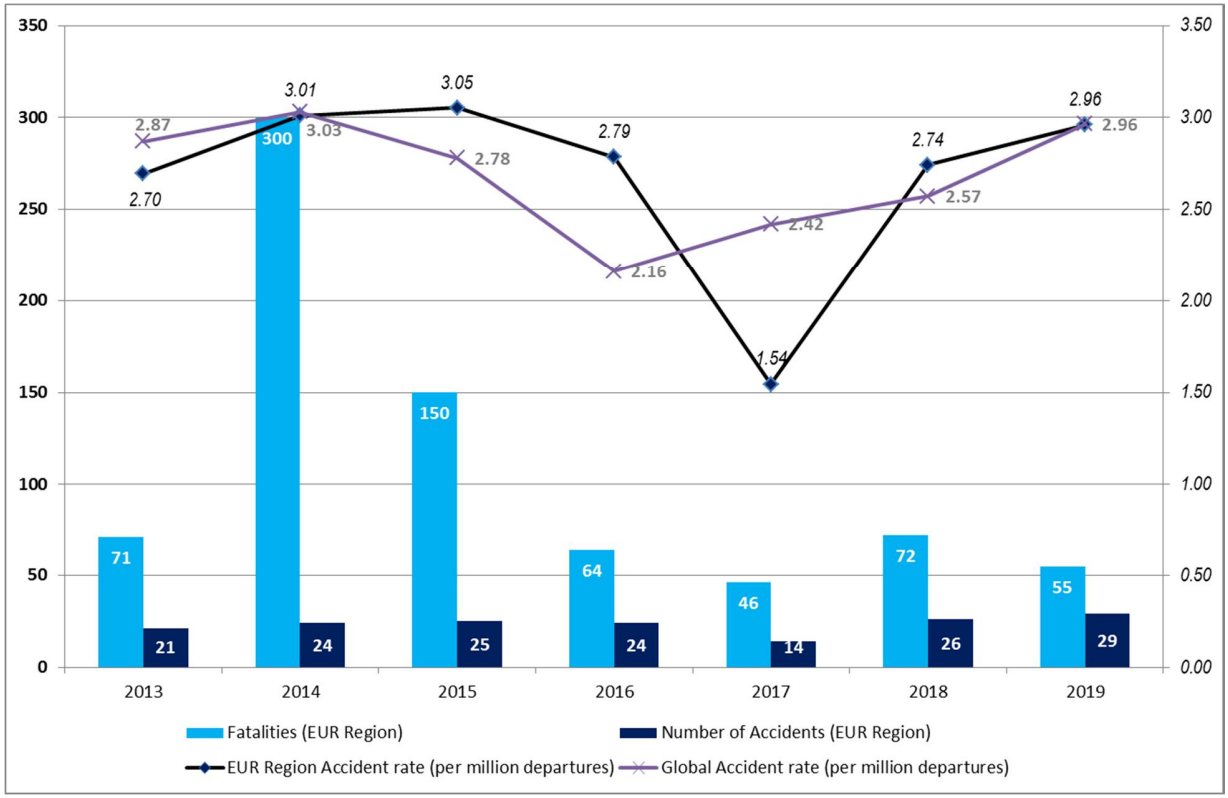


Figure 1 – Accidents in the EUR Region involving scheduled commercial operations with fixed-wing aircraft with a MTOW greater than 5700 kg in 2019

The Universal Safety Oversight Audit Programme Continuous Monitoring Approach (USOAP CMA) measures the effective implementation of a State's safety oversight system. In 2019, 15 USOAP-CMA related activities were carried out in the EUR Region. USOAP CMA results show an average Effective Implementation (EI) score for States in the EUR Region of 77.66%, which is above the world average of 68.75%. USOAP CMA results also show that:

- 87.27% of the States in the EUR Region have achieved the target of 60% EI as outlined as threshold by the 2017-2019 edition of the Global Aviation Safety Plan (GASP)
- Accident and Incident Investigation (AIG) is the area with the lowest EI
- Technical staff qualifications and training (CE-4) is the top issue affecting States' oversight capabilities in the EUR Region.

SSP Foundation data from the ICAO integrated Safety Trend Analysis and Reporting System (iSTARS) shows that, on average, States in the EUR Region have implemented 81.38% of the USAOP CMA

protocol questions considered as essential to establish a mature foundation to support effective State Safety Programme (SSP) implementation. Safety promotion is one of the weakest SSP subject for States in the EUR Region.

As of 31 December 2019, a total of 33 Air Navigation deficiencies classified as having top priority requirements necessary for air navigation safety were identified in the EUR region. One unresolved deficiency having a direct impact on safety and concerning the provision of safety monitoring data to the Regional Monitoring Agency was identified in the EUR region.

The safety risks identified in the EUR Region were addressed through various initiatives in 2019 and have led to accomplishments like:

- Resolution of the Significant Safety Concern (SSC) in Kyrgyzstan pertaining to the certification process for the issuance of air operator certificates and improvement of the Effective Implementation (EI) of States' safety oversight system as a result of capacity building technical assistance activities of the ICAO EUR/NAT Office supported by several donor States and international organizations.
- Four States in the EUR Region have received the ICAO's Council President Certificate in recognition of significant progress in resolving safety oversight deficiencies.
- Four Runway safety Go Teams conducted in cooperation with partner States and international organizations resulting in establishment or improvements of local runway safety teams and recommendations for the national runway safety programmes.
- Four workshops on Aerodrome Certification (AGA) were conducted to build the necessary capacity for CAAs aerodrome inspectorate staff (83 experts trained between December 2018 and December 2019).
- An Accident Investigation (AIG) and ECCAIRS user workshop developed competencies to enable States to conduct independent and effective investigations of aircraft accidents and incidents, support the implementation of ADREP/ECCAIRS compatible taxonomies and databases as well as support States in better fulfilling their investigation obligations within the context of Annex 13.
- Supporting States in the effective implementation of ICAO's policies, plans and SARPs, and in particular, for the improvement of Effective Implementation (EI) of States' safety oversight capabilities is a key objective of the EUR/NAT NCLB Technical Assistance Programme (EUR/NAT TAP). In 2019, the following Technical Assistance (TA) activities were conducted within the framework of EUR/NAT TAP, in close coordination with States, regional and international organizations and with the aim to strengthening States' safety oversight capabilities.
- Three Technical Assistance projects were conducted under the EUR/NAT NCLB Technical Assistance Programme (EUR/NAT TAP) in Belarus, Tajikistan and Ukraine for providing training for 2 months each, including on-the-job training, and for enhancing safety oversight capacities of State civil aviation inspectorate staff.

1. Regional safety performance

1.1. Accident statistics

ICAO's primary indicator of safety in the global air transport system is the accident rate based on scheduled commercial operations involving fixed-wing aircraft with a maximum mass of over 5 700 kg. Aircraft accidents are categorized using the definition provided in Annex 13 — Aircraft Accident and Incident Investigation and the details of each accident for which the State of Occurrence is within the EUR Region have been reviewed by the ICAO Safety Indicator Study Group (SISG) to assure the accuracy of the data. The accident rate for the EUR Region is 2.96 per million departures in 2019.

Year	Departures (millions)	Number of Accidents	Accident rate (per million departures)	Fatal Accidents	Fatalities
2013	7.79	21	2.70	2	71
2014	7.98	24	3.01	2	300
2015	8.19	25	3.06	1	150
2016	8.62	24	2.79	2	64
2017	9.06	14	1.54	3	46
2018	9.49	26	2.74	2	72
2019	9.79	29	2.96	3	55

Table 1 – Accidents in the EUR Region involving scheduled commercial operations with fixed-wing aircraft with a maximum mass of over 5 700 kg

The term 'accident' used throughout this report has the meaning defined in Annex 13 to the Convention on International Civil Aviation. Annex 13 — Aircraft Accident and Incident Investigation requires that the State of Occurrence forward a notification of an accident to ICAO when the aircraft involved is of maximum mass of over 2 250 kg or is a turbojet-powered aeroplane. This requirement is regardless of the type of operations (scheduled commercial or not).

In 2019, 49 accidents involving aircraft of maximum mass of over 2 250 kg occurred in the EUR Region (see Appendix). Out of these 49 accidents, 7 were fatal accidents, causing 65 fatalities. The breakdown by mass groups and flight phases is on the figure below.

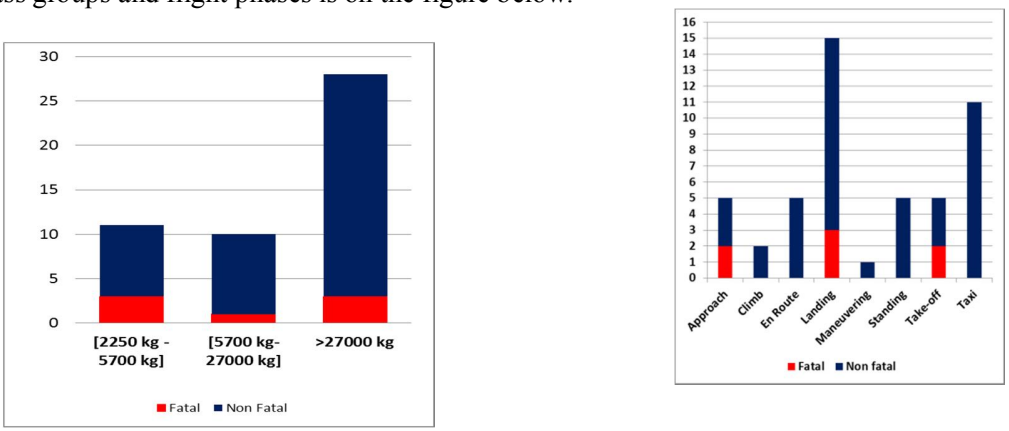
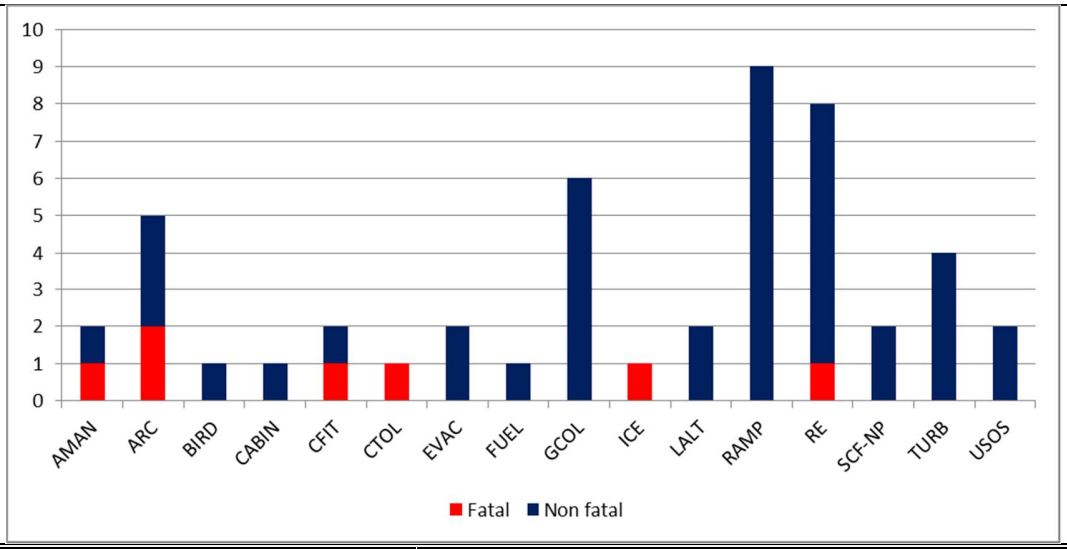


Figure 2a - Accidents involving aircraft of maximum mass of over 2 250 kg which occurred in the EUR Region in 2019

The breakdown by Occurrence Categories[1] is on the figure below:



Occurence Category Name	Occurence Category Description
AMAN - Abrupt Maneuver	The intentional abrupt maneuvering of the aircraft by the flight crew.
ARC - Abnormal Runway Contact	Any landing or takeoff involving abnormal runway or landing surface contact
BIRD - Bird	Occurrences involving collisions/near collisions with bird(s).
CABIN - Cabin Safety Events	Miscellaneous occurrences in the passenger cabin of transport category aircraft.
CFIT - Controlled Flight Into Or Toward Terrain	In-flight collision or near collision with terrain, water, or obstacle without indication of loss of control.
CTOL - Collision With Obstacle(S) During Takeoff And Landing	Collision with obstacle(s) during takeoff or landing while airborne.
EVAC - Evacuation	Occurrence in which either, (a) a person(s) was/were injured during an evacuation, (b) an unnecessary evacuation was performed, (c) evacuation equipment failed to perform as required, or (d) the evacuation contributed to the severity of the occurrence.
FUEL - Fuel Related	One or more powerplants experienced reduced or no power output due to fuel exhaustion, fuel starvation/mismanagement, fuel contamination/wrong fuel, or carburetor and/or induction icing.
GCOL - Ground Collision	Collision while taxiing to or from a runway in use.
ICE - Icing	Accumulation of snow, ice, freezing rain, or frost on aircraft surfaces that adversely affects aircraft control or performance.
LALT - Low Altitude Operations	Collision or near collision with obstacles/objects/terrain while intentionally operating near the surface (excludes takeoff or landing phases).
RAMP - Ground Handling	Occurrences during (or as a result of) ground handling operations.
RE - Runway Excursion	A veer off or overrun off the runway surface.
SCF-NP - System/Component Failure Or Malfunction (Non-Powerplant)	Failure or malfunction of an aircraft system or component other than the powerplant.
TURB - Turbulence Encounter	In-flight turbulence encounter.
USOS - Undershoot/Overshoot	A touchdown off the runway/helipad/helideck surface.

Figure 2b - Accidents involving aircraft of maximum mass of over 2 250 kg which occurred in the EUR Region in 2019

[1] Occurrence Categories are defined by the CICCTT taxonomy
http://www.intlaviationstandards.org/Documents/OccurrenceCategoryDefinitions.pdf

1.2. EUR safety metrics and targets

The EUR Regional Aviation Safety Plan (RASP) 2019–2023 provides EUR Safety Metrics and Targets. The values achieved in 2019 for these metrics are:

	Value for reference period	**Value for 2019**
ST1 – Accident rate in scheduled commercial air transport	2009-2013 regional average: 3.84 accidents per million departures (for aircraft with maximum mass above 5,700 kg) 2009-2013 moving five-year regional average number of accidents: 25.2 (for aircraft with MTOW above 27000kg)	2015-2019 average: 2.61 accidents per million departures (for aircraft with maximum mass above 5,700 kg) 2015-2019 moving five-year regional average number of accidents: 19.8 (for aircraft with MTOW above 27000kg)
ST2 – CAA resources	52.97%	66.61%
ST3 – Certification, surveillance and resolution of safety concerns	CE-6: 81.52% CE-7: 67.23% CE-8: 70.39% Average EI: 73.05%	CE-6: 79.62% CE-7: 61.3% CE-8: 62.08% Average EI: 67.58%
ST4 – SSC resolution	Unresolved SSC: 0 New SSCs not resolved within 2 years from publications in ICAO: 0	Unresolved SSC: 0 New SSCs not resolved within 2 years: 0
ST5 – SSP implementation	N/A	"Gap analysis started": by 67% of States above 60% EI
		"Gap analysis completed": by 60% of States above 60% EI
		"Implementation plan defined": by 42% of States above 60% EI
		"SSP implementation completed": by 0% of States above 60% EI
ST6 – Accident investigations	There were 21 accidents reported to ICAO in 2013 with State of occurrence in EUR/NAT region. 19 accidents were found to have investigations launched. For the residual 2, no information was found if the investigation is launched, i.e. the rate was 90.48%	An investigation was instituted for 47 of the 49 accidents involving aircraft of maximum mass of over 2 250 kg occurring in the EUR Region in 2019 i.e. the rate was 96%.

Table 2 - Safety Targets for EUR Region in 2019

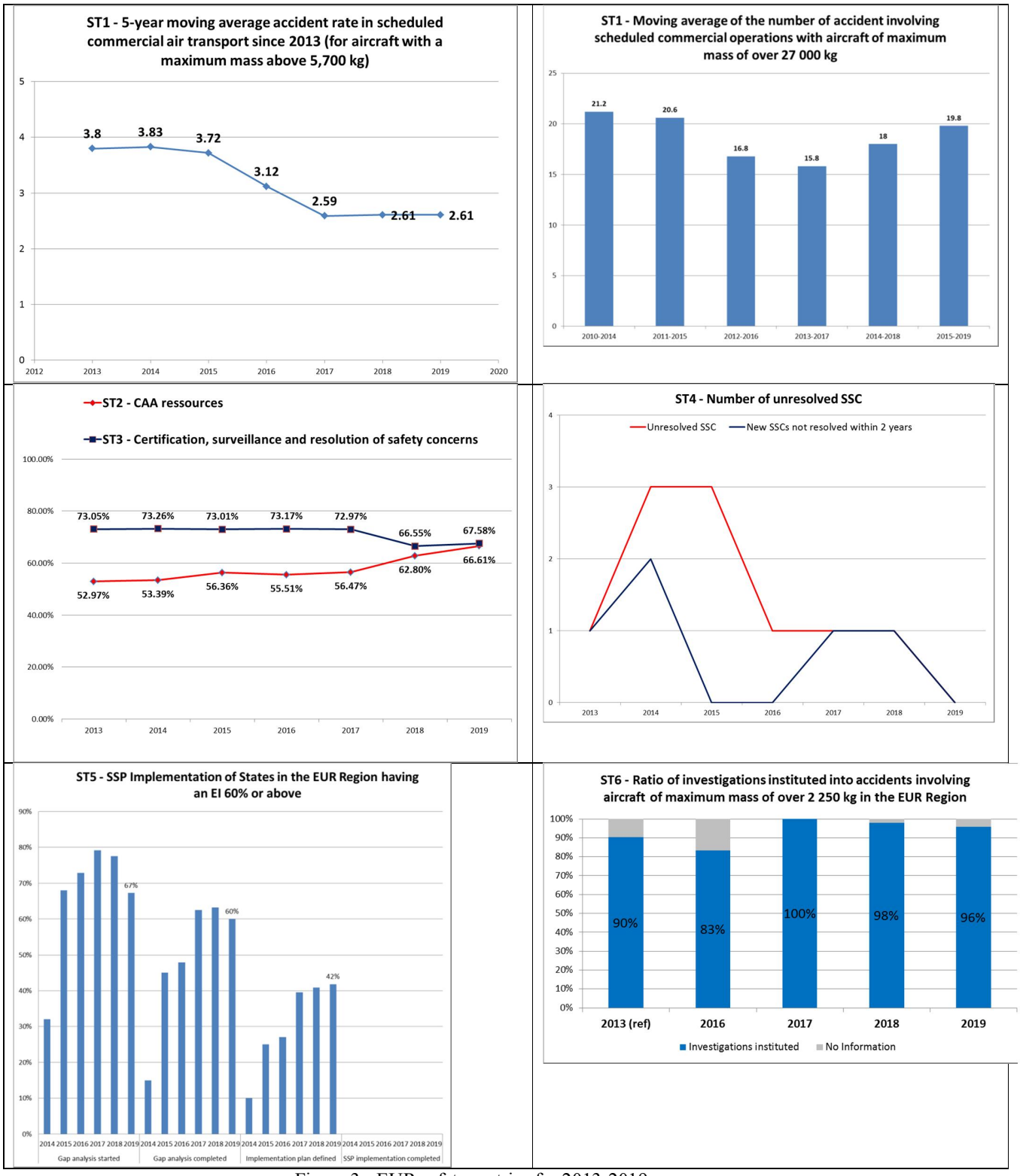


Figure 3 - EUR safety metrics for 2013-2019

2. Safety oversight audit activities

2.1. Universal Safety Oversight Audit Programme Continuous Monitoring Approach (USOAP CMA)

In 2019, 15 USOAP CMA-related activities were carried out in the EUR Region. The main activities under USOAP CMA are:

- Audit: this activity is performed on-site to conduct a systematic and objective assessment of a State's safety oversight system. It can be a full or limited scope.

- ICAO Coordinated Validation Mission (ICVM): this activity is performed on-site to collect and assess evidence of a State's effective correction of previously identified findings (in one or more audit areas). The collected evidence is reviewed and validated at ICAO HQ.

- Off-site validation activity: this activity is performed to assess a State's effective corrective actions addressing previously identified findings related to PQs not requiring an on-site activity.
- State Safety Programme Implementation Assessment (SSPIA).

	State/Organization	Type of activity	Dates
1.	Austria	Off-site validation activity	October 2019
2.	Bosnia and Herzegovina	ICVM	18-25 February 2019
3.	Cyprus	ICVM	5-12 November 2019
4.	Kyrgyzstan	ICVM	8-12 April 2019
5.	Lithuania	Off-site validation activity	May 2019
6.	Montenegro	ICVM	22-29 January 2019
7.	Netherlands (Curaçao only)	Audit	2-12 September 2019
8.	Serbia	ICVM	19-26 March 2019
9.	Slovenia	ICVM	27 August – 3 September 2019
10.	Spain	SSPIA	4-14 November 2019
11.	Turkey	Off-site validation activity	October 2019
12.	Turkmenistan	Audit	10-21 June 2019
13.	Ukraine	Off-site validation activity	December 2019
14.	United Kingdom (Bermuda only)	Audit	6-16 May 2019
15.	United Kingdom	Off-site validation activity	May 2019

Table 3 – USOAP CMA activities in EUR Region in 2019

Results of the USOAP are presented to show the Effective Implementation (EI) by States in reference to the 8 Critical Elements (CEs), which ICAO considers essential for a State to establish, maintain and improve in order to have an effective safety oversight system. USOAP CMA results show an average Effective Implementation (EI) score for States in the EUR Region of 77.66%, which is above the world average of 68.75%. USOAP results also show that 87.27% of the States in the EUR Region have achieved the target of 60% EI as suggested by the 2017-2019 edition of the Global Aviation Safety Plan (GASP).

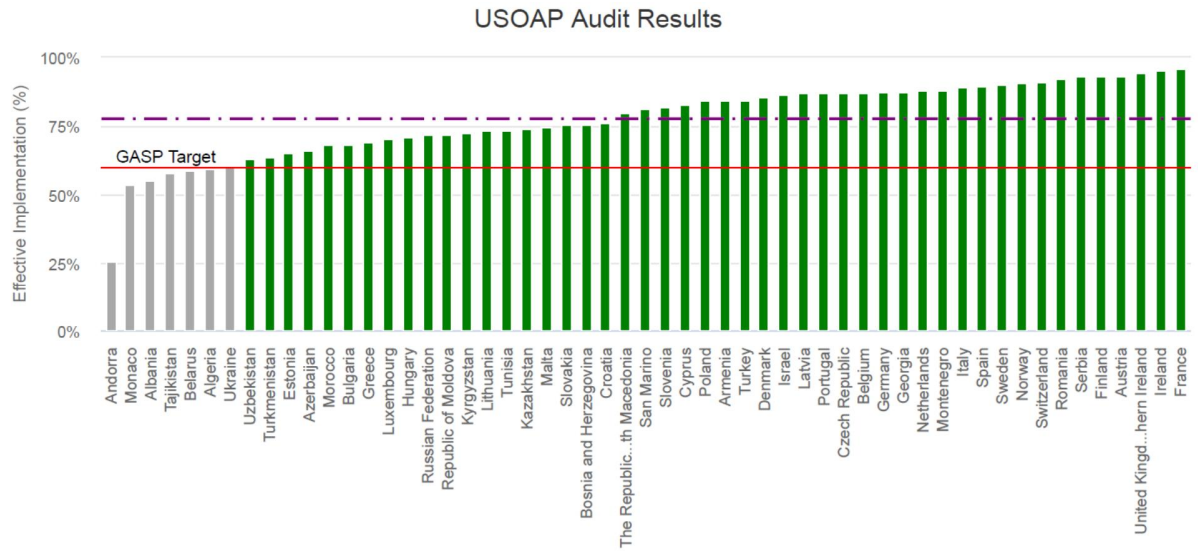


Figure 4 – USOAP Audit Results for States in EUR Region as of 5 March 2020 *(Source iSTARS)*

USOAP results also show that AIG (Accident and Incident Investigation) is the area with the lowest EI (66.32%) and that CE4 (Technical staff qualifications and training) is the top issue affecting the effective implementation percentage (65.01%) in the EUR Region.

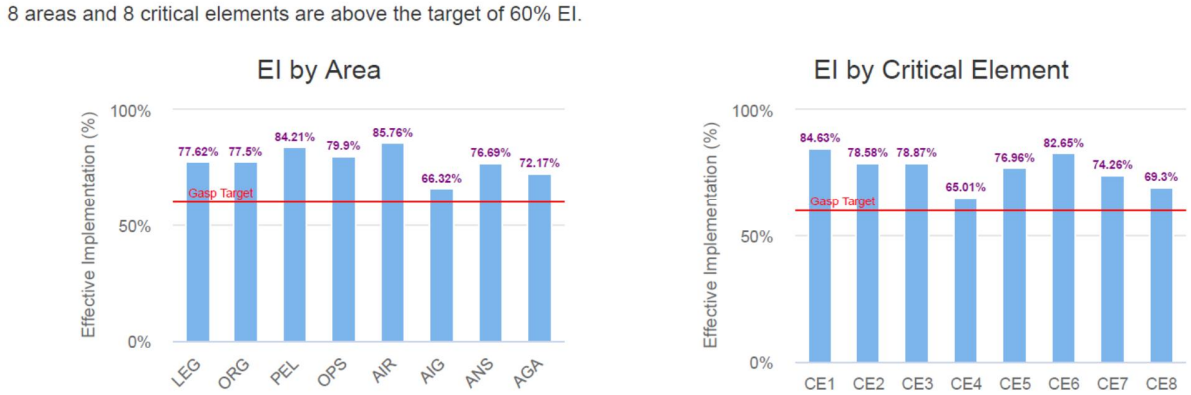


Figure 5 – USOAP Audit Results for States in EUR Region by Area and CE as of 5 March 2020 *(Source: iSTARS)*

2.2. State Safety Programme

A sub-set of 299 Protocol Questions (PQs) out of the 943 ICAO USOAP CMA PQs is used to assist States to build a solid safety oversight foundation for the implementation of SSP. This sub-set of questions is considered as the foundation for a State Safety Programme (SSP) implementation. A SSP Foundation indicator is calculated, as the percentage of PQs which are either validated by the ICAO USOAP team or reported as completed by the State through the corrective action plans (CAP) on the USOAP CMA Online Framework.

The average EI for SSP foundation PQs for States in the EUR Region is 81.38 %. The SSP foundation EI for States in the EUR Region is shown on the figure below.

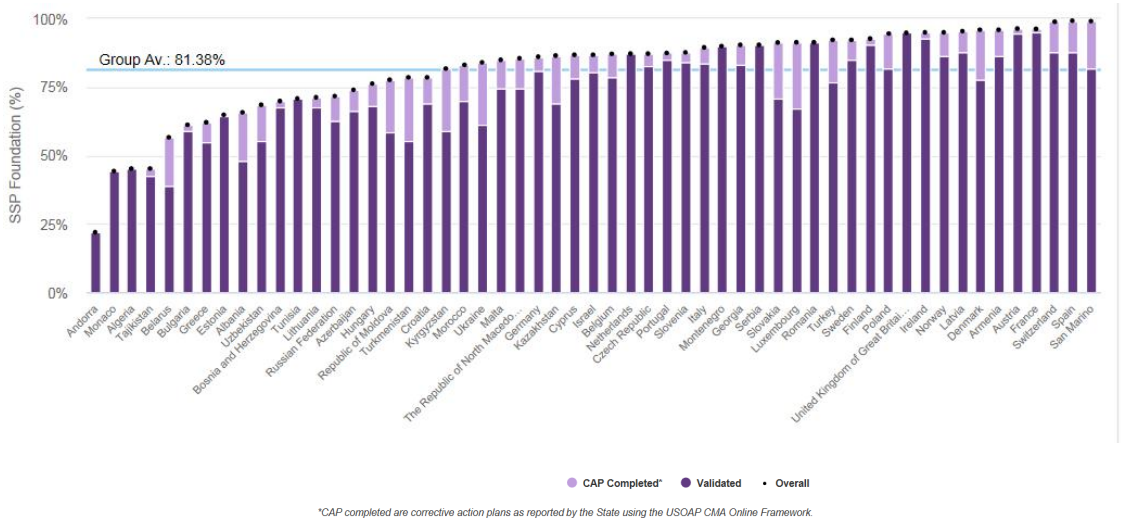


Figure 6 – Overall SSP Foundation for States in EUR Region *(source: iSTARS)*

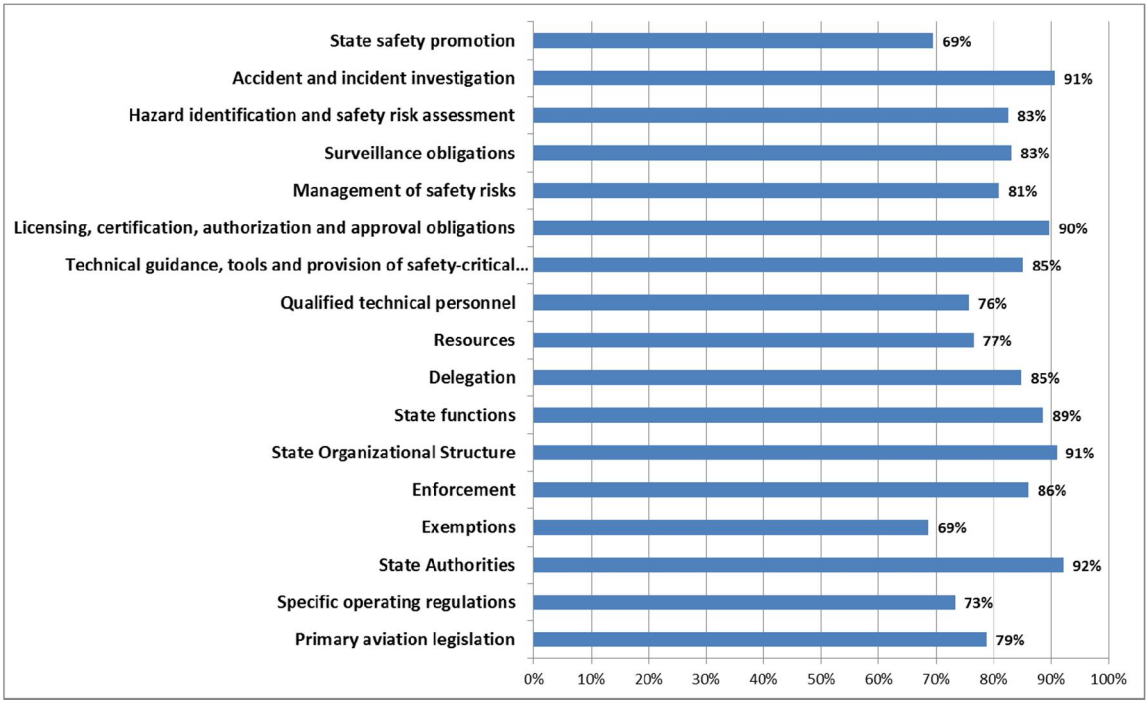


Figure 7 – Average EI by Safety Management subjects for States in EUR Region (as of 11 March 2020)

These PQs can be prioritized and addressed when conducting the SSP Gap Analysis or while defining the SSP implementation/action plan. States can use the ICAO iSTARS online application to perform an SSP Gap Analysis as defined in the 4th edition of the Safety Management Manual (SMM). This provides an indication of the broad scope of gaps and hence overall workload to be expected. This initial information

can be useful to senior management in anticipating the scale of the SSP implementation effort and hence the resources to be provided.

The SSP statistics shown in the figure below are high-level information about each Gap analysis project performed by States themselves. SSP implementation progress has been measured for each State using simple milestone as per the entered data. A State having reviewed all Gap Analysis Questions (GAQs) has reached Level 2. A State having defined an action plan for all non-implemented questions has reached Level 3. A State having closed all actions and fully implemented its SSP has reached Level 4.

The number of EUR States in each SSP implementation level is given below.

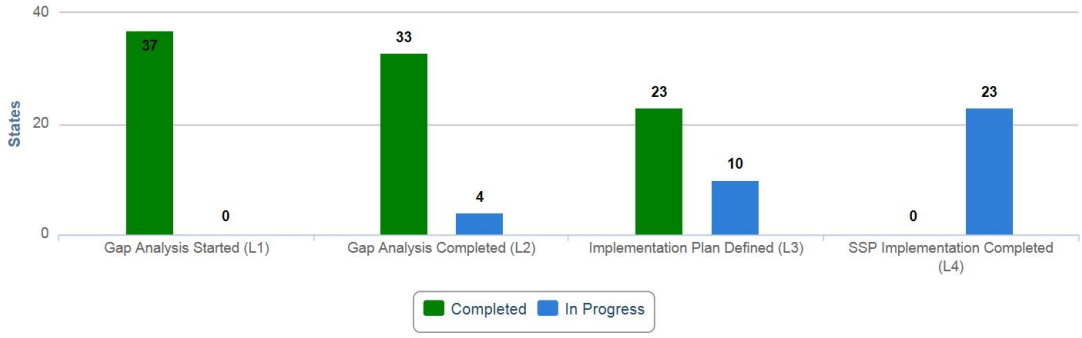


Figure 8 – SSP implementation levels for States in the EUR Region (as of 9 March 2020)

2.3. IATA Operational Safety Audit (IOSA)

The IATA Operational Safety Audit (IOSA) is IATA's leading industry safety audit program that assesses commercial air operators' conformance with its IOSA Standards and Recommended Practices (ISARPs). The IOSA audit was introduced in 2003 and over 6000 audits were performed since then. As of 20 January 2020, the IOSA registry contained 437 operators worldwide, which represents almost 90% of schedule air traffic worldwide. During 2019, 97 audits were performed under the IOSA Program in the EUR/NAT Regions with an average of 21 findings per audit. In 2019, the Flight Operations Section (FLT), was the IOSA section with the highest number of findings followed by the Organization (ORG) and Maintenance Operations (MNT) Sections.

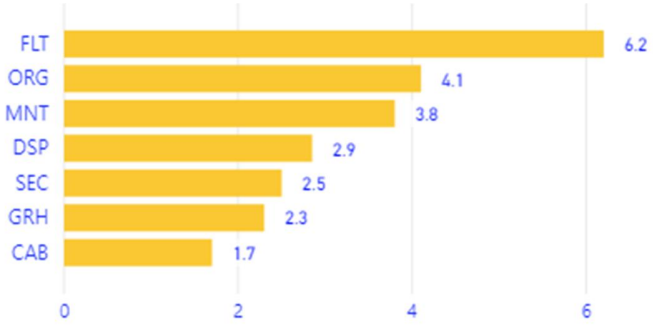


Figure 9– Average findings per IOSA Sections)

Half of the Top 10 findings in 2019 are related with the SMS in three different IOSA disciplines. At Organizational (ORG) level the lack of a proper implementation and integration throughout the Operator's organization (ORG 1.1.10) is the finding with highest number of occurrences. The rest are the SMS Training (ORG 1.6.5), non-conformities on setting performance measures in support of the operator's safety objectives and to validate the effectiveness of safety risk controls (ORG 3.2.1) and Safety accountabilities and responsibilities (ORG 1.3.1). The SMS Training on Maintenance Operations (MNT 1.12.6) and in the Flight Operations scope (FLT 2.5.1) are the other two areas with a high number of SMS related Finding.

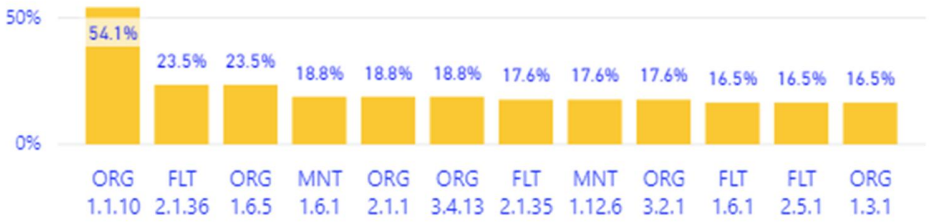


Figure 10 – Top findings ratio (IOSA)

The non-SMS Top 10 findings are related with the Flight Instructors Qualification and Training (FLT 2.1.36), Document control at Organizational level (ORG 2.1.1) in MNT operations (MNT 1.6.1) and FLT operations (FLT 1.6.1). At Organizational level there is also a high number of findings on the auditor training (ORG 3.4.13). Consistent with the Top 10 findings, 50% of the Top 10 SMS related findings are located at Organizational level:

- ORG 1.1.10, SMS implementation and integration throughout the Operator's organization
- ORG 1.6.5 related with SMS Training of the Operator, which is supported by a high number of associated findings in all operational disciplines.
- ORG 3.2.1, linked with setting performance measures in support of the operator's safety objectives and to validate the effectiveness of safety risk controls
- ORG 1.3.1, safety accountability, authorities and responsibilities of management and non-management personnel throughout the organization.
- ORG 3.4.1, related with the Quality Management System as a key component of the SMS and more specifically to the Quality Assurance.

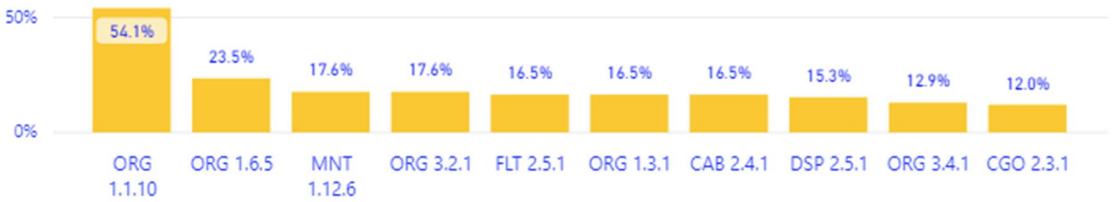


Figure 11 – Top findings ratio SMS (IOSA)

3. EUR List of Air Navigation Deficiencies

A deficiency is a situation where a facility, service or procedure does not comply with a regional air navigation plan approved by the Council, or with related ICAO Standards and Recommended Practices (SARPs), and which has a negative impact on safety, regularity and/or efficiency of international civil aviation.

As of 12 March 2020, one deficiency having a direct impact on safety and requiring immediate corrective actions was identified in the EUR region (in red on the chart below). This deficiency is related to the provision of air space safety monitoring data, for which the recommended action by ICAO is for States' CAAs to send the required monitoring data to the RMA (Regional Monitoring Agency) on a regular basis. An additional 32 deficiencies classified as having top priority requirements necessary for air navigation safety were identified.

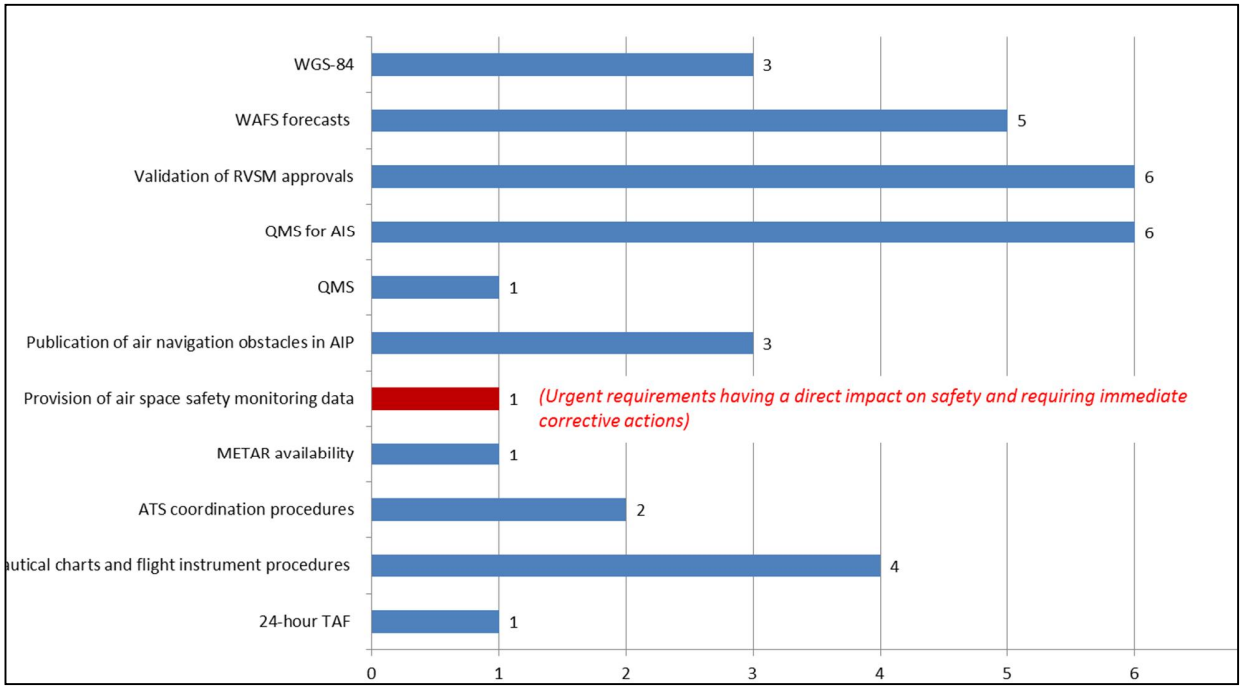


Figure 12– EUR Air Navigation deficiencies in 2019

Note: deficiencies with intermediate requirements necessary for air navigation regularity and efficiency are not shown here.

The USOAP CMA PQ 7.045 ("*Has the State established and implemented a mechanism for the review and elimination of deficiencies identified within the framework of the Planning and Implementation Regional Groups (PIRGs)?*") has an average EI rate of 60.78% for the States in the EUR Region (as of 12 March 2020).

4. Runway safety risks

Runway safety-related events include the following occurrence categories: abnormal runway contact (ARC), bird strikes (BIRD), ground collision (G-COL), runway excursion (RE), runway incursion (RI), loss of control on the ground (LOC-G), collision with obstacle(s) during take-off and landing (CTOL) and undershoot/overshoot (USOS). Runway safety events remain the highest number of events, and in 2019 have caused the most fatalities in the EUR Region: 23 accidents involving aircraft of maximum mass of over 2 250 kg occurred in the EUR Region, causing 47 fatalities out of a total of 65.

Runway Safety Go-Teams

ICAO and its Runway Safety Programme Partners conduct Runway Safety Go-Team (RS Go-Team) missions at the request of specific airports. The main objective of RS Go-Team missions is to provide assistance to CAAs and the local Runway Safety Team (LRST) for the airports to support the improvement of the national Runway Safety Program, and to improve performance of the established RST. Four RS Go-Team visits were conducted in 2019 in the EUR Region in cooperation with partner States and international organizations. These 3-day missions consisted of a runway safety workshop on day 1, a visit to airport on day 2 and a RST meeting of the airport (Aerodrome Control Tower, airside movement area, connecting taxiways and apron) on day 3. They resulted in observations and recommendations for the national runway safety programmes.

Figure 13- RS Go-Team at Baku/Heydar Aliyev International Airport (UBBB), Azerbaijan (September 2019)

Aerodrome	RS Go-Team composition	Total participants	Dates
Rabat/Salé International Airport (GMME), Morocco	ICAO EUROCONTROL Brussels airport (ACI Europe) IFALPA	34	18 to 20 June 2019
Kyiv/Zhuliany International Airport (UKKK), Ukraine	ICAO EUROCONTROL	55	2 to 4 July 2019
Baku/Heydar Aliyev International Airport (UBBB), Azerbaijan	ICAO EUROCONTROL Brussels airport (ACI Europe) Pulkovo Airport (Saint Petersburg)	16	11 to 13 September 2019
Minsk-2 International Airport (UMMS), Belarus	ICAO EUROCONTROL Brussels airport (ACI Europe) Pulkovo Airport (Saint Petersburg)	28	17 to 19 December 2019

Table 4 – Runway Safety Go-team missions in EUR Region in 2019

Global Reporting Format (GRF) workshops

To help mitigate the risk of runway excursion ICAO has developed a harmonized methodology for the assessing and reporting of runway surface conditions. This methodology, known as the Global Reporting Format (GRF), will be globally applicable from 5 November 2020, with deployment activities now underway. The GRF is intended to cover conditions found in all climates. It provides a means for aerodrome operators to rapidly and correctly assess runway surface conditions, whether they are exposed to wet runway conditions, snow, slush, ice or frost, including rapidly changing conditions such as those experienced during winter or in tropical climates. A methodology that is easily understood and implemented globally is an important means by which the runway excursion risk can be mitigated and the safety of runway operations improved. Awareness, education and training about GRF were addressed through an ICAO/ACI symposium hosted in Montreal on 26-28 March 2019. This was followed up by two more focused regional workshops held in the EUR Region in 2019, during which a GRF implementation check list was developed to assist States in the ICAO EUR Region with implementation.

GRF workshop location	Participants	Total participants	Dates
ICAO EUR/NAT Office, Paris, France	29 States, 5 International Organizations (ACI, CANSO, EASA, IATA, and ICAO), 1 Airline and 1 Industry	98	10-11 July 2019
Fraport in Frankfurt, Germany	28 States, 7 International Organizations (ACI, CANSO, EASA, EUROCAE, IATA, ICAO and IFALPA), 1 Airline and 1 Industry	105	10-11 December 2019

Table 5 – GRF workshops in EUR Region in 2019

Safety promotion videos on runway safety

The EUROCONTROL Skybrary and Skyclips websites make available additional information and a collection of short animations of approximately two minutes duration, which focus on a single safety topic in aviation. Additions made in 2019 address runway safety risks and include videos on:

- Airside driving: https://www.skybrary.aero/index.php/Airside_driving_(SKYclip)
- Workload management: https://www.skybrary.aero/index.php/Workload_Management_(SKYclip)
- Runway occupied medium term: https://www.skybrary.aero/index.php/Runway_occupied_medium_term_(SKYclip)
- Immediate departure: https://www.skybrary.aero/index.php/Immediate_departure_(SKYclip)
- Low Level Go Around: https://www.skybrary.aero/index.php/Low_Level_Go_Around_(SKYclip)
- Low visibility takeoff: https://www.skybrary.aero/index.php/Low_visibility_takeoff_(SKYclip)

5. Loss of Control In-flight (LOC-I) risks

Loss of control In-flight (LOC-I) events include uncontrolled collisions with terrain as well as extreme manifestations of deviations from intended flightpath or aircraft flight parameters, regardless of whether the flight crew realized the deviation and whether it was possible to recover or not. These types of events account for a small portion of accidents in a given year but are generally fatal and account for a large portion of the total number of fatalities. In 2019, no LOC-I accident involving aircraft of maximum mass of over 2 250 kg has occurred in the EUR Region.

Safety Enhancement Initiative (SEI) of IE-REST related to reducing LOC-I accidents

The IE-REST is implementing an SEI related to reducing LOC-I accidents (IE-REST/PT/03). The outputs of this SEI are:

1. Undertake a review of existing Upset Prevention and Recovery/ Enhanced Stall Recovery guidance material to develop and distribute a Russian language Advisory Circular or other material as required
2. Organise a set of relevant seminars and round-table meetings on LOC-I and Stall prevention/recovery issue inviting the representatives from flight test community to share their stall phenomena knowledge, flight test experience (including contributing factors as airplane configuration, high altitude stall, icing, failures, somatogravic illusion etc.) and effective upset and stall recovery training
3. Develop and distribute among regulators within the IE-REST geographical area a questionnaire for identifying the national requirements and any inconsistency with international aviation organization recommendation on airplane stall prevention and recovery training

It is to be noted that this SEI remains in the implementation phase. IE-REST members look for possible solutions to foster implementation of the SEI including the revision of rapporteur and membership in the group.

6. Controlled Flight into Terrain (CFIT) risks

Controlled Flight into Terrain (CFIT) events are in-flight collision or near collision with terrain, water, or obstacle without indication of loss of control. These types of events account for a small portion of accidents in a given year but are generally fatal and account for a large portion of the total number of fatalities. In 2019, 2 accidents involving aircraft of maximum mass of over 2 250 kg occurred in the EUR Region. One was fatal, causing 5 fatalities.

In 2019, IE-REST reviewed the information and recommendations related to mitigation of risks related to CFIT prepared by UK (Bermuda) and agreed that regional efforts to prevent CFIT should be maintained. A safety advisory on CFIT prevention shall be finalized in 2020.

7. Safety Oversight and Accident Investigation capabilities

Universal safety oversight audit programme (USOAP) audits have identified that States' inability to effectively oversee aviation operations remains a global safety concern. AIG (Accident and Incident Investigation) is the area with the lowest EI in the EUR Region and CE4 (Technical staff qualifications and training) is the top issue affecting the effective implementation percentage.

The 7 States in the EUR Region with an effective implementation below the 60% target set out in the GASP are in the IE-REST geographical area (the part of the ICAO EUR Region which is not covered by the EU/EASA regulatory framework).

Resolution of Significant Safety Concern (SSC)

In February 2016, ICAO identified a Significant Safety Concern (SSC) in Kyrgyzstan pertaining to the certification process for the issuance of air operator certificates. During the ICVM conducted in Kyrgyzstan from 8 to 12 April 2019, the ICAO team reviewed the actions taken and the evidences presented by Kyrgyzstan to address this SSC. Following the review, the ICAO SSC Validation Committee determined that the actions taken by Kyrgyzstan had resolved this SSC, which, as a result, is no longer posted on the ICAO USOAP Continuous Monitoring Approach (CMA) online framework (https://www.icao.int/usoap).

More information about the resolution of this SSC can be found at
https://www.icao.int/EURNAT/Pages/news_articles/NoCountryLeftBehind-success.aspx

President of the ICAO Council certificates for achievements in safety

During the opening ceremonies of ICAO's 40th Assembly in September 2019, States representing all ICAO Regions received Council President Certificates in recognition of significant progress in resolving safety oversight. The Certificates were established to recognize the States' significant progress in resolving safety oversight and security deficiencies, and in improving the effective implementation of ICAO Standards and Recommended Practices as identified through related ICAO audit programmes. Based on their achievements in 2018, the following four EUR States were recognized by the ICAO Council for their safety progress:

- Azerbaijan

- Georgia
- Montenegro
- Serbia

These awards, established by the ICAO Council in support of the ongoing No Country Left Behind initiative, have been developed in order to more publicly acknowledge and encourage States' commitment and progress in making our global network even safer and more secure than it is today. The effective implementation of ICAO's global Standards and Recommended Practices is considered a fundamental prerequisite for establishing air transport's rapid global connectivity, and in turn the many socio-economic benefits it helps to realize.

EUR Meeting for Universal Safety Oversight Audit Program

Continuing the successful experience of ICAO - EASA Joint pan-European National Continuous Monitoring Coordinator meetings (E-NCMC) held in previous years, an E-NCMC/9 meeting was held in the ICAO European and North Atlantic Office in Paris, France on 21 November 2019. The meeting discussed implementation challenges, shared experience and received updates from ICAO on recent developments of the ICAO Universal Safety Oversight Audit Program (USOAP). This event was an important coordinated effort to assist States in improving their level of effective implementation (EI) of the eight critical elements of the State safety oversight system. Such meetings, held in true spirit of ICAO No Country Left Behind (NCLB) campaign, serve goals to avoid duplication, capitalize on existing mechanisms and support regional implementation of the ICAO Global Aviation Safety Plan (GASP). In attendance were 50 participants from 36 States, as well as speakers from the European Commission, EASA and ICAO.

Workshops on aerodrome certification

Under ICAO's global initiative "No Country Left Behind" (NCLB), the ICAO EUR/NAT Regional Office developed a Technical Assistance Programme (EUR/NAT TAP). The AGA 18001 project is part of the EUR/NAT TAP and is supporting States in the EUR Region to build the necessary capacity in the area of Aerodrome Certification through dedicated Workshops at sub regional level, to identify the most common gaps (findings) and to update their oversight capacity. Four AGA certification workshops to provide training for CAAs aerodrome inspectorate staff and to build the necessary capacity were conducted for EUR States in December 2018 and in 2019:

AGA workshop location	Participants	Total participants	Dates
Paris, France	4 States : Algeria, Andorra, Morocco, Tunisia/ACAO	13	18-20 December 2018
Tirana, Albania	3 States: Albania, Bosnia and Herzegovina, and Serbia	8	15-17 January 2019
Kiev, Ukraine	6 States: Armenia, Azerbaijan, Belarus, Georgia, Kyrgyzstan, and Ukraine	27	5-7 February 2019
Moscow, Russian Federation	ICAO, IAC and 8 States: Armenia, Azerbaijan, Belarus, Kazakhstan, Kyrgyzstan, Republic of Moldova, Russian Federation, and Uzbekistan	35	17-19 December 2019

Table 6 – Aerodrome certification (AGA) workshops in EUR Region

Workshop on SAR

An ICAO Search and Rescue (ICAO EUR SAR) Workshop combined with a SAR exercise (SAREX), was held in Belgrade, Serbia from 16 to 18 September 2019, in cooperation with Civil Aviation Directorate of The Republic of Serbia (CAD). The Workshop was attended by 120 participants from 20 EUR States and several International and Serbian Organizations. The first objective of the ICAO EUR SAR Workshop was to raise awareness about the current SAR activities in the EUR Region, share other ICAO Regions and States' experience and address Regional SAR implementation matters. Additionally, during the Workshop it was discussed and agreed on recommendations for the implementation of future SAR concepts in the EUR Region, notably a follow up on AN-Conf/13 Recommendation, regarding the implementation of new Standards in support of Global Aeronautical Distress and Safety System (GADSS), inviting the States to review their current organization of search and rescue (SAR) services, and establish bilateral and regional agreements facilitating the provision of SAR.

During the workshop, the discussions allowed the States and International Organizations to evaluate the impact of the Standards related to GADSS, providing the opportunity to formally receive their comments. Moreover, as an iterative process, the workshop had the opportunity to assess the recent updates in the ICAO EUR Doc 039, SAR Plan, as part of regular process to keep current with changes in ICAO Annexes and guidance material. The presentations were posted on the ICAO Portal for your easy access.

At the end of the second day of the ICAO SAR Workshop, a major international search and rescue exercise in civil aviation was wrapped up following a three-day activity in Vrsac airport. Organized by the Directorate of Civil Aviation (CAD), garnering over 150 professionals from around the world, along with the full capacity search and rescue exercise, combined with the ICAO SAR Workshop, was organized by the CAD together with the ICAO EUR/NAT Office in Paris

The exercise was held at the Nikola Tesla Airport and Vrsac Airport with the participation of all search and rescue facilities in the civil aviation of the Republic of Serbia. SAREX Video materials produced by CAD are available online at:

- Night scenario – Belgrade- LYBE – 17.09 https://www.youtube.com/watch?v=twDuLqfTMvI ;
- Day scenario – Vrsac – LYVR – 18.09 https://www.youtube.com/watch?v=K1qwHayAsEs .

The ICAO SAR Workshop met its objectives and due to their excellent achievement, the ICAO EUR/NAT Office has received requests to organize similar events in other States next years. Algeria, Bulgaria, Georgia and Tunisia showed interest to host such event with the possibility to combine with a SAREX.

Technical Assistance activities for safety oversight

Supporting States in the effective implementation of ICAO's policies, plans and SARPs, and in particular, for the improvement of Effective Implementation (EI) of States' safety oversight capabilities is a key objective of the EUR/NAT NCLB Technical Assistance Programme (EUR/NAT TAP). In 2019, the

following Technical Assistance (TA) activities were conducted within the framework of EUR/NAT TAP, in close coordination with States, regional and international organizations and with the aim to strengthening States' safety oversight capabilities.

Technical Assistance (TA) activity	Description	Areas trained	Dates
TA project for Tajikistan (EUR/NAT TJK 17001)	Reviewed the existing and further developed technical guidance, regulations and procedures of Tajikistan CAA. Addressed the ICAO USOAP CMA determined non-satisfactory PQs in PEL, OPS and AGA areas. Provided initial exposure training to the key certification and licensing activities.	PEL, OPS, AGA	01 October to 30 November 2019
TA project for Ukraine (EUR/NAT UKR 19002)	Provided for a period of two months On-the-Job Training (OJT) to PEL, OPS and AIR inspectors of the State Aviation Administration of Ukraine (SAAU), and enhanced the establishment and effective implementation of technical guidance material, procedures and checklists used for the licensing, certification, authorization, approval (CE-6) and surveillance (CE-7) of individuals and organizations performing an aviation activity in Ukraine.	PEL, OPS, AIR	01 October to 6 December 2019.
TA project for Belarus (EUR/NAT BLR 19003)	Assisted in reviewing and updating of operations, pilot licensing and airworthiness inspectors manuals and provided on the Job Training (OJT) to the relevant inspectorate staff of Department of Aviation of the Ministry of Transport and Communication of the Republic of Belarus to enhance their competencies (CE-4), establish and implement technical guidance material, procedures and checklists (CE-5) for the licensing, certification, authorization, approval (CE-6), surveillance (CE-7) and resolution of safety concerns (CE-8) for individuals and organizations performing an aviation activity in Belarus.	PEL, OPS, AIR	30 November 2019 to 29 January 2020
TA mission hosted by the CAA of Slovenia	Provided USOAP CMA preparation/familiarization course. After a general session on guidance for LEG and ORG PQs, 3 simultaneous break-out sessions were conducted in ANS, PEL/OPS and AIG to provide area-specific guidance on PQs. An industry visit to Slovenia Control facilities (Approach control and Tower of Ljubljana airport) was also conducted to get familiarized with the capabilities in the ANS sub-area. There were in total 20 participants from: -The Directorate of Aviation and Maritime Transport of the Ministry of Infrastructure -The Aircraft Accident and Incident Investigation	LEG, ORG, PEL, OPS, ANS and AIG	15 to 19 April 2019

	Service of the Ministry of Infrastructure -The CAA Slovenia		

Table 7 – Technical Assistance activities in EUR Region in 2019

Accident investigation and ECCAIRS user workshop

A RASG-EUR Accident investigation and ECCAIRS user workshop, was held at the ICAO EUR/NAT Regional Office in Paris, France from 8 to 10 April 2019. This workshop aimed to develop competencies to enable States to conduct independent and effective investigations of aircraft accidents and incidents, support the implementation of ADREP/ECCAIRS compatible taxonomies and databases as well as support States in better fulfilling their investigation obligations within the context of Annex 13. This event was focused on investigators and managers from Accident Investigation Authorities of the EUR Region, as well as safety analysts and representatives from organizations involved in accident and/or incident investigations. The workshop was attended by 63 participants from 29 States, 3 international organizations and was conducted in English and Russian languages.
For workshop materials go to go to https://www.icao.int/eurnat/pages/welcome.aspx - EUR/NAT Meetings - Other Meetings Seminars and Workshops – SAFETY-AIG - RASG-EUR AIG and ECCAIRS user workshop 2019 (or click here).

8. Safety and Air Navigation Capacity&Efficiency

8.1. EUR Air Navigation ASBU implementation

The ICAO Global Air Navigation Plan, (GANP) Aviation System Block Upgrades (ASBU) methodology is a programmatic and flexible global approach that allows all Member States to advance their Air Navigation capacities based on their specific operational requirements. More information on the GANP can be found on the ICAO website at www.icao.int/airnavigation/Pages/GANP-Resources.aspx.

Following the ICAO Assembly Resolutions, Member States, planning and implementation regional groups (PIRGs), and the aviation industry are requested to utilize the guidance provided in the GANP for planning and implementation activities which establish priorities. Member States are also obliged to map their national or regional programmes against the harmonized GANP and to report the implementation status on the various ASBU modules back to the PIRGs on a regular basis.

Member States, through the ASBUs framework, work collaboratively with ICAO, their Air Navigation Service Providers and industry stakeholders so that they can advance their air navigation capabilities and systems based on specific operational requirements and that they can implement them in a harmonized and timely manner in order to maximize the capacity, safety and efficiency of the air transport system. This approach will also ensure that continuous safety improvements and air navigation system modernization can advance in parallel as both areas are linked in the GANP.

Depending on implementation parameters, such as the complexity of the operating environment, the constraints and the resources available, regional and national implementation plans have been developed in alignment with the GANP. Such planning requires interaction between stakeholders, including regulators, users of the aviation system, the air navigation service providers (ANSPs), aerodrome operators and supply industry, in order to obtain commitments to implementation. Several ASBU modules had been given a high priority by the PIRG which included especially ASBU Block 0 modules

with a safety component (e.g. B0-ACAS regarding the implementation of Airborne Collision Avoidance Systems, or B0-SNET regarding the increased effectiveness of Ground Based Safety Nets, or B0-SURF regarding the safety and efficiency of aerodrome surface operations A-SMGCS Level 1& 2).

The overview of the deployment planning dates and implementation progress that had been achieved for the ICAO ASBU Block 0 Modules for all 55 States within the ICAO EUR Region can be found in the annual ASBU monitoring report which is developed in close collaboration by ICAO and EUROCONTROL.

The latest, 5th edition of the ICAO-EUROCONTROL ASBU implementation monitoring report for the ICAO European Region (EUR), endorsed by the EASPG/1 meeting, provides a valuable single view of all progress made by each of the 55 ICAO/EUR countries in implementing ASBU Block 0 Modules: https://www.icao.int/EURNAT/Pages/Aviation-System-Block-Upgrade-(ASBU)-Implementation-Monitoring-Report-.aspx

8.2. Mid-Air Collision (MAC) risks

The EUROCONTROL Skybrary and Skyclips websites make available additional information and a collection of short animations of approximately two minutes duration, which focus on a single safety topic in aviation. Additions made in 2019 address mid-air collision (MAC) risks and include videos on:

- Airspace infringement: https://www.skybrary.aero/index.php/Airspace_Infringement_(SKYclip)
- Level bust: https://www.skybrary.aero/index.php/Level_busts_(SKYclip)
- TCAS – Always follow the RA: https://www.skybrary.aero/index.php/TCAS_-_Always_follow_the_RA_(SKYclip)
- TCAS RA High vertical rate: https://www.skybrary.aero/index.php/TCAS_RA_High_Vertical_Rate_(SKYclip)

8.3. Language Proficiency Requirements

The ICAO European and North Atlantic Office has completed the implementation of the ICAO EUR Special Implementation Projects (SIPs) related to Language Proficiency Requirements (LPRs). The objective of these projects was to provide technical assistance to States in the ICAO European Region, through two dedicated workshops, organized in cooperation with the International Civil Aviation English Association (ICAEA) to support the implementation of aviation language testing and training best practices in accordance with ICAO Manual on the Implementation of ICAO Language Proficiency Requirements (Doc 9835). One LPR workshop was conducted in Luxembourg from on 9 to 11 October 2019 and another one in Tbilisi, Georgia from 14 to 16 October 2019.

The Language Proficiency Requirements (LPR) are safety critical and their effective implementation should continue to be supported by States. ICAO will continue to monitor the implementation of LPRs through USOAP CMA. While progress has been made in the aviation language testing and training domains, this industry remains unregulated.

Relating to LPR Implementation there is a need to enhance States' safety oversight capabilities, including the training of concerned regulators' staff. Regulators should maintain regular contact with the Test Service Providers;

The GASP's mission is to continually enhance aviation safety performance internationally by providing a collaborative framework for States, regions and industry. One of the 6 goals in the 2020-2022 edition of the GASP calls for States to increase collaboration at the regional level to enhance safety.

More specifically, this project is linked to GASP Goal 2 "Strengthen States' safety oversight capabilities" and to GASP Target 2.1: "All States to improve their score for the effective implementation (EI) of the critical elements (CEs) of the State's safety oversight system (with focus on priority PQs) as follows:

- By 2022 – 75%
- By 2026 – 85%
- By 2030 – 95%"

The two LPR workshops conducted in the EUR Region in 2019 have allowed:

- to raise awareness and to develop a 'checklist' of best-practice in LPR language testing systems, according to ICAO Document 9835,
- workshop participants to listen to and review speech samples from an array of tests,
- participants to become familiar with candidate performance, to test task appropriacy/fairness, indicators of language performance, aspects of test that allow raters to interpret/assess performance against the rating scale, to test task measurement attributes , to test task/item complexity, candidate engagement and effect on overall scores, etc.
- examples of hypothetical test tasks, questions and content to be used and reviewed in the workshops to explore key questions: how does a test design affect the quality of tests, the result the test produces and the confidence in the results the test produces, and
- test providers to help understand the Aviation English Language Test Service (AELTS), as well as what is expected of them at each stage of the recognition process.

The Workshops targeted:

- Licensing authorities directly involved in the LPRs
- Test Service Providers (TSPs)
- ANSPs and airlines involved in the delivery of tests
- Personnel involved in the implementation of tests.

The design of a test instrument according to ICAO Document 9835 is the foundation of a testing system and affects all aspects of a testing system. This point has often been sometimes overlooked by stakeholders. As a result, differences in testing standards and practices have arisen. This has introduced a number of challenges that could undermine the long-term effectiveness of the ICAO LPRs and, compromise aviation safety. These challenges include:

- inadequate implementation of a uniform LPR standard;
- a lack of equivalence between the ICAO Levels issued by different tests and States;

- variations in what language skills and language knowledge LPR tests assess and the extent to which these relate to the language, communicative contexts and proficiency levels needed for safe aeronautical communications;
- market forces favouring some tests over other tests;
- the emergence and spread of tests and testing practices, which often fail to assess the necessary language skills and/or award ICAO Levels at a lower standard, at the expense of better quality tests and testing practices;
- civil aviation authorities accepting tests or test results from outside their jurisdiction because of obligations to accept tests approved by other States (mutual recognition obligation) or because of a lack of expertise or resources to evaluate the quality or impact of tests, based on the assumption that if one State approves an LPR test for licensing purposes then that test meets an international standard;
- a lack of confidence in the ICAO Levels awarded by different tests and States;
- a large number of tests have emerged that are based on flawed, inconsistent or unsuitable test designs which negatively impact on language training programmes and long-term attitudes towards language proficiency and the ICAO LPRs, and lead to threats to civil aviation safety.

A number of key criteria have been identified and suggested as critical elements in test design which influence the overall effectiveness of an LPR test. Each criterion plays a key role in how well a language proficiency test meets the objectives of the ICAO LPRs and how well the test performs overall in terms of validity, reliability and practicality. All the criteria are equally important in ICAO LPR best practice assessment. These criteria are core issues that shape the overall effectiveness and suitability of a testing system for the assessment of air traffic controllers and pilots for ICAO LPR licensing purposes.

The following criteria have been identified and discussed as essential for an effective LPR test:

- Separate test instruments need to be designed for pilots and air traffic controllers.
- Test instruments need to include appropriate tasks that directly assess how test- takers use language in radiotelephony communication contexts.
- Test instruments need to include tasks and items which allow the assessment to differentiate between ICAO language proficiency levels.
- Test instruments need to comprise distinct sections with a range of appropriate test task types.
- Test instruments need to contain tasks dedicated to assessing listening comprehension, separate from tasks designed to assess speaking performance.
- Test instruments need to include test tasks that allow test takers to engage in interactive and extended communication.
- Test instruments need to have a sufficient number of equivalent versions, with each version of the test representing the test instrument in the same way.

In total 71 LPR experts from 27 States benefited from the two workshops.

9. Safety Management

The GASP near-term objective requiring that all States which have an EI of 60% or greater should have a SSP implemented by 2017 is not met, as only 23 out 55 EUR States (42%) of EUR States have a defined implementation plan and none have fully implemented their SSP. SSP Foundation data from ICAO iSTARS show that safety promotion is one of the weakest SSP subject for States in the EUR Region.

Workshop on safety management capacity building
An ICAO Workshop on Safety Management Capacity Building for the European and North Atlantic Regions was held at the ICAO EUR/NAT Office in Paris, France, from 2 to 5 April 2019.

The workshop topics and hands-on exercises provided State personnel involved in the implementation of State Safety Programmes with some of the skills required to perform their role effectively.

This workshop led by ICAO was attended by 23 participants from Austria, Bulgaria, Estonia, Greece, Israel, Italy, Kyrgyzstan, Latvia, Slovenia, Spain, Turkey, United Kingdom and World Food Programme. The workshop provided information and platform for discussion on State Safety Programmes Implementation and Monitoring Tools, Safety Management capacity planning, Safety Management interfaces, safety data collection and processing systems and other fundamentals.

More information on the ICAO Safety Management initiatives is available at:
https://www.icao.int/safety/SafetyManagement/Pages/default.aspx

Safety promotion in EUR Region

In addition annual safety reviews or reports published by States in the EUR Region, international and Regional Organizations publish reports on a yearly basis containing information in an aggregated format about the types of civil aviation occurrences and other safety related information and defines the trends and actions taken. These reports include:

Organization	Type of orgnaization	Description
EASA	RSOO	The Annual Safety Review 2019 provides not just a statistical summary of aviation safety in the EASA Member States (MS) but also identifies the most important safety challenges faced in European aviation today. This analysis drives the development of safety actions for the EPAS and harnesses the experience of both the EASA Member States (EASA MS) and industry to connect the data with the current and future priorities of the Agency. https://www.easa.europa.eu/document-library/general-publications/annual-safety-review-2019
IAC	RSOO and RAIO	The Interstate Aviation Committee publishes every year a report on flight safety in civil aviation of Contracting States of the Intergovernmental Agreement on Civil Aviation and Air Space Use, signed on 30 December 1991. The 2019 edition is/will be available in both Russian and English on the IAC website: http://www.mak-iac.org
ENCASIA	RAIO	Regulation (EU) No 996/2010 established the European Network

		of Civil Aviation Safety Investigation Authorities (ENCASIA) and has put strong emphasis on the coordination between Safety Investigation Authorities (SIA) and its reinforcement in the European context, in order to generate real added value in aviation safety. This is to be achieved by building upon the already existing cooperation between such authorities and the investigation resources available in the Member States of the European Union. The 2019 ENCASIA Annual Report related to the implementation of its work programme is available at: https://ec.europa.eu/transport/modes/air/encasia/activities_en
IATA	International Organization	The IATA Safety Report provides the industry with critical information derived from the analysis of aviation accidents to understand safety risks in the industry and propose mitigation strategies. The report combines reactive, proactive and predictive information gathered from industry safety sources and provides valuable information aggregated at global and regional levels. The report can be requested at: http://www.iata.org/publications/Pages/safety-report.aspx

Table 8 – International Organizations' Safety Reports in 2019

Appendix – List of Accidents

List of accidents involving aircraft of maximum mass of over 2 250 kg that have occurred in 2019 in one of the States within the area of accreditation of the European and North Atlantic (EUR/NAT) Office of ICAO in the EUR Region

Note: Accidents involving scheduled commercial operations with aircraft of maximum mass of over 5700 kg are shaded in grey in the table below.

Date Occurence	State Of Occurence	Aircraft Type	Maximum Mass	Phase Of Flight	Fatalities	Occurrence Category	Description
17-Jan-19	Malta	BOEING 737	78220	Taxi	0	GCOL	Ground collision during taxi with a Boeing 737 (TC-JHM) on taxiway D of Malta International Airport.
28-Jan-19	Spain	ATR ATR72	22000	Landing	0	RE	The aircraft left the right side of the runway upon landing at Palma de Mallorca airport and hit one of the signaling elements.
29-Jan-19	Germany	BOEING 737	78220	Climb	0	SCF-NP	Main landing gear mechanism failure at Frankfurt Hahn Airport. Damage was observed on the left-hand wing. Investigation delegated to AAIU Ireland
08-Feb-19	Denmark	AIRBUS A321	93000	Landing	0	ARC	Hard landing and tailstrike upon landing at Billund airport in dark night and under instrument meteorological conditions (IMC).
13-Feb-19	France	DE HAVILLAND CANADA DHC-6	5670	Standing	0	RAMP	At the arrival at the parking at Saint Barthélemy airport, a gate agent was hit in the head by the right engine spinning propeller.
26-Feb-19	Russian Federation	GULFSTREAM G200	17960	Landing	0	RE	Upon landing at Moscow Sheremetyevo airport, brakes were applied and the thrust reversers were deployed. During rollout the no.2 engine was brought back to idle and the thrust reverser

Date Occurence	State Of Occurence	Aircraft Type	Maximum Mass	Phase Of Flight	Fatalities	Occurrence Category	Description
							stowed. The no.1 (left) engine remained at maximum reverse, causing t
27-Feb-19	United Kingdom	SUPERMARINE SPITFIRE	3976	Landing	0	ARC	The landing gear warning horn sounded during the approach to land. The undercarriage had been selected down and the green light indicating it was safe was illuminated, but the right undercarriage leg collapsed towards the end of the landing ground roll.
28-Feb-19	United Kingdom	EMBRAER ERJ-190	52290	Take-off	0	EVAC	Evacuation after smoke filled cabin at start of takeoff from Exeter Airport. A child passenger fell through a gap in the steps when disembarking the aircraft.
01-Mar-19	United Kingdom	AIRBUS A320	77000	Take-off	0	EVAC	Rejected take off and evacuation onto runway at London-Stansted Airport.
02-Mar-19	United Kingdom	DE HAVILLAND CANADA DHC-8	29260	Taxi	0	GCOL	The aircraft was being taxied to its allocated stand at Southampton airport. The No 1 engine had been shut down in accordance with the operator's SOPs. As it approached the stand, at walking pace, the commander applied the brakes, which had no effect. The aircraft hit signage and the rotating No 2 (right) propeller struck a nearby ground power unit (GPU).
03-Mar-19	Algeria	BEECHCRAFT 1900	7765	Landing	0	SCF-NP	The aircraft experienced a left-hand main landing gear collapse while landing at Ouargla airport (DAUU), Algeria.
08-Mar-19	Russian Federation	ATR ATR42	18600	Landing	0	RE	During landing on RWY-13 at Turukhansk

Date Occurence	State Of Occurence	Aircraft Type	Maximum Mass	Phase Of Flight	Fatalities	Occurrence Category	Description
							airport, the aircraft veer off 20 m beyond the left border of the runway. The aircraft received minor damages.
23-Mar-19	United Kingdom	AIRBUS A320	77000	Taxi	0	RAMP	Nose landing gear torque link failed on pushback at Bristol Airport.
03-Apr-19	United Kingdom	AIRBUS A320	77000	Taxi	0	RAMP	While being pushed back from Stand 18 at Belfast International Airport, the aircraft was stopped with the tug and tow bar positioned at a significant angle to the aircraft's nose. The tow bar disconnected from the nose landing gear, and the aircraft rolled forward and struck the tug.
04-Apr-19	Austria	DE HAVILLAND CANADA DHC-8	29260	Landing	0	ARC	The aircraft suffered a tailstrike during landing in Innsbruck, Austria.
24-Apr-19	Germany	CESSNA 550 CITATION II	6849	Landing	0	USOS	The aircraft touched down with landing gear extended in the grass prior to the asphalt area of runway 13 of Siegerland Airport. The left main landing gear collapsed and damaged the left wing tank. The right main landing gear also collapsed but the right wing tank remained undamaged. The fuel leaking from the left wing tank caught fire.
30-Apr-19	United Kingdom	BOEING 737	78220	Taxi	0	GCOL	After a positioning flight (non-revenue), EI-SEV was taxiing to park on Stand 22 (S22) at East Midlands Airport (EMA) and the routing passed behind G-GDFB on Stand 24 (S24). As EI-SEV passed behind G-GDFB its winglet struck the other aircraft's right

Date Occurence	State Of Occurence	Aircraft Type	Maximum Mass	Phase Of Flight	Fatalities	Occurrence Category	Description
							horizontal stabilizer.
04-May-19	United Kingdom	LEARJET 45	9752	Standing	0	RAMP	The nose landing gear leg collapsed aft during pushback which was most likely caused by inadvertent brake application at Edinburgh Airport.
05-May-19	Russian Federation	SUKHOI SUPERJET 100	45880	Landing	41	ARC	The aircraft bounced on the runway at Moskva-Sheremetyevo Airport (SVO) after an initial touch down. After the second touchdown flames erupted and engulfed the rear of the aircraft. The aircraft slid to a stop on the grass between runway 24L and two taxiways. An emergency evacuation was then carried out.
22-May-19	Russian Federation	ANTONOV AN-2	5500	Take-off	0	RE	The aircraft suffered a runway excursion when it failed to lift off the runway during takeoff at the "May 1" collective farm near Zhuravskoye. The aircraft came to rest in trees.
09-Jun-19	Russian Federation	ANTONOV AN-2	5500	En Route	0	TURB	Turbulence during a phyto-sanitary flight, collision with trees.
20-Jun-19	Kazakhstan	ANTONOV AN-2	5500	Take-off	2	CTOL	Aerial works, collision with high voltage lines during takeoff, near Rodina village, Tselinograd district.
23-Jun-19	Italy	AIRBUS A320	77000	Approach	0	CABIN	Injury to a flight attendant during the approach to Rome airport. Investigation delegated to Germany (BFU).
23-Jun-19	Ukraine	ANTONOV AN-2	5500	En Route	0	FUEL	The aircraft crashed under unknown circumstances during an agricultural flight and burst into flames. Both occupants survived the accident.

Date Occurence	State Of Occurence	Aircraft Type	Maximum Mass	Phase Of Flight	Fatalities	Occurrence Category	Description
27-Jun-19	Russian Federation	ANTONOV AN-24	21000	Landing	2	RE	During landing rollout on runway 22 at Nizhneangarsk Airport, the aircraft veered off the right side of the runway and travelled across grass until it impacted a building. A fire erupted.
09-Jul-19	Netherlands	BOEING 737	78220	Taxi	0	RAMP	During pushback of a Boeing 737 (PH-BXH) from a gate at Amsterdam-Schiphol International airport, a collision occurred with an Airbus A320 (OE-IVQ) which at that time also got a pushback from a gate. The Boeing 737 suffered damage to the left stabiliser
12-Jul-19	Greece	ATR ATR42	18600	Taxi	0	RE	During taxiing at Naxos airport and after pivoting the aircraft to take the takeoff position on RWY 36, when approaching the end of the RWY, the main wheels reached the gap at the end of RWY and stopped half of it out of the RWY. The aircraft sustained substantial damage.
16-Jul-19	Russian Federation	ANTONOV AN-2	5500	En Route	0	LALT	The plane crashed into a house while engaged in an aerial application flight. Four occupants of the house were injured. Only criminal investigation is in progress.
24-Jul-19	France	BOEING 777	351530	Standing	0	RAMP	During the last stages of the pushback, the tow bar fuse opened. Following the disconnection of the tow bar from the tractor, the aeroplane moved forward and the loaded bar struck the leg of a ground agent.
30-Jul-19	Germany	AIRBUS A319	75500	Standing	0	RAMP	Collision with a towed

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							staircase while parked at Frankfurt airport.
06-Aug-19	Denmark	CESSNA 560 CITATION EXCEL	9090	Landing	0	CFIT	On short final to runway 10R in Aarhus (EKAH) and with visual contact to the runway system, the flight crew descended below the glide path and deactivated a software safety barrier leading to a collision with the antenna mast system of the localizer for runway 28L. The aircraft ended up on runway 10R. The aircraft caught fire.
12-Aug-19	United Kingdom	BOEING 787	244940	Taxi	0	RAMP	The aircraft was pushed back using the incorrect line and as a result the aircraft tail cone struck the blast screen at London Gatwick Airport.
15-Aug-19	Russian Federation	AIRBUS A321	93000	Climb	0	BIRD	The aircraft was substantially damaged when it carried out a forced landing on a cornfield shortly after takeoff from Zhukovsky International Airport due to a dual bird strike and engine failure.
21-Aug-19	Turkey	AIRBUS A340	275000	En Route	0	TURB	Whilst passing through northern Turkey at FL360 the aircraft encountered moderate to severe turbulence during which a passenger was severely injured. Investigation conducted by AAIB UK.
23-Aug-19	Austria	ANTONOV AN-2	5500	Landing	0	USOS	The aircraft touched down just short of the elevated runway at Gmunden Airfield, causing the gear to collapse, then swung off the runway. It sustained damage to the left-hand gear and left-hand lower wing.

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28-Aug-19	Russian Federation	ANTONOV AN-2	5500	Maneuvering	0	LALT	The aircraft was engaged in spraying a field when it touched trees during a low-level turn. It then hit the ground, causing the left-hand upper wing to break.
30-Aug-19	Russian Federation	ANTONOV AN-2	5500	Landing	2	ARC	The aircraft performed the emergency landing near Lake Silyan-Kuel, Kobyasky settlement. Two crew members and three passengers were on board. In course of the accident two passengers were killed.
05-Sep-19	Italy	CESSNA 560 CITATION EXCEL	9090	Taxi	0	GCOL	Ground collision with a ground vehicle while taxiing at Milan Malpensa airport. Damage to the left wing, with fuel leakage. The vehicle fell over and the driver was injured.
09-Sep-19	Germany	AIRBUS A319	75500	Approach	0	TURB	Turbulences injured passenger
11-Sep-19	Germany	CESSNA 208 CARAVAN	3970	Approach	1	AMAN	The aircraft crashed in open field terrain near Gransee Airfield after dropping 14 skydivers.
30-Sep-19	United Kingdom	ANTONOV AN-12B	61000	Taxi	0	GCOL	On departure during taxi from stand aircraft struck floodlight post at Liverpool airport.
04-Oct-19	Ukraine	ANTONOV AN-12B	61000	Approach	5	CFIT	The charter cargo aircraft was found to have crashed during an emergency landing about 1,5 km short of runway 31 of Lviv-Danylo Halytskyi International Airport. A weather report shows there was fog at the airport with a visibility of 800 meters and a vertical visibility of 200 feet.
03-Nov-19	Spain	BOEING 787	244940	En Route	0	AMAN	During the descent to the destination airport of

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							Barcelona, through FL260, the aircraft increased its speed until it reached a value close to the VMO (maximum permissible operating speed). In order to reduce speed, the crew acted by extending the air brakes and pulling the control column. In this maneuver the aircraft reached a maximum vertical acceleration of 2.1g, as a result of which a passenger and a cabin crew suffered serious injuries.
16-Nov-19	Germany	AIRBUS A330	217000	Taxi	0	GCOL	Ground collision with a Boeing 777 (HL7204) during taxi after landing at Frankfurt/Main Airport.
21-Nov-19	Ukraine	BOEING 737	78220	Landing	0	RE	The aircraft suffered a runway excursion after landing at Odessa, Ukraine. It drifted to the left and rolled off the side of the runway. After rolling on the ground for about 550 meters the aircraft was steered back on to the runway, but the nose landing collapsed.
23-Nov-19	Germany	BOEING 737	78220	Standing	0	RAMP	Passenger fell from stairs at Nürnberg Airport.
11-Dec-19	United Kingdom	BOMBARDIER GLOBAL EXPRESS	45132	Landing	0	RE	On landing aircraft missed rapid exit and veered off the runway at Liverpool airport.
16-Dec-19	Spain	AIRBUS A330	217000	Approach	0	TURB	One passenger was injured during severe turbulence on approach to Adolfo Suárez Madrid Barajas airport.
27-Dec-19	Kazakhstan	FOKKER 100	44450	Take-off	12	ICE	The aircraft took off from runway 05R of Almaty airport and lost height shortly after

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							becoming airborne. It veered right and hit a perimeter fence before impacting a house in a residential area near the runway. The aircraft broke up. There was no fire.

Glossary

ACI	Airport Council International
ANSP	Air Navigation Service Provider
ASBU	Aviation System Block Upgrades
ATCO	Air Traffic Controller
CANSO	Civil Air Navigation Services Organisation
CE	Critical Element
CFIT	Controlled Flight into Terrain
CTOL	Collision with Obstacle(s) During Takeoff and Landing
EASA	European Union Aviation Safety Agency
EGPWS	Enhanced Ground Proximity Warning System
ENCASIA	European Network of Civil Aviation Safety Investigation Authorities
EPAS	European Plan for Aviation Safety
FAA	Federal Aviation Administration (USA)
FATA	Federal Air Transport Agency (Russian Federation)
GAQ	Gap Analysis Question
GASP	Global Aviation Safety Plan
IAC	Interstate Aviation Committee
IATA	International Air Transport Association
IBAC	International Business Aviation Council
ACAS	Airborne Collision Avoidance System
ICCAIA	International Coordinating Council of Aerospace Industries Associations
ICVM	ICAO Coordinated Validation Mission
IE-REST	ICAO-EUR Regional Expert Safety Team
IFALPA	International Federation of Air Line Pilots' Associations
IFATCA	International Federation of Air Traffic Controllers' Associations
IOSA	IATA Operational Safety Audit
ISRALPA	Israel Air Line Pilots Association
iSTARS	integrated Safety Trend Analysis and Reporting System
LOC-I	Loss of Control In-Flight
NCLB	No Country Left Behind
OJT	On-the-Job Training
PQ	Protocol Question
RMA	Regional Monitoring Agency
RMT	Rule Making Task
RPAS	Remotely Piloted Aircraft Systems
RST	Runway Safety Team
SEI	Safety Enhancement Initiative
SSC	Significant Safety Concern
SSP	State Safety Programme
TAWS	Terrain Awareness Warning System
TCAS RA	Traffic Collision Avoidance System Resolution Advisory
UAS	Unmanned Aircraft System

UPRT	Upset Prevention and Recovery Training
USOAP CMA	Universal Safety Oversight Audit Programme Continuous Monitoring Approach

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