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Autoriteti i Aviacionit Civil i Kosovës
Autoritet Civilnog Vazduhoplovstva Kosova
Civil Aviation Authority of Kosovo

Occurrence Reporting Overview

2017

Autoriteti i Aviacionit Civil i Kosovës - Autoritet Civilnog Vazduhoplovstva Kosova - Civil Aviation Authority of Kosovo
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Introduction

The Occurrence Reporting System aims to improve aviation safety by ensuring that relevant safety information relating to civil aviation is reported, collected, stored, protected, exchanged, disseminated and analysed. The sole objective of occurrence reporting is the prevention of accidents and incidents and not to attribute blame or liability. The information collected is adequately protected from unauthorised use or disclosure, and it is used strictly for the purpose of maintaining and improving aviation safety.

Pursuant to CAA Regulation No. 09/2017 on the reporting, analysis and follow-up of occurrences in civil aviation, of 6 September 2017, which transposes into the internal legal order of the Republic of Kosovo the Regulation (EU) No 376/2014 of the European Parliament and of the Council of 3 April 2014 on the reporting, analysis and follow-up of occurrences in civil aviation, all relevant persons shall report aviation occurrences to the Civil Aviation Authority of the Republic of Kosovo (CAA). This reporting contributes to the improvement of the safety of civil aviation through better understanding of these occurrences to facilitate analysis and trend monitoring so that appropriate and timely preventive action can be taken and aviation safety improved.

CAA Regulation No. 09/2017 has repealed CAA Regulation 1/2009 on occurrence reporting in civil aviation, CAA Regulation No. 08/2010 laying down implementing rules for the integration into a central repository of information on civil aviation occurrences exchanged in accordance with Directive 2003/42/EC of the European Parliament and of the Council, and CAA Regulation 9/2010 laying down implementing rules for the dissemination to interested parties of information on civil aviation occurrences referred to in Article 7(2) of Directive 2003/42/EC of the European Parliament and of the Council.

The Occurrence Reporting System has been established in Kosovo in 2006. By strict application of rules on confidentiality, protecting the source of safety information and ensuring the confidence of staff working in civil aviation in occurrence reporting systems, the CAA has developed a relationship of trust with the reporters, and consequently contributed to improvement of the quality of occurrence reports. Furthermore, the operators have their own Safety Management Systems (SMS), which have advanced significantly in the recent years. The SMS usually integrates a component for treating and addressing reported occurrences, enabling the industry to contribute directly to the collection and analysis of safety-related occurrences.

The CAA stores occurrence reports drawn up on the basis of details of occurrences collected in accordance with Articles 4 and 5 of Regulation No. 09/2017 in its national database (CAA ECCAIRS database), as prescribed in Article 6(5), by using the ECCAIRS (European Coordination Centre for Aviation Incident Reporting Systems) software. Accidents and serious incidents shall also be stored in the CAA ECCAIRS database, subject to the agreed terms and conditions with the Aircraft Accident Incident Investigation Commission of the Republic of Kosovo (AAIIC). Also, the security related occurrences, apart from laser attack occurrences, shall be stored in the CAA ECCAIRS database subject to the agreed terms and conditions with the Ministry of Internal Affairs of the Republic of Kosovo (MIA).

The CAA will subsequently, in agreement with the European Commission, update the European Central Repository (EU ECCAIRS central database) by transferring to it all information relating to safety stored in the CAA ECCAIRS database as prescribed in Article 8(2) of Regulation No. 09/2017.

The CAA participates in exchange of information by making all information relating to safety stored in its database available to the competent authorities of the other ECAA Partners, EASA and the Commission, through the European Central Repository, in accordance with Article 9 of Regulation No. 09/2017.

This Occurrence Reporting Overview contains a short explanation of occurrence classes and categories, an analysis of the Occurrence Report (OR) statistics for 2017, a more detailed description of the coded categories of occurrences reported in 2017 and a thorough description of a few occurrences.

Occurrence Classes

The ECCAIRS occurrence classes are based on the ICAO ADREP 2000 Taxonomy.

Accident

An occurrence associated with the operation of an aircraft which takes place between the time any person boards the aircraft with the intention of flight until such time as all such persons have disembarked, in which:

a) a person is fatally or seriously injured as a result of:
   - being in the aircraft, or
   - direct contact with any part of the aircraft, including parts which have become detached from the aircraft, or
   - direct exposure to jet blast, except when the injuries are from natural causes, self-inflicted or inflicted by other persons, or when the injuries are to stowaways hiding outside the areas normally available to the passengers and crew; or

b) the aircraft sustains damage or structural failure which:
   - adversely affects the structural strength, performance or flight characteristics of the aircraft, and
   - would normally require major repair or replacement of the affected component, except for engine failure or damage, when the damage is limited to the engine, its cowlings or accessories; or for damage limited to propellers, wing tips, antennas, tires, brakes, fairings, small dents or puncture holes in the aircraft skin; or

c) the aircraft is missing or is completely inaccessible.

Serious incident

An incident involving circumstances indicating that an accident nearly occurred. N.B. Examples of serious incidents can be found in Attachment D of ICAO Annex 13 and in the ICAO Accident/Incident Reporting Manual (ICAO Doc 9156).

Incident

An occurrence, other than an accident, associated with the operation of an aircraft which affects or could affect the safety of operation. N.B. The type of incidents which are of main interest to the International Civil Aviation Organization for accident prevention studies are listed in the ICAO Accident/Incident Reporting Manual (ICAO Doc 9156) and ICAO Annex 13.

Major incident

Eurocontrol: An incident associated with the operation of an aircraft, which safety of aircraft may have been compromised, having led to a near collision between aircraft with ground or obstacles (i.e. safety margins not respected which is not the result of an ATC instruction).

Significant incident

Eurocontrol: An incident involving circumstances indicating that an accident, a serious or major incident could have occurred, if the risk had not been managed within safety margins, or if another aircraft had been in the vicinity.

Occurrence without safety effect

A possibly safety related occurrence not meeting the reporting requirements. This could be e.g. the result of downgrading the incident after review.

Not determined

The class of the occurrence has not been determined.

Occurrence Categories

For the purpose of this publication, occurrences are categorised based on the ICAO ADREP 2000 Taxonomy (ECCAIRS Aviation) that is presented below:

ADRM	Aerodrome (Occurrences involving aerodrome design, service, or functionality issues)
AMAN	Abrupt manoeuvre (The intentional abrupt manoeuvring of the aircraft by the flight crew)
ARC	Abnormal runway contact (Any landing or take-off involving abnormal runway or landing surface contact)
ATM	ATM/CNS (Occurrences involving Air traffic management (ATM) or communications, navigation, or surveillance (CNS) service issues)
BIRD	Birdstrike (Occurrences involving collisions / near collisions with birds / wildlife)
CABIN	Cabin safety events (Miscellaneous occurrences in the passenger cabin of transport category aircraft)
CFIT	Controlled flight into or toward terrain (Inflight collision or near collision with terrain, water, or obstacle without indication of loss of control)
CTOL	Collision with obstacle(s) during take-off and landing (Collision with obstacle(s), during take-off or landing whilst airborne)
EVAC	Evacuation (Occurrence where either; (a) person(s) are 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)
EXTL	External load related occurrences (Occurrences during or as a result of external load or external cargo operations)
F-NI	Fire/smoke (non-impact) (Fire or smoke in or on the aircraft, in flight or on the ground, which is not the result of impact)
F-POST	Fire/smoke (post-impact) (Fire/Smoke resulting from impact)
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 carburettor and/or induction icing)
GCOL	Ground Collision (Collision while taxiing to or from a runway in use)
GTOW	Glider towing related events (Premature release, inadvertent release or non-release during towing, entangling with towing, cable, loss of control, or impact into towing aircraft / winch)
ICE	Icing (Accumulation of snow, ice, freezing rain, or frost on aircraft surfaces that adversely affects aircraft control or performance)
LA[1]	Laser attack
LALT	Low altitude operations (Collision or near collision with obstacles/objects/terrain while intentionally operating near the surface (excludes take-off or landing phases))
LOC-G	Loss of control - ground (Loss of aircraft control while the aircraft is on the ground)

[1] Laser attacks do not have a separate category as per the ICAO ADREP 2000 Taxonomy, they are included in the SEC (security related) category.

LOC-I	Loss of control - inflight (Loss of aircraft control while or deviation from intended flightpath inflight)
LOLI	Loss of lifting conditions en-route (Landing en-route due to loss of lifting conditions)
MAC	Airprox/ ACAS alert/ loss of separation/ (near) midair collisions (Airprox, ACAS alerts, loss of separation as well as near collisions or collisions between aircraft in flight)
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)
RI-A	Runway incursion - animal (Collision with, risk of collision, or evasive action taken by an aircraft to avoid an animal on a runway or on a helipad/helideck in use)
RI-VAP	Runway incursion - vehicle, aircraft or person (Any occurrence at an aerodrome involving the incorrect presence of an aircraft, vehicle or person on the protected area of a surface designated for the landing and take-off of aircraft)
SCF-NP	System/component failure or malfunction [non-powerplant] (Failure or malfunction of an aircraft system or component - other than the powerplant)
SCF-PP	Powerplant failure or malfunction (Failure or malfunction of an aircraft system or component - related to the powerplant)
SEC[2]	Security related (Criminal/Security acts which result in accidents or incidents (per International Civil Aviation Organization [ICAO] Annex 13)
TURB	Turbulence encounter (In-flight turbulence encounter)
UIMC	Unintended flight in IMC (Unintended flight in Instrument Meteorological Conditions (IMC))
USOS	Undershoot/overshoot (A touchdown off the runway surface)
WSTRW	Windshear or thunderstorm. (Includes: flight into wind shear and/or thunderstorm-related weather, in-flight events related to hail, events related to lightning strikes, events related to heavy rain (not just in a thunderstorm)).
OTHR	Other (Any occurrence not covered under another category)
UNK	Unknown or undetermined (Insufficient information exists to categorize the occurrence)

[2] The Ministry of Internal Affairs has been designated to handle independently the collection, evaluation, processing, analysis and storage of details of the security related occurrences. However, the CAA remains responsible to handle independently the laser attack occurrences, which are included in this category.

Statistics

During the year 2017, as shown in the Figure 1, in total there were 149 occurrences reported to the CAA. This number represents a slight increase compared to the number of occurrences reported in 2016 and 2015, when there were reported 130 respectively 132 occurrences. While comparing with the number of occurrences reported over the past ten years, the year 2017 represents the second year with the largest number of occurrences immediately after the year 2014, when a total of 174 occurrences were reported. Whereas the total number of occurrences reported to the CAA, from 2006, when the occurrence reporting system was established in Kosovo, until the end of 2017, has reached a total of 1213 occurrences. The slight increase of the number of occurrences in 2017 doesn't indicate a weakening in the level of safety in civil aviation, but it is believed to be the result of more thorough reporting by participants in the aviation industry.

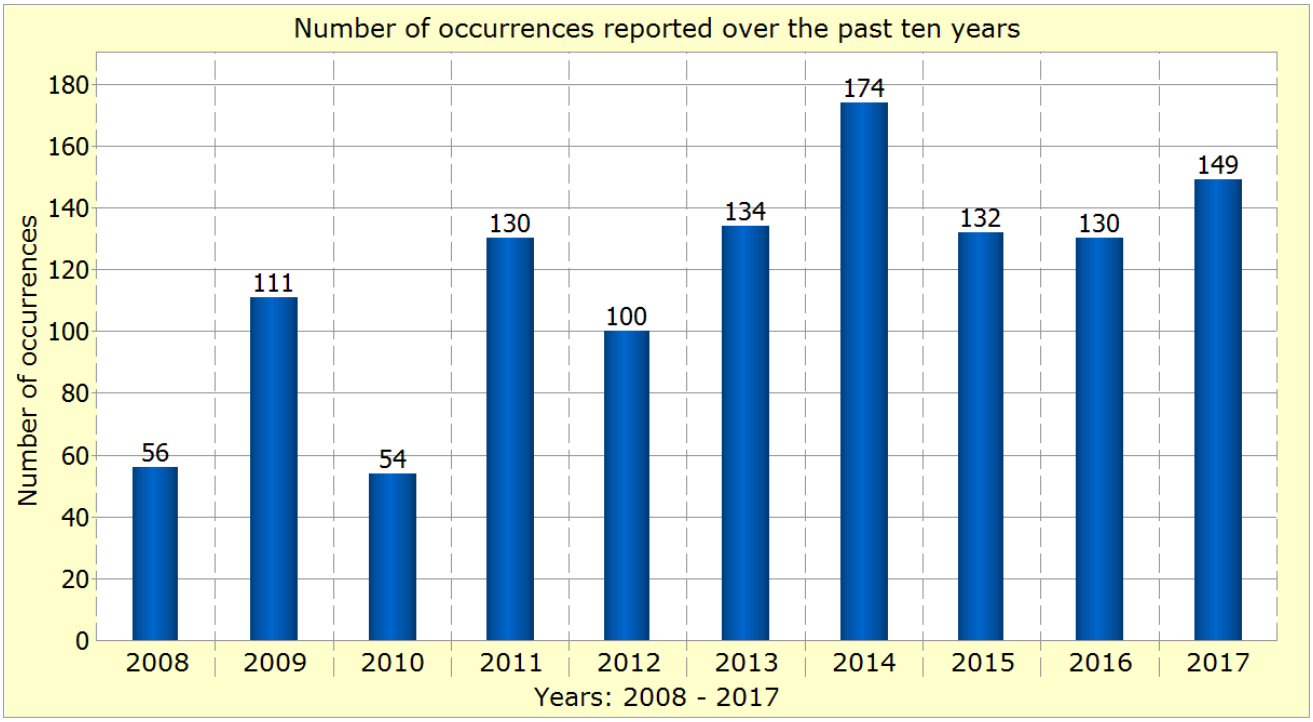

Figure 1. Number of occurrences reported over the past years: 2008 - 2017

The Figure 2 shows the number of occurrences received by the CAA on monthly basis over the past three years (2015-2017). The figure shows that the year 2017 started with 16 reported occurrences in January, then two succeeding months had 5 occurrences each, and then there was a constant increase of the number of occurrences from April to September, from 7 occurrences per month up to 24 respectively. October experienced a slight drop of the number of occurrences, while November, with only 2 occurrences, was the month with the least number of occurrences over the past three years. The year 2017 ended with a rather average number of 9 occurrences in December.

Increase of the number of occurrences during the summer months of July and August, and the month of September can also attributed to the high number of flight movements during these months at Prishtina International Airport "Adem Jashari" LKIA (PIA "Adem Jashari").

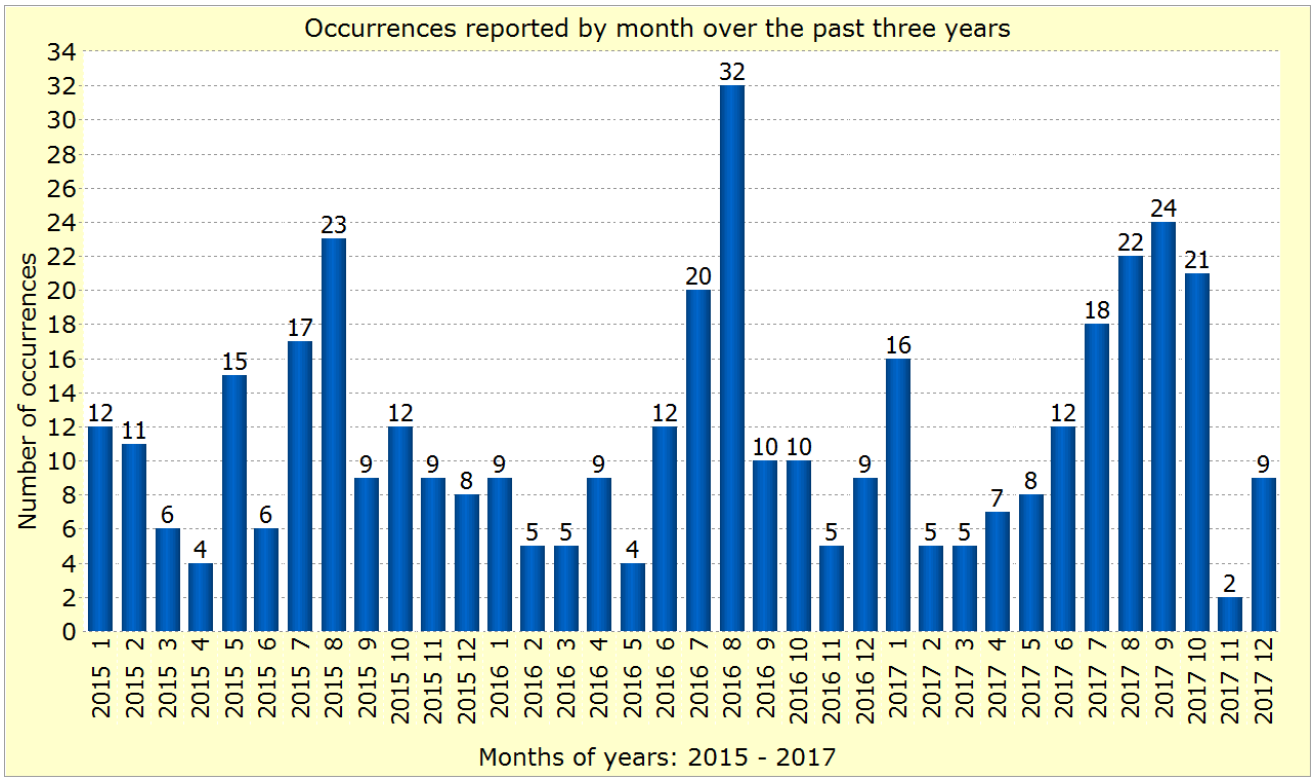

Figure 2. Occurrences reported by month over the past years: 2015 - 2017

The Figure 3 shows the total number of occurrences reported to the CAA over the past five years and their classification based on the severity of their effect on the safe operation of aircraft and occupants.

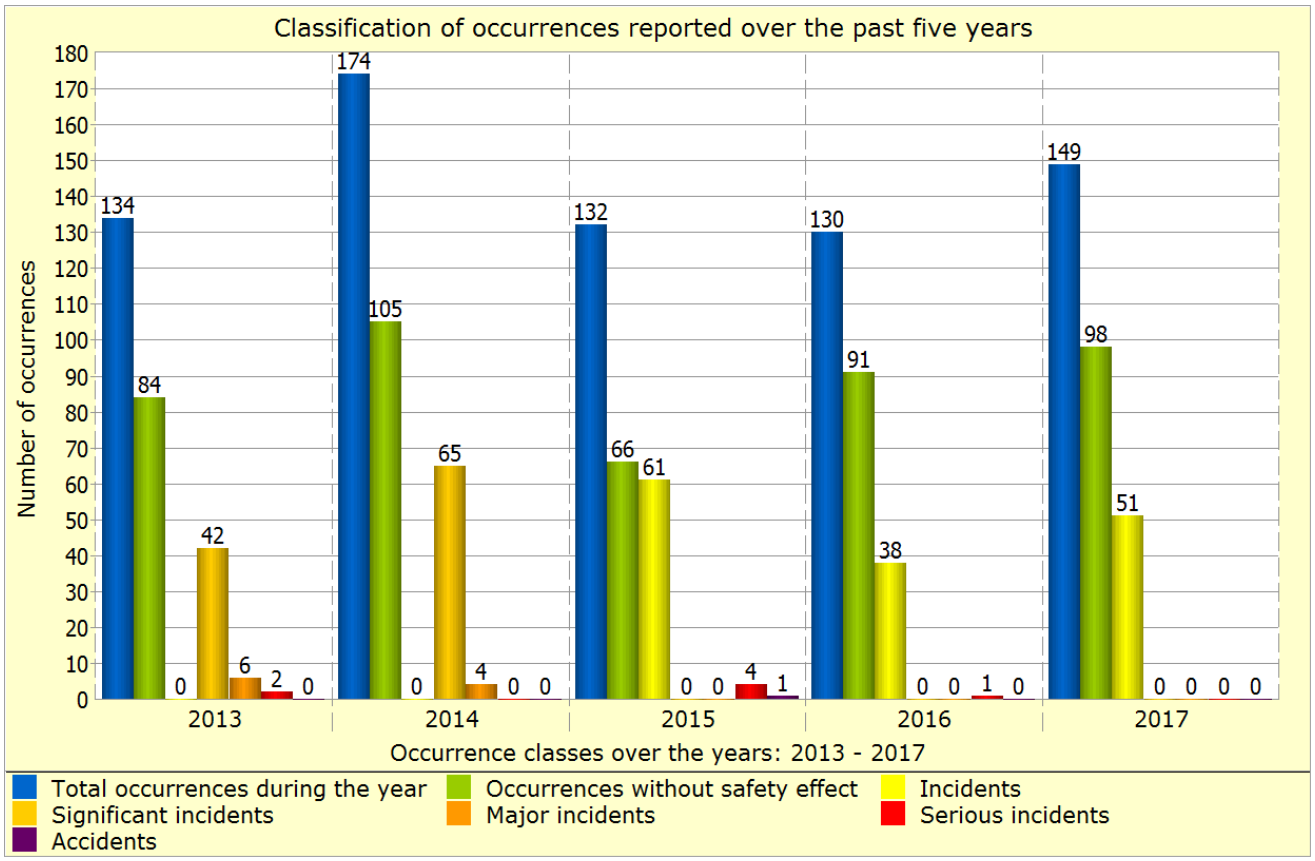

Figure 3. Classification of occurrences reported over the past years: 2013 - 2017

As shown in the Figure 3, out of 149 occurrences received during 2017, 98 occurrences were classified as “Occurrences without safety effect”, 51 occurrences were classified as “Incidents”, while there were no occurrences classified as “Serious incidents” or “Accidents”. Whereas, during the past three years the CAA hasn’t classified any of the received occurrences as “Significant incidents” or “Major incidents”, instead the relevant occurrences were classified as “Incidents”.

The number of the occurrences classified as incidents in 2017, 51 occurrences or about 34%, has increased compared to the number of incidents in 2016 (38 incidents or about 29%), but it remains lower than the number of incidents in 2015 and the number of incidents (significant incidents + major incidents) in 2014. The major contribution in the increase of the number of incidents in 2017 have given the following four categories: ATM (Air traffic management or communications, navigation or surveillance), the SCF-NP (System/component failure or malfunction [non-powerplant]), the SEC (Security related, which contains also laser attack occurrences), and the OTHR (Other), with a total of 15 incidents.

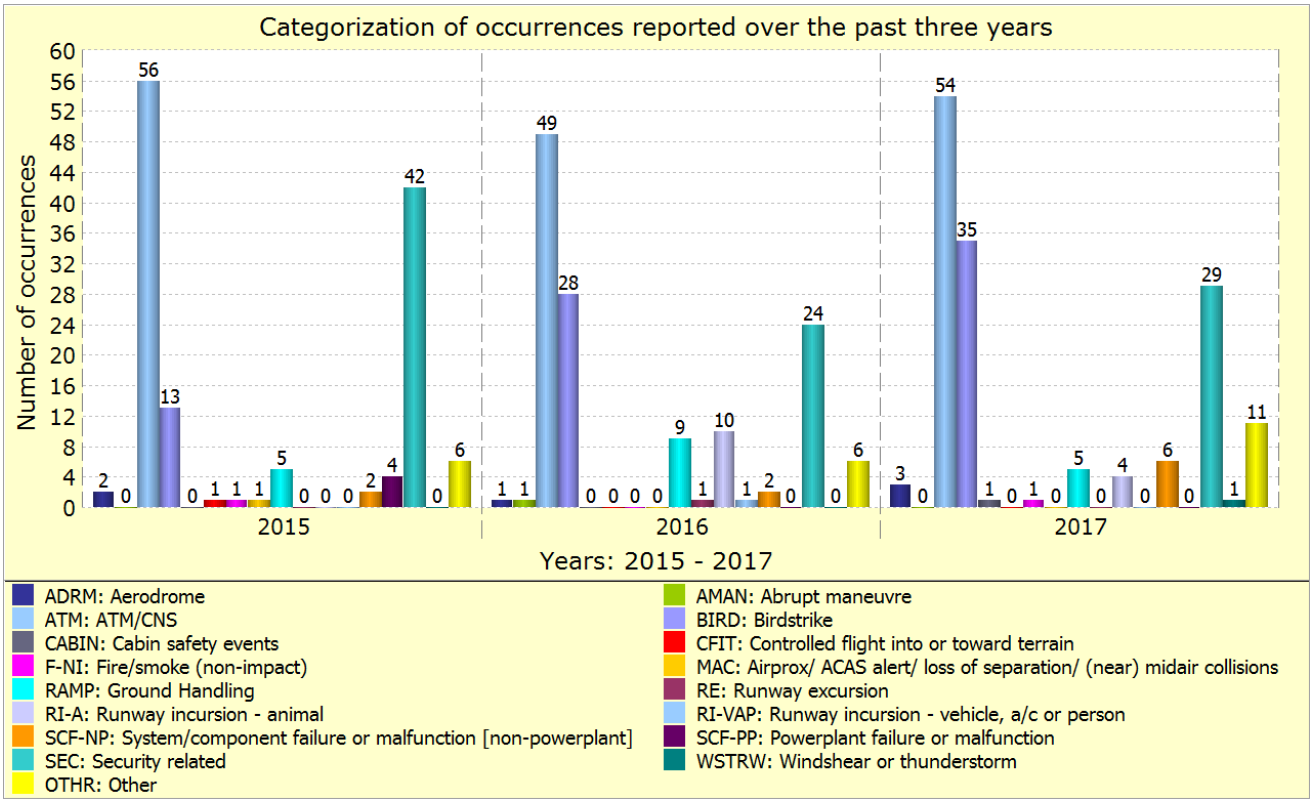

Figure 4. Categorization of the occurrences reported over the years 2015, 2016 and 2017, as extracted from the CAA ECCAIRS Database

From the Figure 4, which presents the categories of the occurrences reported over the years 2015, 2016 and 2017, can be seen that six categories of occurrences have contributed in the increase of the number of occurrences in 2017, in comparison with the number of occurrences in 2016. These categories are as follows: ADRM (Aerodrome), ATM (Air traffic management or communications, navigation or surveillance), BIRD (Birdstrike), SCF-NP (System/component failure or malfunction [non-powerplant]), SEC (Security related), and OTHR (Other). The sum of all the occurrences of these six categories in 2017 was for 28 occurrences more than it was in 2016. Apart from the categories that have contributed in the increase, the following two categories: RAMP (Ground handling) and

RI-A (Runway incursion - animal) have contributed in the decrease of the number of occurrences in 2017. The sum of all the occurrences of these two categories in 2017 was for 10 occurrences less than it was in 2016. While, other categories didn't have a significant impact on the total number of occurrences.

The Figure 5 presents the categorization and classification of the occurrences reported in 2016 and 2017, while the Table 1 presents the occurrences reported during 2017, their coded categories and their determined classes.

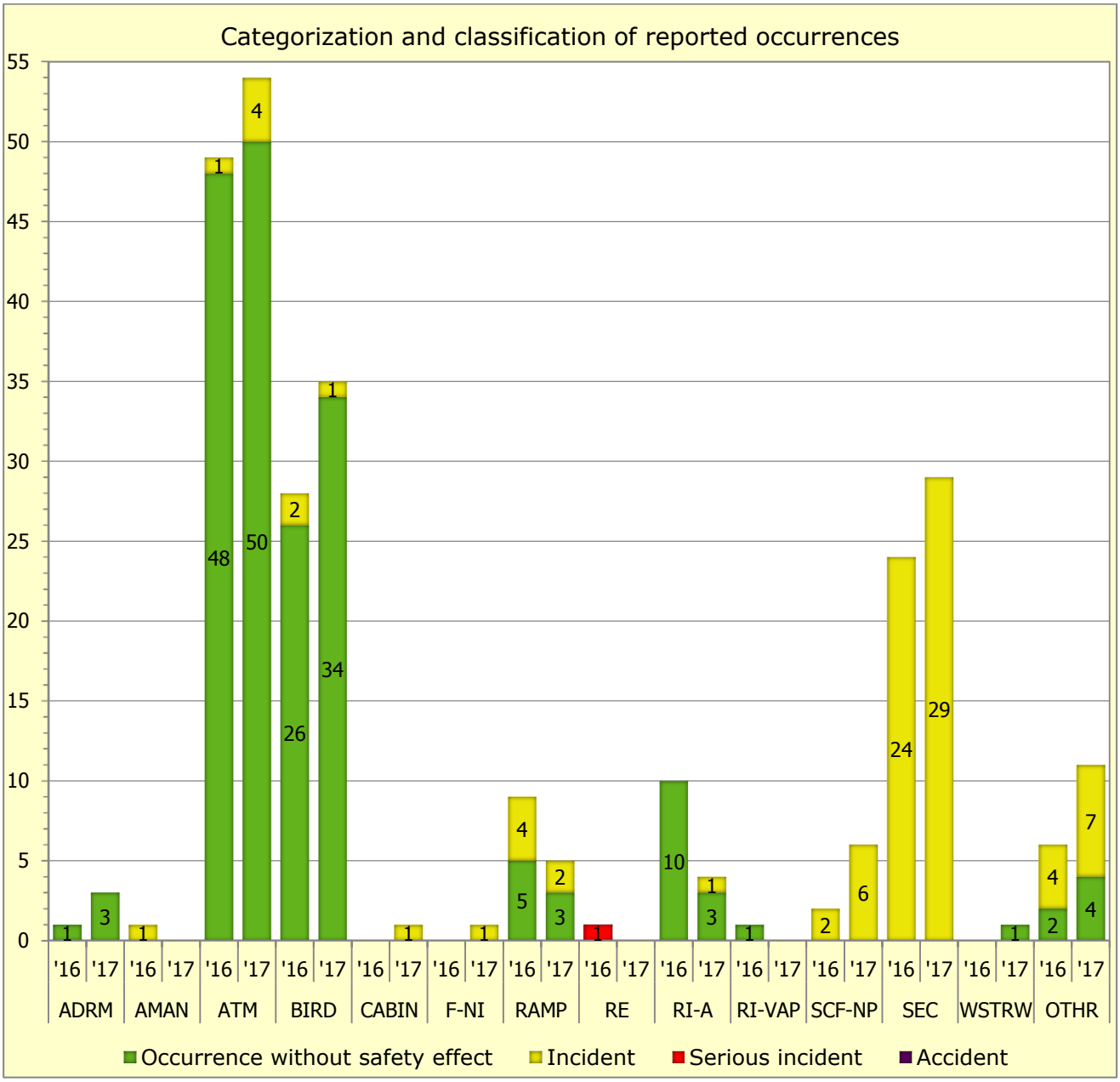

Figure 5. Categorization and classification of the occurrences reported in 2016 and 2017

By examining the categories of the occurrences reported in 2017 from the Figure 4, the Figure 5 and the Table 1, it can be observed that a significant portion (54, around 36%) of the received occurrences are codded under the Air traffic management (ATM) or communications, navigation, or surveillance (CNS) category, which includes ATM/CNS service issues, aeronautical information and meteorological services. Out of these

occurrences, 50 (92%) of them were classified as occurrences without safety effect and 4 occurrences were classified as incidents.

The second most reported category of occurrences is the Birdstrikes category (BIRD) with 35 occurrences, which represents around 23% of the overall number of the reported occurrences. Out of these occurrences, 97% of them were classified as occurrences without safety effect and one occurrence was classified as incident.

And the third most reported category of occurrences is the Security related (SEC) category with 29 occurrences, which includes also the Laser attacks subcategory, and represents around 19% of the overall number of the reported occurrences. However, the laser attacks are considered to constitute a relatively high percentage of the overall number of the reported occurrences, due to the severe effects they may have on the safety of aircraft operations. They are all classified as incidents and they account for around 56% of the overall number of the reported incidents.

	Occurrence Without Safety Effect	Incident	Serious Incident	Accident	Total
ADRM	3	-	-	-	**3**
ATM	50	4	-	-	**54**
BIRD	34	1	-	-	**35**
CABIN	-	1	-	-	**1**
F-NI	-	1	-	-	**1**
RAMP	3	2	-	-	**5**
RI-A	3	1	-	-	**4**
SCF-NP	-	6	-	-	**6**
SEC	-	29	-	-	**29**
WSTRW	1	-	-	-	**1**
OTHR	4	7	-	-	**11**
Total	**98**	**52**[3]	**0**	**0**	**150**[4]

Table 1. Occurrence reported during 2017, their coded categories and determined classes

[3] The number of occurrences determined as Incidents in 2017 was 51, but one of these incidents was coded under two categories.

[4] The total number of occurrences in 2017 was 149, but one of these occurrences was coded under two categories.

Coded Occurrence Categories

This section presents in-depth information about the occurrences reported in 2017 and their coded categories.

ADRM: Aerodrome. Occurrences involving aerodrome design, service, or functionality issues. This category includes deficiencies/issues associated with runways, taxiways, ramp area, parking areas, buildings and structures, Crash/Fire/Rescue (CFR) services, obstacles on the Aerodrome property, power supply, lighting, markings, signage, procedures, policies, and standards. Occurrences of this category do not necessarily involve an aircraft.

Three occurrences reported during 2017, as shown below, were coded in the ADRM category:

File Number(s)	Headline of Occurrence	Number of Occurrences	Occurrence Class
004	Friction Tester Unserviceable	1	OWSE[5]
011	Malfunction of Snow Removal Truck & Missed Approach	1	OWSE
102	Approach Mast Damage	1	OWSE

Friction Tester Unserviceable – It was reported that the friction measurement vehicle was not working properly, due to the problem with its display. Since the friction testing device (ASFT - Airport Surface Friction Tester) couldn't provide the friction measurement data, measurements were performed using the alternate method for friction measurement and reporting.

Malfunction of Snow Removal Truck & Missed Approach – While performing the snow removal operations on runway, the equipment/truck suffered a malfunction, for which TWR was notified. The truck was removed from the runway and towed to the mechanical maintenance facilities. At the time of truck malfunction, one aircraft was on approach, therefore RDR ATCO instructed the PIC to perform a missed approach.

Approach Mast Damage – During a regular inspection it was noticed that due to high winds (16 kt) one of the approach masts was damaged in its frangible part and it has fallen down on the ground. An approach mast is a structure with multiple lights of the approach lighting systems, which complies with ICAO frangibility requirements.

The aerodrome operator has taken immediate measures to repair the equipment and put them back in service. All reported occurrences were classified as occurrences without safety effect.

ATM: ATM/CNS. Occurrences involving Air traffic management (ATM) or communications, navigation, or surveillance (CNS) service issues.

As listed below, 54 occurrences reported during 2017 were coded in the ATM category:

[5] Occurrence without safety effect.

File Number(s)	Headline of Occurrence	Number of Occurrences	Occurrence Class
007, 012, 013, 019, 020, 022, 050, 083, 133, 145	AWOS Unserviceable	10	OWSE
008	DVOR/DME Unserviceable	1	OWSE
014	Digital Linear Tape Unserviceable	1	OWSE
015	Radiotelephony Unserviceable	1	OWSE
021	Serial Management Protocol Unserviceable	1	OWSE
024, 048, 094	EUMETCast Problem	3	OWSE
025	No VFR Flight Plan	1	Incident
026	Computer and Internet Problems	1	OWSE
030	No SNOWTAM Sent	1	OWSE
035, 139, 142	Background Noise on Radio	3	OWSE
036	Non-Standard Missed Approach	1	OWSE
038	Meteorological System Unserviceable	1	OWSE
040	Internet and AFTN Unserviceable	1	OWSE
043	AWOS - AFTN Link Problems	1	OWSE
046, 059	CrashNET Unserviceable	2	OWSE
047	Wrong Altitude Indication	1	Incident
052	Power Outage, Unserviceability of All Frequencies, Radar Screen, ALMOS, ATIS and AFTN	1	OWSE
053, 064, 090	ATIS & AWOS Unserviceable	3	OWSE
056	Vehicle on the Runway	1	Incident
067, 071	Telephone Lines Unserviceable	2	OWSE
077	Radar Service Unserviceable	1	OWSE
082	Podgorica Landline Unserviceable	1	OWSE
088	Radiotelephony, Meteo Data and ATIS Unserviceable	1	OWSE
089	Radar Service, ALMOS and ILS Unserviceable	1	OWSE
114	RCWP in TWR Unserviceable	1	OWSE
119	Three Missed Approaches due to Low Visibility	1	OWSE
121	Localizer ILS RWY17 Unserviceable	1	OWSE
122, 143	Internet Problems	2	OWSE
125, 128, 146	VCSS Unserviceable	3	OWSE
130, 131, 132	RVR Unserviceable	3	OWSE
147	Radio Frequency Unserviceable	1	OWSE
148	Radio Frequency Unserviceable	1	Incident

Table 1 and Figure 4 show that during 2017 occurrences concerning ATM systems and procedures (including Aeronautical Information and Meteorological Services) account for around 36% of the occurrences reported during 2017.

Occurrences covering technical failures or defects, mainly related to communication, navigation, surveillance, meteorological equipment, aeronautical information systems etc., are coded under this category, as well as any other occurrence pertaining to or involving ATM procedures and systems.

During 2017, as in previous years, the problems with the meteorological equipment were the most prominent, accounting for 38% of the overall ATM occurrences. All of these occurrences involved short-term equipment failure of the automatic observation system (AWOS), around 80%, the weather forecasting system (15%) or failure of supporting functions such as AFTN/Internet affecting meteorological services. All of these occurrences were classified as occurrences without safety effect. The frequency of the occurrences, however, remains a concern, and needs to be addressed as soon as possible. To mitigate the effect of the frequent failures, the Air Navigation Service Agency (ANSA), has in place a back-up weather observation system, which is not automatic, and back-up procedures for manual measurements and observations. The condition of the equipment, its age and lack of spare parts for the current AWOS remains problematic. ANSA has taken necessary measures to maintain the equipment in service, and in the future, it plans to procure a new automatic weather observation system.

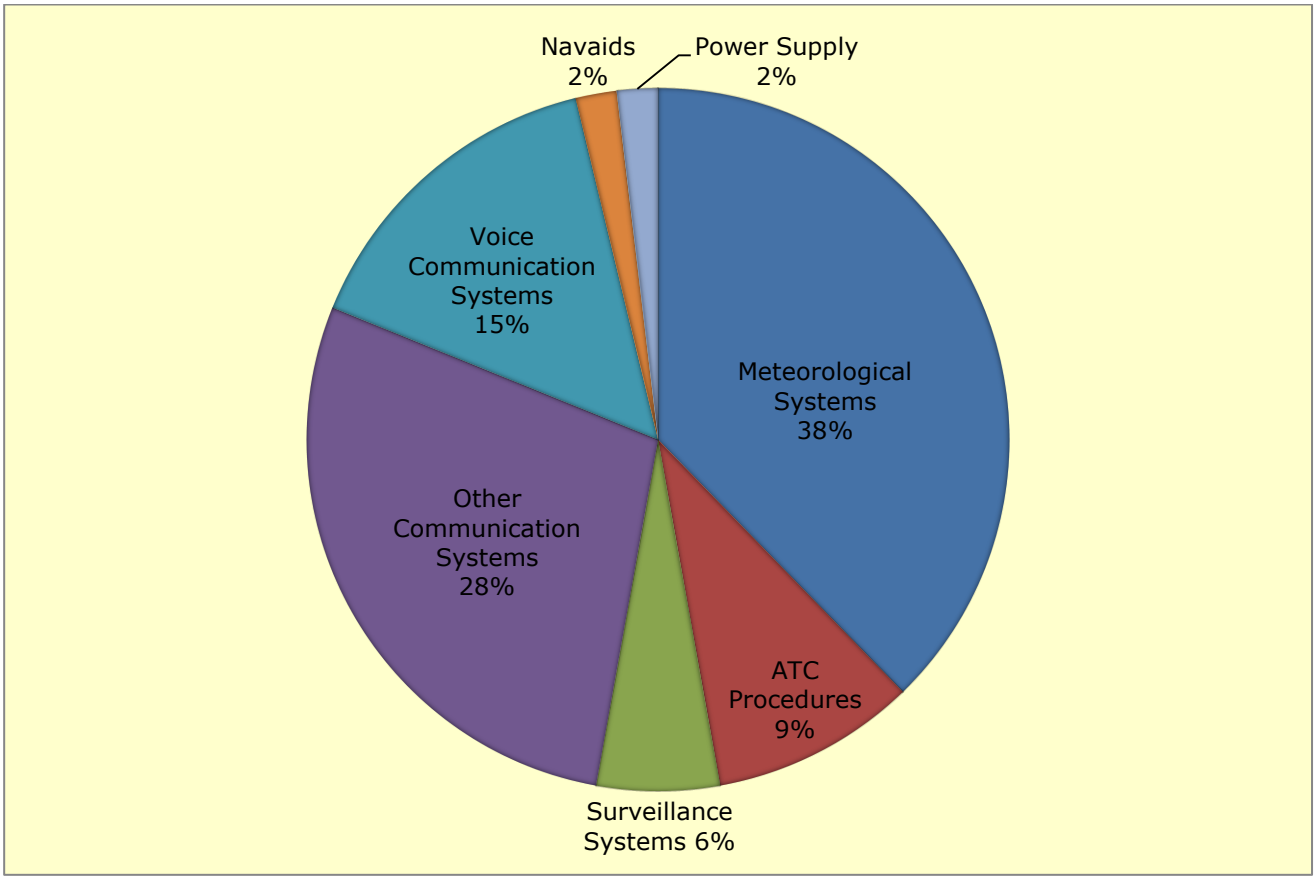

Figure 6. A breakdown of the reported ATM occurrences per sub-category

Occurrences related to communication systems other than Voice Communication systems (Other Communication Systems) were the second most reported. All of these occurrences mainly concerned technical problems, which usually lasted for short periods of time and had no safety impact. Technical issues with Voice Communication systems were the third most reported, representing 15% of ATM occurrences. One of them was classified as

Incident, due to the fact that it occurred during peak time operations, increasing thus both pilot and controller workload. It can also be noted from Figure 7, that this category experienced the sharpest increase compared to the previous years. While some of these occurrences are still under investigation, it is evident that the age and condition of the radio system currently in place have played a major role. The procurement of a new radio communication system is planned as part of a major governmental investment project in 2018.

Five reported occurrences were related to ATC procedures, out of which 2 were classified as Incidents. One of the incidents, concerned two aircraft, one of which was indicating a radar altitude different from the one originally cleared for by the controller. The controller had to give out additional instructions to both aircraft to ensure proper separation between the two, in accordance with the ATC manual of procedures. The other incident involved the presence of a vehicle on the runway, after a clearance for take-off was given to an aircraft. Both incidents were investigated to identify root causes and safety recommendations were implemented to avoid reoccurrence.

Occurrences involving surveillance systems such as Radars, were reported in significantly lower numbers than in the previous years. All 3 reported occurrences involved small technical problems, lasting for short periods of time.

Few occurrences reported in 2017 were associated to Navigation Systems (1) and Power Supply (1).

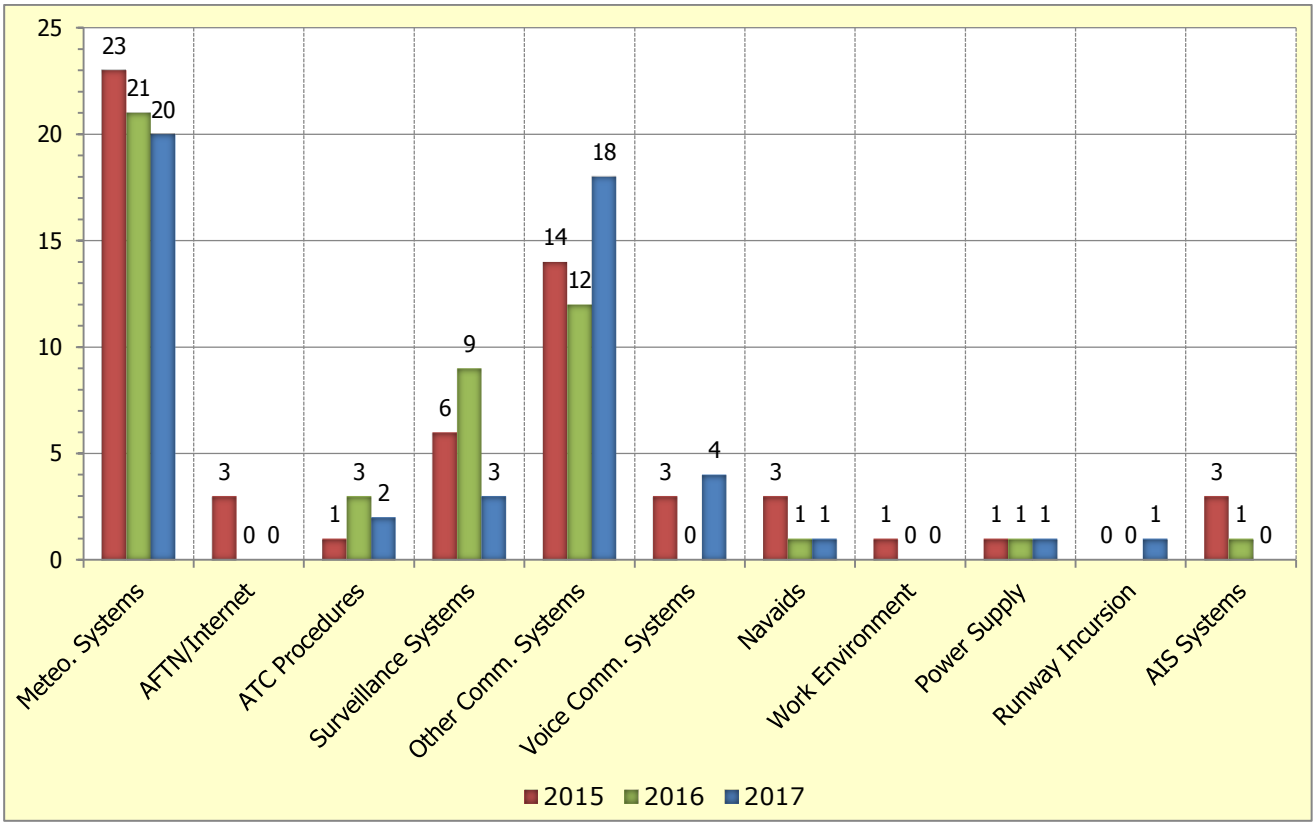

Figure 7. A comparison of the ATM occurrences reported during 2015, 2016 and 2017

A significant number of the reports were helpful to both the ANSA and the CAA in identifying trends regarding equipment and other aspects of air navigation services and

systems, enabling the ANSA to address these issues more carefully and ensure that proper measures were taken to mitigate the problems.

BIRD: Birdstrike. This category includes a collision/near collision with birds/wildlife, or ingestion of one or more birds. Unconfirmed birdstrikes are also included in this category.

As listed below, during 2017 there were 35 reported birdstrikes that were all classified as occurrences without safety effect except one that was classified as incident.

File Number(s)	Headline of Occurrence	Number of Occurrences	Occurrence Class
010, 027, 037, 042, 044, 058, 062, 063, 068, 073, 074, 078, 080, 085, 087, 093, 098, 099, 100, 105, 107, 109, 111, 112, 113, 117, 120, 124, 129, 134	Bird Strike	30	OWSE
061	Bird Strike	1	Incident
028, 072	Bird/Wildlife Strike	2	OWSE
092	Deceased Bird Found on RESA 35	1	OWSE
126	Cancelled Take-off Clearances due to Flocks of Birds	1	OWSE

The incident has occurred when a medium size bird hit the lower part of aircraft engine, leaving the traces of blood and feather on the fan blades. Consequently, due to maintenance inspection of the aircraft the flight was delayed for approximately two hours. No damage was found.

The Figure 8 shows the trend of the reported birdstrikes per each month during 2015, 2016 and 2017.

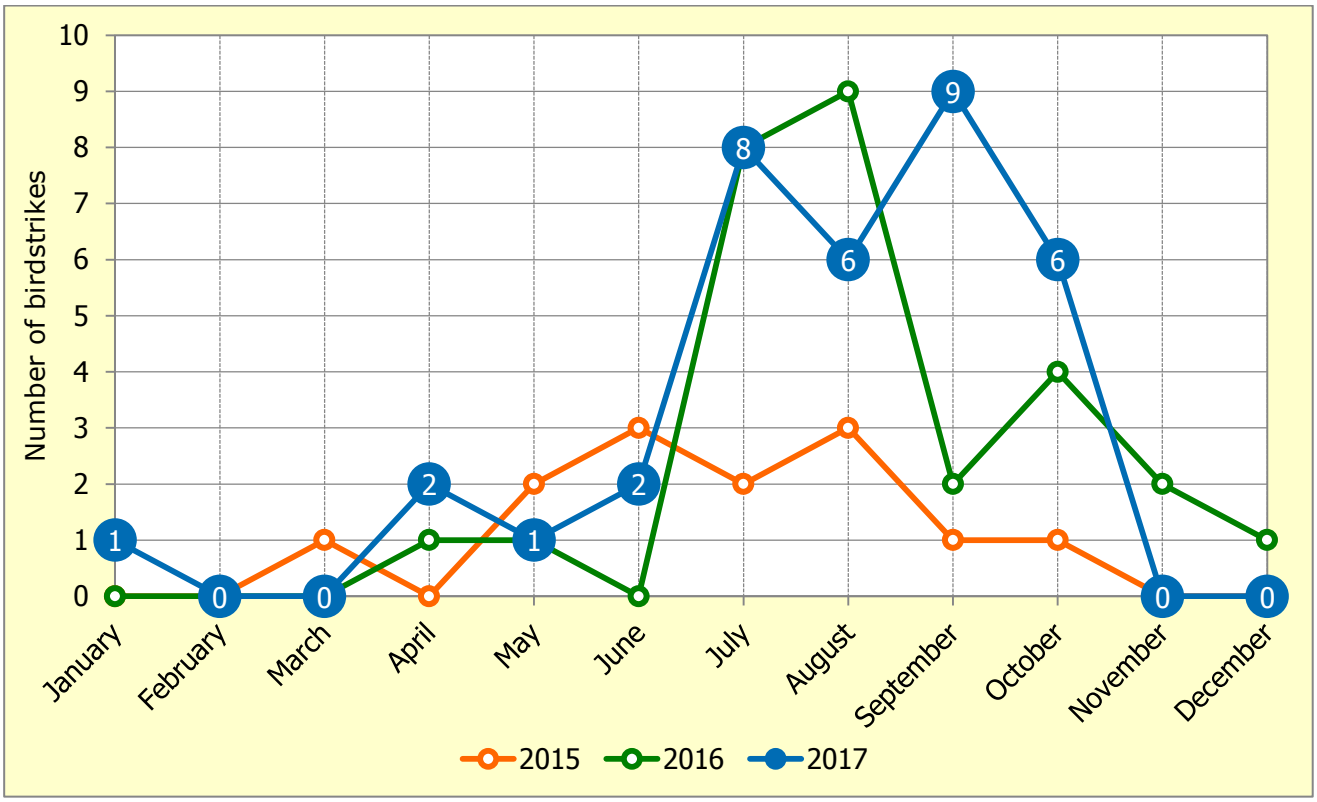

Figure 8. Birdstrikes reported during 2015, 2016 and 2017

As shown above, the trend of the reported birdstrikes in 2017, with a slight increase of the number, remained approximate to the trend of birdstrikes in 2016. Out of the total number of 35 reported occurrences, the aerodrome operator has confirmed 12 birdstrikes.

The Figure 9 shows the number of confirmed birdstrikes per each month during 2016 and 2017.

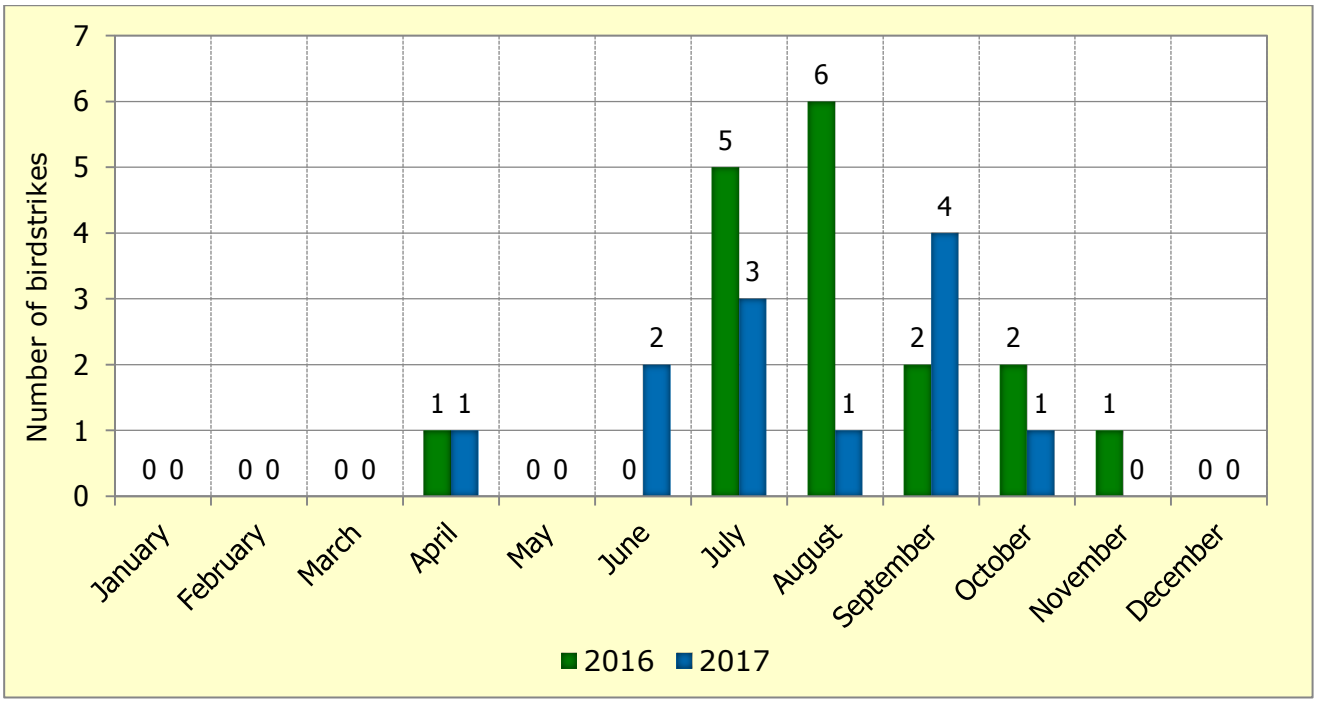

Figure 9. Confirmed birdstrikes reported during 2016 and 2017

A confirmed birdstrike is collision between a bird and an aircraft for which evidence, in the form of a carcass, or other remains, is found on the ground; or damage and/or other evidence is found on the aircraft. An unconfirmed birdstrike is collision for which no physical evidence is found (i.e. no damage to the aircraft is evident upon inspection, and no bird remains, carcass or blood smears are evident on the airframe).

The largest number of birdstrikes occurred during the summer months, which can be attributed mainly to several factors, including increased number of aircraft movements due to the high peak season at PIA "Adem Jashari", weather conditions, harvesting season nearby the airport boundaries, etc. In 2017, the largest number of confirmed birdsrtikes involved kestrels (small falcons that hunt small mammals and large insects) and other small birds.

CABIN: Cabin safety events. Miscellaneous occurrences in the passenger cabin of transport category aircraft.

As listed below, one occurrence reported during 2017 was coded under the CABIN category. This occurrence was coded also under the F-NI category, and it was classified as incident.

File Number(s)	Headline of Occurrence	Number of Occurrences	Occurrence Class
045	Smoke in Cabin due to Mobile Phone Battery	1	Incident

This incident occurred few minutes after departure from PIA "Adem Jashari", when smoke started coming out of a mobile phone spare battery that was placed in a passenger's handbag. The smoke was noticed by chief cabin that put the battery on a metallic trash bin and poured water on it until the fire was extinguished. The battery connectors weren't secured to avoid short circuits. The aircraft returned to PIA, but no emergency was declared and no firefighting assistance was needed, though they were on a stand-by.

F-NI: Fire/smoke (non-impact). Fire or smoke in or on the aircraft, in flight or on the ground, which is not the result of impact.

One occurrence reported during 2017 was coded under the F-NI category and also under the CABIN category. See: **CABIN: Cabin safety events**.

LA: Laser Attack. See: **SEC: Security related.**

RAMP: Ground Handling. Occurrences during (or as a result of) ground handling operations, which include collisions that occur while servicing, boarding, loading, and deplaning the aircraft also during boarding and disembarking while helicopter is hovering, injuries to people from propeller/main rotor/tail rotor/fan blade strikes, push-back/power-back/towing events, jet blast and prop/rotor down wash, aircraft external preflight configuration errors that lead to subsequent events, and all parking areas (ramp, gate, tiedowns).

As listed below, during 2017 there were five reported occurrences involving ground handling services.

File Number(s)	Headline of Occurrence	Number of Occurrences	Occurrence Class
009	Hit of Cleaning Vehicle by Passenger Stairs	1	OWSE
031	Fire Hydrant Hit by Baggage Trolley	1	Incident
057	Ambulift's Safety Rail Touched Aircraft Door	1	OWSE
069	Baggage Loaded into Wrong Compartment	1	Incident
079	Wrong Parking Stand	1	OWSE

Two of these occurrences were classified as incidents, the first involved a trolley which got disconnected while in motion on the movement area, and the second occurred due to wrong baggage loading found on the incoming flight. The other three occurrences were classified as occurrences without safety effect.

RI-A: Runway incursion - animal. Collision with, risk of collision, or evasive action taken by an aircraft to avoid an animal on a runway or on a helipad/helideck in use.

File Number(s)	Headline of Occurrence	Number of Occurrences	Occurrence Class
033	Dog on Airfield	1	OWSE
039	Dog on Runway Threshold	1	OWSE
041	Dog on Runway	1	OWSE
066	Dog on Movement Area	1	Incident

The presence of wildlife (birds and animals) on and in the aerodrome vicinity poses a serious threat to aircraft operational safety. In order to manage the wildlife and to minimize the likelihood of collisions between wildlife and aircraft, LKIA has developed a Wildlife Hazard Management Plan (WHMP), which was reviewed and approved by the CAA.

During 2016 the CAA had received a significant number of reports involving presence of dogs on the airside of PIA “Adem Jashari”. According to investigations, the most contributing factors to large number of dogs entering the movement area were the inadequate perimeter fence and an ineffective barrier at one of the gates, both at the military part of the airport. This issue was solved in close corporation between the airport and KFOR officials. However, during 2017, as listed above, the CAA has received another 4 reports involving animals (dogs) entering the movement area. Consequently, in order to manage the wildlife more efficiently, the aerodrome operator has introduced the updated daily inspection procedures and monitoring forms, with the special focus on inspection of the problematic parts of the perimeter fence. Three of the reported occurrences were classified as occurrences without safety effect, while one is considered to be an incident.

SCF-NP: System/component failure or malfunction [non-powerplant]. Failure or malfunction of an aircraft system or component - other than the powerplant.

As listed below, six occurrences reported during 2017 were coded under the SCF-NP category.

File Number(s)	Headline of Occurrence	Number of Occurrences	Occurrence Class
006	Unable to Retract Landing Gear after Take-Off	1	Incident
016	Primary Radio Unserviceable	1	Incident
018	Ground Proximity Warning System Malfunction	1	Incident
023	Pressurization Problem	1	Incident
034	Windshield Problems	1	Incident
144	Landing Gear Problem	1	Incident

The first incident (File No. 006) involved a military aircraft that after the departure from PIA "Adem Jashari" was unable to retract the landing gear. The pilot decided to turn back for landing and declared emergency. Prishtina ATC Tower activated CrashNET and aircraft landed safely.

The second incident (File No. 016) also involved a military aircraft that also returned to land at PIA due to problems with their primary radio. ATC Tower activated Alert Phase 1 via the CrashNET. Pilots were able to communicate with ATC by using their back-up radio and subsequently they landed the aircraft safely.

The third incident (File No. 018) also involved a military aircraft that had problems with terrain warning when it was established on the final approach course. Due to malfunction of their Ground Proximity Warning System pilots decided to divert to Sofia Airport, where they landed the aircraft safely.

The fourth incident (File No. 023) involved a commercial aircraft that due to a pressurization problem returned to land at PIA, where it landed safely. The problem was caused by the left side forward passenger door that wasn't closed properly, from which also loud noise was coming. After landing, the door was found loose fitted. PIA ground staff doesn't operate with doors of any airline, they have performed a pre-departure visual check and observed no irregularities. The airline has informed their Ground Operations Department to provide a reminder to the handling companies about exterior inspection procedures.

The fifth incident (File No. 034) involved a military aircraft that also returned to land at PIA due to windshield problems, which wasn't broken. No emergency was declared, but Alert Phase 2 was activated, and later aircraft landed safely.

The sixth incident (File No. 144) involved a commercial aircraft that, after departure from Podgorica Airport, reported problems with landing gear and requested to proceed to PIA for landing. The state of urgency signal Pan-Pan was declared. Prishtina ATC instructed the crew to proceed directly to PIA, while the crew requested to perform a missed approach with low pass, in order for ATC to visually check the landing gear. They also requested presence of Rescue and Fire Fighting Services, which were already informed, and Alert Phase 1 was activated. After the visual check, ATC reported that the gear appeared to be down. And after it was cleared to land the aircraft landed safely.

SEC: Security related. Criminal/Security acts which result in accidents or incidents (per International Civil Aviation Organization [ICAO] Annex 13. Examples include: a) hijacking and/or aircraft theft; b) interference with a crewmember (e.g., unruly

passengers); c) flight control interference; d) ramp/runway/taxiway security; e) sabotage; f) suicide; and g) acts of war.

File Number(s)	Headline of Occurrence	Number of Occurrences	Occurrence Class
017, 029, 032, 051, 054, 070, 075, 076, 081, 084, 086, 091, 095, 096, 101, 103, 106, 110, 115, 118, 127, 135, 136, 149	Laser Attack	24	Incident
060, 138	Two Laser Attacks	2	Incident
104	Repetitive Laser Attacks	1	Incident
108	Double Laser Attack	1	Incident
116	Aborted Take-Off	1	Incident

As listed above, during 2017 there were 28 occurrences related to laser attacks (pointing a laser at an aircraft in flight) submitted to the CAA, and they were all classified as incidents. Some of those occurrences contained two laser attacks occurring during the same flight, or from the same position laser was pointed at two aircraft. Most of these incidents occurred during the approach and departure phase of flight, when aircraft operate at low altitudes. All the involved aircraft landed safely at PIA "Adem Jashari" or flew safely to their intended destinations.

The Figure 10 presents a comparison of the reported laser attacks by month during the years 2015, 2016 and 2017.

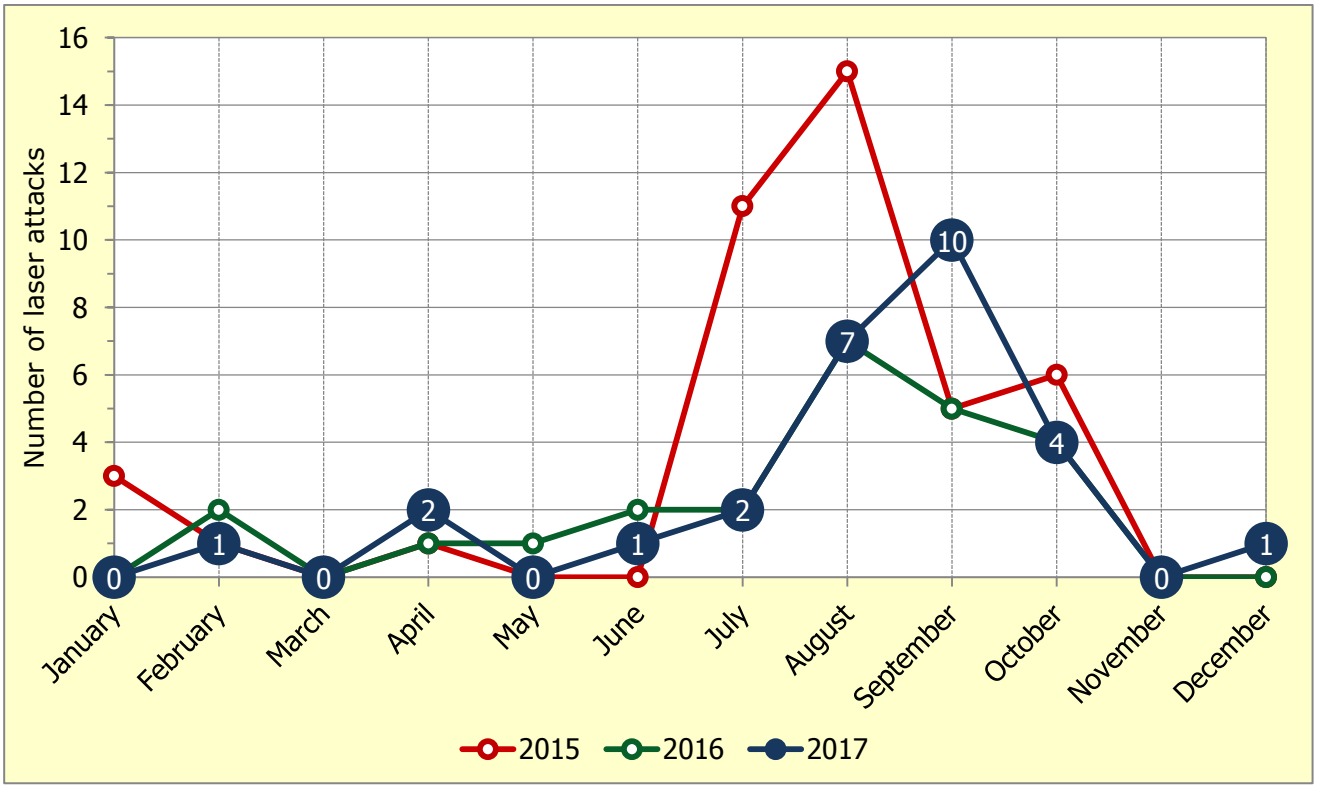

Figure 10. Laser attacks reported during 2015, 2016 and 2017

The number of occurrences related to laser attacks has increased slightly in 2017 in comparison with 2016, but it remains lower than the number of laser attacks in 2015, when 42 attacks were reported.

One occurrence reported during 2017 involved an aborted take-off event (File No. 116), which occurred during take-off run due to indication of an open door. The incident was caused by a passenger seated at emergency exit, who intended to open the emergency door. The aircraft returned to apron, where Kosovo Police and the pilot in command concluded that the passenger didn't try to open the door on purpose, but he did it accidentally. Before the next departure, the pilot allowed the same passenger to continue the flight, but he changed his seat.

In cooperation with the Air Navigation Service Agency (ANSA) and the Kosovo Police (KP), the CAA has amended the trilateral understanding cooperation agreement for response in real time against laser attackers. The draft agreement hasn't been finalised yet, but it is expected to be completed soon. The draft agreement specifies that the air traffic controller on duty shall immediately call on the phone the Police Operational Centre, which shall immediately inform the nearest KP Patrol Unit on the site to enable the fastest response. KP remains responsible for investigation of all laser attack occurrences.

Otherwise, the Ministry of Internal Affairs of the Republic of Kosovo has been designated to handle independently the collection, evaluation, processing, analysis and storage of details of the security related occurrences. However, the CAA remains responsible to handle independently the laser attack occurrences, which are included in the SEC category.

As illustrated in the below picture, modern lasers have the power to blind, to act as a huge distraction and to dazzle the pilots during critical phases of flight, such as take-off and landing.

Photograph 1. Illustration of the effects of a laser pointed in a cockpit.

Shining a laser at an aircraft in flight is a serious risk to the safety of passengers and crew, as well as people living close to airports. Laser attacks are carried out deliberately by irresponsible persons, they constitute a criminal offence, and the CAA strongly urges anyone who observes such activity at night, especially in the vicinity of an airport, to contact the police immediately.

WSTRW: Windshear or thunderstorm. Includes: flight into wind shear and/or thunderstorm-related weather, in-flight events related to hail, events related to lightning strikes, events related to heavy rain (not just in a thunderstorm).

CAA has received one occurrence report coded under this category:

File Number(s)	Headline of Occurrence	Number of Occurrences	Occurrence Class
065	Runway Struck by Lightning	1	OWSE

In July 2017, a lightning struck the runway causing small surface damages. The aerodrome operator undertook necessary measures to clean and repair the damaged area. No flight delays were reported. This occurrence was classified as occurrence without safety effect.

OTHR: Other. Any occurrence not covered under another category.

File Number(s)	Headline of Occurrence	Number of Occurrences	Occurrence Class
001, 002, 003, 005	Unauthorised Drone Activity	4	Incident
049	Airspace Infringement	1	Incident
055	Unauthorised Approach and Descent	1	Incident
097, 137	Airspace Infringement	2	OWSE
123	Missed Approach	1	OWSE
140	Unstabilized Approach	1	Incident
141	Unstabilized Approach	1	OWSE

As listed above, 11 occurrences reported in 2017 were coded in this category. As can be seen in the Figure 4, this number represents a significant increase compared to the number of reported occurrences in two previous years, when were reported 6 occurrences in each year. Seven out of 11 occurrences coded in this category were classified as incidents and four as occurrences without safety effect.

Four of the occurrences coded in this category related to unauthorised drone activities of unknown drones, and they were all classified as incidents. Three of these activities occurred in the city of Prishtina and one of them in the village of Karaçevë e Epërme. One occurrence, which occurred 6 NM Northeast of PIA “Adem Jashari” and was observed by a KFOR helicopter, involved an unknown flying object infringing the airspace. This occurrence was classified also as incident.

One occurrence, classified as incident, related to unauthorised approach and descent of an aircraft without prior clearance from the approach air traffic controller. The airline has acknowledged that the event was caused by non-compliance of the required procedures by their crew, though not on purpose, and that their Training Department, Flight Operations Department and Safety Department have taken appropriate corrective measures.

Two other occurrences related to airspace infringements, which indicate entrance of aircraft into Kosovo airspace without proper permissions or clearance. Both of these occurrences were classified as occurrences without safety effect.

Three other occurrences related to the problems with aircraft during the approach phase of the flight: one missed approach and two unstabilized approaches. The missed approach and one of the unstabilized approaches were classified as occurrences without safety effect, while the other unstabilized approach was classified as incident. The unstabilized approach incident occurred when there was a surface wind of 14 knots (26 km/h), and later the aircraft landed safely.

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