



Republika e Kosovës
Republika Kosovo - Republic of Kosovo



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

Occurrence Reporting Overview 2011



Introduction

The objective of Occurrence Reporting System is to contribute to the improvement of air safety by ensuring that relevant information on safety is reported, collected, analysed, stored, protected and disseminated. The ultimate goal of occurrence reporting is the prevention of incidents and accidents and not to attribute blame or liability.

Pursuant to Regulation 01/2009 on Occurrence Reporting in Civil Aviation, which transposes into Kosovo's national legal order the Directive 2003/42/EC, all relevant persons shall report aviation occurrences to the Civil Aviation Authority of Republic of the Republic of Kosovo (CAA). Such reporting contributes to the improvement of the safety of civil aviation through better knowledge of these occurrences to facilitate analysis and trend monitoring for initiating corrective actions.

Occurrence Reporting System in Kosovo has been in place since 2006. Despite the slow start, the occurrence reporting rate has substantially improved in the last few years.

The CAA has set up the ECCAIRS (European Co-ordination Centre for Aviation Incident Reporting Systems) system in its office and at Prishtina International Airport "Adem Jashari" Limak Kosovo International Airport (LKIA) for facilitating the reporting of occurrences by all persons who have a duty to report such occurrences. The CAA will subsequently integrate its systems with the EU ECCAIRS central office for exchange of occurrence information and for facilitating effective analysis and monitoring of safety critical information, in accordance with Regulation 8/2010, which transposes into our national legal order the Commission Regulation (EC) No.1321/2007. Accidents and serious incidents shall also be stored in the database, subject to the agreed terms and conditions with the Aircraft Accident Incident Investigation Commission of the Republic of Kosovo(AAIIC).

This report contains Occurrence Report (OR) statistics for 2011, a short explanation of each category and short description of few occurrences.

ECCAIRS Occurrence Classes

The ECCAIRS occurrence classes are based on ICAO's 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

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

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

An incident which has no safety significance.

Statistics

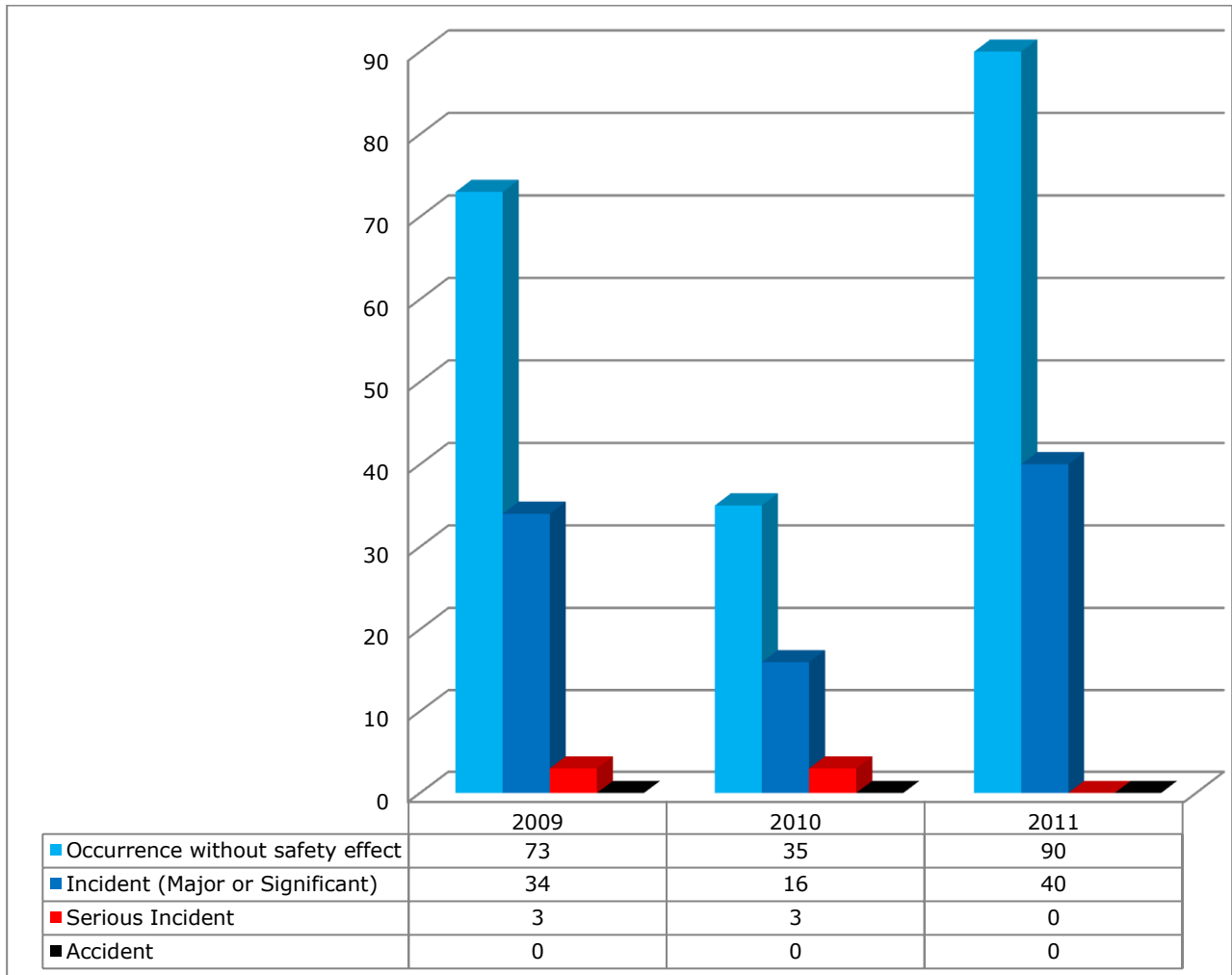


Figure 1.Number of ORs received in the last three years according to occurrence class

Figure 1 shows that there is a significant difference between the number of reported occurrences in 2009, 2010 and 2011. In 2009, 110 occurrences were reported, while in 2010 only 54 were reported. In 2011 the number of reported occurrences was 130, indicating a significant increase in the number of reports compared to the previous year. Observing the trend of received OR's in 2011, contributing factors to the high number of reported occurrences are the number of reported birdstrikes (30) and occurrences of technical nature (58).

Out of the 130 reported occurrences 90 were classified as "Occurrence Without Safety Effect" and 40 were classified as "Incident".

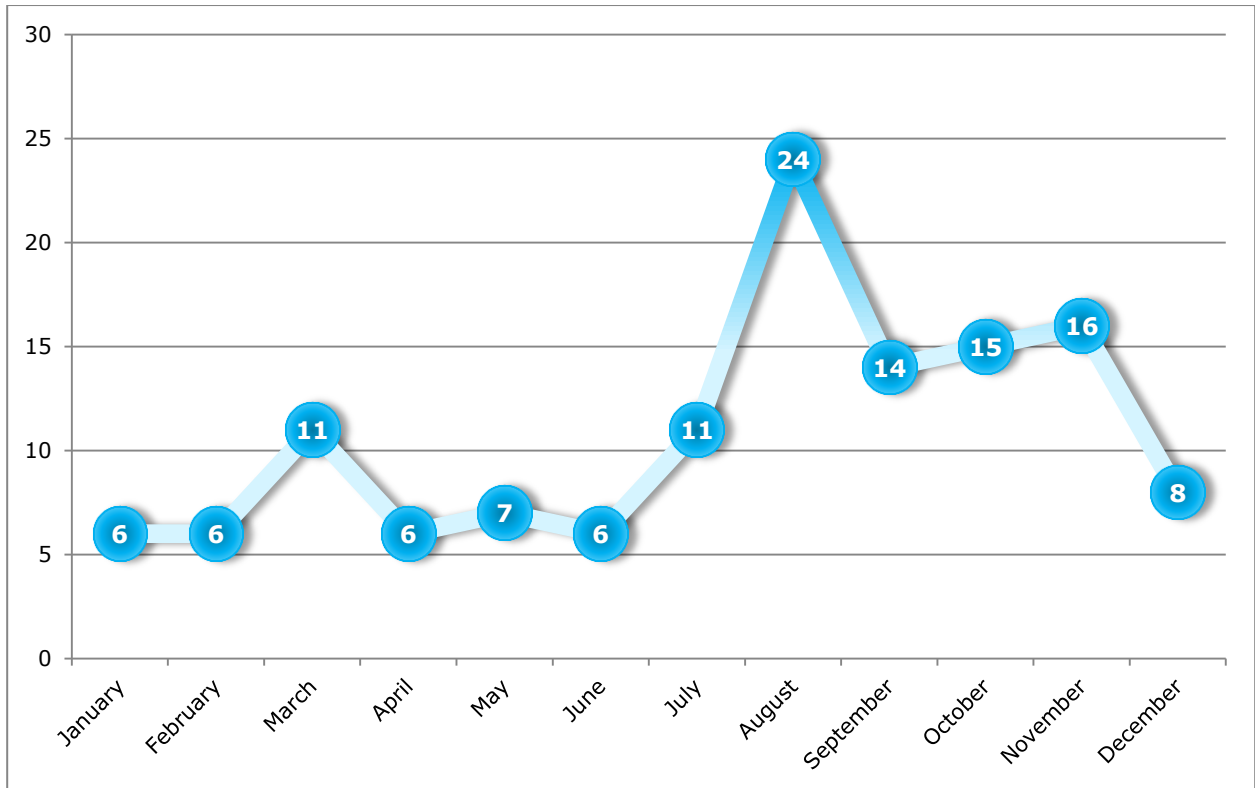


Figure 2.ORs received during 2011

Figure 2 demonstrates the number of received Occurrence reports during 2011 for each month.

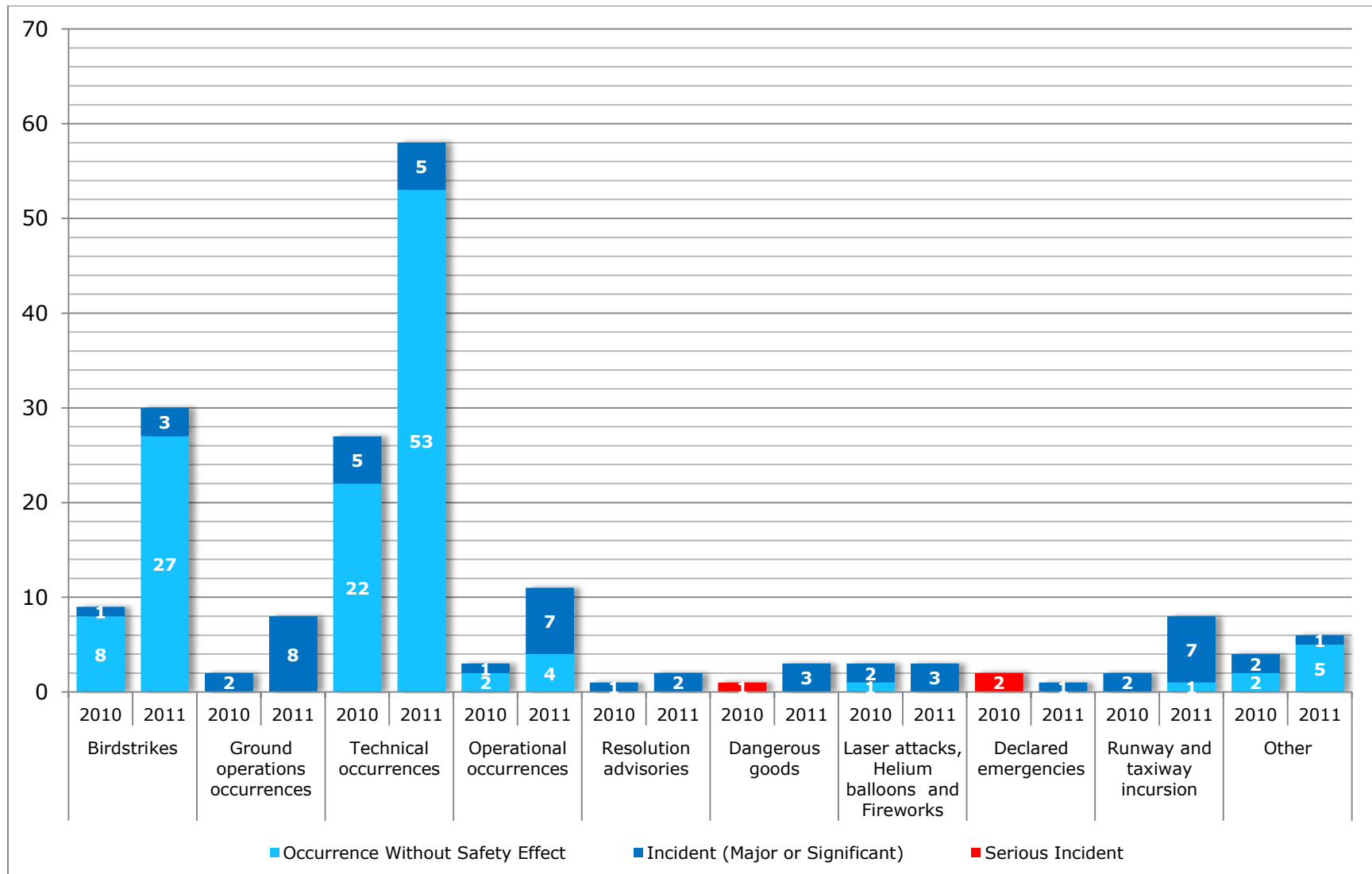


Figure 3. Number of received ORs in 2010 and 2011 according to occurrence class and category

Category	Occurrence Without Safety Effect		Incident (Major or Significant)		Serious Incident		Total	
	2010	2011	2010	2011	2010	2011	2010	2011
Birdstrikes	8	27	1	3	0	0	9	30
Ground operations occurrences	0	0	2	8	0	0	2	8
Technical occurrences	22	53	5	5	0	0	27	58
Operational occurrences	2	4	1	7	0	0	3	11
Resolution advisories	0	0	1	2	0	0	1	2
Dangerous goods	0	0	0	3	1	0	1	3
Laser attacks, Helium balloons and fireworks	1	0	2	3	0	0	3	3
Declared emergencies	0	0	0	1	2	0	2	1
Runway and taxiway incursion	0	1	2	7	0	0	2	8
Other	2	5	2	1	0	0	4	6
Total	35	90	16	40	3	0	54	130

Table 1. ORs received in 2010 and 2011 according to major categories

Technical occurrences. Figure 3 and Table 1 show that during 2011 occurrences of technical nature account for around half of the received ORs. Occurrences covering technical failures or defects, mainly related to communication, navigation, surveillance, meteorological equipment etc., are categorized as *Technical Occurrences*. Around 70% of Technical Occurrences (see Figure 4) received during this year were related to short-term problems with the Aeronautical Fixed Telecommunication Network (AFTN) system, internet connection and meteorological equipment, mainly with the Automated Weather Observing System (AWOS) and its components. Due to the fact that these were short-term problems with functioning back-ups, safety of operations was not affected.

One occurrence was classified as an incident, because wrong information concerning wind data was provided to the pilot due to unserviceable METEO equipment, which could have potentially led to a more serious incident; the aircraft landed safely.

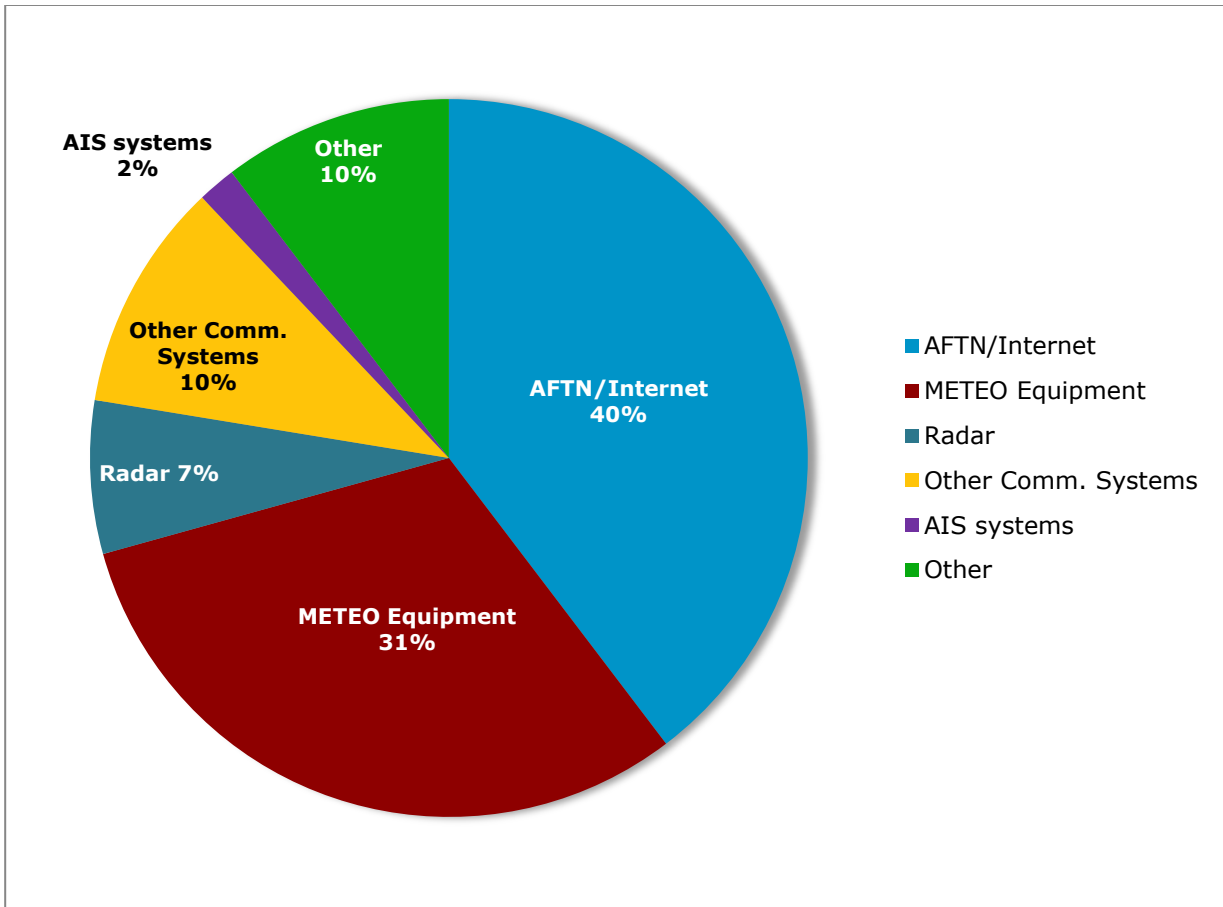


Figure 4. Technical occurrences

A much smaller number of occurrences reported were related to problems with surveillance equipment (around 7%) and other communications systems such as radio communications failures or problems with the VCS system (around 10%). In these two categories one occurrence was classified as an incident. This incident was related to problems with Radar signal interference, causing duplication of Radar targets. The occurrence was immediately investigated by the ANSP and appropriate recommendations to mitigate the problem were produced. The occurrence is considered to be closed, however the CAA will continue to monitor closely the implementation of the recommendations during its regular oversight activities.

Three other technical occurrences which were classified as incidents were related to a single incident involving a major power supply failure.

The significant number of reports was helpful in identifying trends regarding equipment, both by the Air Navigation Service Provider (ANSP) and the CAA, enabling the ANSP to address these issues more carefully and ensure that proper measures are taken to mitigate the problems.

It is worth noting that the significant rise in the number of reported occurrences in this category compared to last year (see Figure 3) is an indication that reporting has become more widespread in the industry, especially the ANSP, due to raised awareness regarding benefits from occurrence reporting and its clear contribution to the improvement of safety.

Birdstrikes. There were 30 reported birdstrikes in 2011, out of which 27 were classified as occurrence without safety effect and 3 as incident. One incident occurred during take-off run resulting in an aborted take-off. Later on, the aircraft departed safely. Another birdstrike occurred on departure, during climbing phase; the aircraft turned back to LKIA and landed safely.

Due to increased number of reported birdstrikes, CAA conducted several inspections at Prishtina International Airport "Adem Jashari" LKIA. The airport operator did implement some immediate corrective measures. CAA will continue to monitor closely the implementation of the corrective actions during its regular oversight activities.

See Appendix B for further reading on Birdstrike reporting.

Operational occurrences. Occurrences related to violation and/or noncompliance with established procedures and Air Traffic Control clearances are categorized as *Operational Occurrences*. There were 11 reported occurrences during 2011; seven were classified as incidents and four as occurrence without safety effect.

Two incidents were related to hang-glider and paragliding activities on the eastern part of mountain Golesh that penetrated the western Prishtina controlled zone (Prishtina CTR). No prior information regarding this activity was given to Prishtina Tower. Although, there was a violation of procedures, no harm to persons or property was reported. One incident involved an aircraft departing without clearance. Another incident was related to an aircraft performing an unauthorized holding manoeuvre while following an approach procedure.

Laser attacks, helium balloons and fireworks. Due to a few unusual occurrences reported in 2011 concerning laser activity and fireworks, CAA has prepared an explanatory note regarding fireworks and the consequences of the irresponsible use of such devices by the public with respect to civil aviation safety. This note is attached to this document as Appendix A.

Runway and taxiway incursion. Any occurrence at an aerodrome involving the incorrect presence of an aircraft, vehicle, person or wildlife on the manoeuvring area

is categorized as *Runway and Taxiway Incursion*. At PIA in 2011 there were eight occurrence reports categorized as runway and taxiway incursion, out of which seven were classified as incidents. One incident was caused by dogs crossing the runway during landing of an aircraft. On the other incidents people and vehicles entering the manoeuvring area were involved.

Ground operations occurrences. Occurrences related to ground handling (cabin service, catering, ramp service, etc.) are categorized as *Ground operations occurrences*. There were eight occurrences reported and classified as incidents in 2011, two of which caused by pilots not following marshaling signals and thus turning on the direction that could have caused a ground collision with another aircraft. However, no harm was reported to persons or property. One incident was related to fuel spillage during refuelling of the aircraft. Rescue and Firefighter Service responded immediately and cleaned the platform as per written procedures; safety was not compromised.

Declared emergencies. In 2011 there was one Incident recorded; the pilot requested the Emergency Services to be on Standby as a precaution. The aircraft was having problems with its landing gear sensors that gave an indication that the nose landing gear was not down and locked. The aircraft landed safely at PIA.

Dangerous goods. In 2011 three occurrences were reported concerning transport of dangerous goods by air. In one case there was a shipment containing non-declared dangerous goods originating from PIA. Two other cases involved the incoming shipments of dangerous goods, for which the airlines operating in PIA didn't have the appropriate permissions from CAA.

Law Nr. 03/L-051 on Civil Aviation and Regulation 06/2011 on transport of Dangerous Goods by air in Republic of Kosovo, stipulates that all dangerous goods offered for transport by air, shall be declared, packed, marked and labelled in accordance with provisions of this regulation, Annex 18 and ICAO Technical Instructions for Safe Transport of Dangerous Goods By Air. Also, weapons and munitions, including explosives and toxic gases, nuclear fuel and radioactive materials shall be carried on board aircraft, only with special written permission from Director General of CAA.



Figure 5: Dangerous Goods Labels¹

TCAS Resolution Advisories (RA). Traffic collision avoidance system (TCAS) is an aircraft collision avoidance system, mandated by ICAO and designed to reduce the incidence of mid-air collisions between aircraft. It monitors the airspace around an aircraft for other aircraft equipped with SSR transponders and operates independently of ground-based equipment to provide advice to the pilot on potential conflicting aircraft. A Resolution Advisory (RA) is issued when two aircraft are on a collision course and are too close to each other (around 25s). When an RA is issued, pilots are expected to respond immediately to the RA unless doing so would jeopardize the safe operation of the flight. In 2011 two occurrences related to TCAS RA alerts were reported; in both cases the safety of flight operations was not compromised.

¹ Source: <http://www.arenburgstransport.com/forms.htm>

APPENDIX A

Fireworks

Firework displays can vary from the small-scale garden event to a major commercial or ceremonial occasion; they have the potential to distract and confuse aircrews or damage aircraft during flight operations. A feature of fireworks displays is that solid objects are physically launched into the air to create the full visual effect. Many fireworks associated with large-scale events can dispense canisters several hundred meters into the air. Whilst the risk of collision with aircraft is small, the existence of such projectiles needs to be borne in mind when carrying out an assessment for firework displays in the vicinity of aerodromes, especially on the approach path of the runway.

FAA *Aeronautical Information Manual* (AIM) states that our eyes require up to 30 minutes of exposure to total darkness to adapt completely. Once night vision is established, it can be lost entirely within a few seconds of viewing a bright light. According to the accident pilots, the fireworks display creates a glare so intense and disorienting that he/she cannot locate the nearby airport. The best options might be to divert to an airport with an operating control tower and request ATC assistance, or fly away from the source of the glare and return 30 minutes later—with the pilot's night vision restored and the fireworks show likely over. However, insufficient fuel may take those options off the table and safety of flight could be compromised.²

² Reference: http://www.aopa.org/asf/epilot_acc/ftw04la175.html

APPENDIX B

Birdstrike Reporting³

The Context for Birdstrike Reporting

Whilst Birdstrike Reporting is a reactive response to the potential hazard, there is no alternative widely-available means of monitoring potentially hazardous bird activity. However, recording of birdstrikes is a very important part of understanding both actual and relative risks.

Very few birdstrikes out of the total reported are hazardous to continued safe flight, although the overall cost of repairing birdstrike damages is high and damage to individual aircraft or their engines can be very expensive to repair.

The Requirement to Report Birdstrikes

According to Regulation 1/2009 on Occurrence Reporting in Civil Aviation every person, in the exercise of his/her functions, shall report all occurrences which endanger or which, if not corrected, would endanger an aircraft, its occupants or any other person. Also, by the provisions in ICAO Annex 14, Aerodrome Design and Operations, Volume I, birdstrikes are required to be reported at national level.

EU-OPS 1.420 d recommendations (as transposed through CAAK Regulation 6/2009):
“(i) A commander shall immediately inform the local air traffic service unit whenever a potential bird hazard is observed.”, and “(ii) If he is aware that a birdstrike has occurred, a commander shall submit a written birdstrike report after landing to the Authority whenever an aircraft for which he is responsible suffers a birdstrike that results in significant damage to the aircraft or the loss or malfunction of any essential service. If the birdstrike is discovered when the commander is not available, the operator is responsible for submitting the report.”

Description

Since roughly 90% of all strikes with a known location occur on or in the vicinity of an airport, the issue impacts not only on aircraft operators but also on the operational safety of airports. The collection of data on birdstrikes is aimed at facilitating the detection of locations where there is a high probability of a significant birdstrike hazard and can help to define the nature of the problem. Data on birdstrikes (and other wildlife strikes) is essential for bird and wildlife management on and around

airports. This information is also useful to aircraft fuselage and engine manufacturers, assisting them in the design of birdstrike resistant airframe structures and engines. That is why birdstrike reports of sufficient quality collected, analysed and finally submitted to ICAO by States are of great value at national, regional and global level.

Care must be exercised while interpreting the data collected. For example, an airport with an increasing rate of birdstrikes is not necessarily becoming a more risky location. The total number of strikes at an airport is not a good indicator of risk.

Actual birdstrikes may not provide the whole picture: the reporting and recording potentially hazardous bird activity can also be very useful, even though this is not included in the formal requirements for birdstrike reporting.

Incidents where a birdstrike was narrowly avoided, perhaps by flight crew being forced to take evasive action to keep away from birds, or of observed significant bird activity which might have constituted a direct hazard in slightly different circumstances, should be reported on a standard occurrence reporting form.

What to Report

The information that is commonly sought in a birdstrike report includes:

- General information (aircraft operator, flight number or registration, aircraft and engine type, etc.)
- Location and time (aerodrome name, runway used, local time, location if En Route – nearest town)
- Relevant meteorological conditions (visibility, cloud cover, precipitation)
- Flight parameters (height – AGL, speed – IAS)
- Phase of flight (parked, taxi, take-off run, climb, en route, descent, approach, landing roll)
- Part(s) of aircraft struck and (if) damaged (radome, propeller, windshield, wing/rotor, nose, engine, landing gear, tail, lights, other)
- Effects on flight (rejected take off, emergency/precautionary landing, engine(s) shut down and other consequent effects)
- Species information (exact species or species group if known)
- Number of birds seen and number struck
- Size of bird(s)
- Prior warning of bird activity
- Any other relevant information and remarks regarding the occurrence.

³Reference: "Bird Strike Reporting" on <http://www.skybrary.aero/>