

Aerodrome Accidents and Incidents Management & Reporting

Sofema Online (SOL) www.sofemaonline.com considers the key elements involved in the management of Aerodrome Incidents & Accidents

Introduction - Accidents and Incidents: Scope and Consequences

Effective management of accidents and incidents requires coordination among multiple stakeholders, including airport operators, airlines, ground handling service providers, and air traffic control (ATC). Clear lines of communication and regular training exercises are key.

Airports need robust communication systems to ensure that all relevant stakeholders, from air traffic controllers to ground staff and emergency responders, are informed in real-time during accidents or incidents.

The range of accidents and incidents at aerodromes can vary significantly, from minor equipment damage to catastrophic events involving multiple fatalities.

- Minor incidents may include ground collisions, equipment failures, or near-miss occurrences, while more severe accidents could involve aircraft crashes, runway incursions, or critical safety breaches that result in substantial loss of life and property.

Note - Despite this wide range of scenarios, human factors consistently emerge as contributing elements to these events.

The Link Between Safety and Human Factors

Human error is frequently cited as a major contributor to aviation accidents and incidents.

- Studies indicate that a significant proportion of these events, particularly in highly complex and high-stakes environments like aerodromes, can be attributed to human error.
- These errors may stem from issues like miscommunication, inadequate training, lack of awareness, or improper responses to unexpected situations.
- The relationship between safety and human factors is, therefore, central to understanding how accidents occur and how they can be prevented.

Mitigating Risks Through Human Factors Awareness

By recognizing the pivotal role that human factors play, aerodrome operators and regulators can develop more effective strategies to mitigate risks.

Promoting awareness of human limitations and designing systems and procedures that account for those limitations can reduce the likelihood of human error and ultimately enhance safety at aerodromes.

These strategies include enhanced training programs that focus on communication, teamwork, and decision-making under stress. Additionally, implementing fatigue management systems and fostering a "just culture"

- “Just Culture” refers to a system of shared accountability in which organizations are accountable for the systems they have designed and for responding to the behaviors of their employees in a fair and just manner.
- Just Culture Behaviour - encourages reporting errors without fear of punishment in circumstances which are shared and understood.

Consider the following aspects related to mandatory actions, best practices, and competence development concerning aerodrome accidents and incidents management & reporting:

ADR.OR.D.030 Safety reporting system - Regulation (EU) No 139/2014

- The aerodrome operator shall establish and implement a safety reporting system for all personnel and organisations operating or providing services at the aerodrome, in order to promote safety at, and the safe use of, the aerodrome.
- The aerodrome operator, in accordance with ADR.OR.D.005(b)(3), shall:
 - Require that the personnel and organisations mentioned in point (a) use the safety reporting system for the mandatory reporting of any accident, serious incident and occurrence; and
 - Ensure that the safety reporting system may be used for the voluntary reporting of any defect, fault and safety hazard which could impact safety.

Safety Reporting System

The safety reporting system shall protect the identity of the reporter, encourage voluntary reporting and include the possibility that reports may be submitted anonymously.

- The aerodrome operator shall:
 - Record all reports submitted;
 - Analyse and assess the reports, as appropriate, in order to address safety deficiencies and identify trends;
 - Ensure that all organisations operating or providing services at the aerodrome which are relevant to the safety concern, participate in the analysis of such reports and that any corrective and/or preventive measures identified are implemented;
 - Conduct investigations of reports, as appropriate; and
 - Refrain from attribution of blame in line with the 'just culture' principles.

Proactive Risk Management:

Airports should implement proactive risk management measures, including regular safety assessments and audits, continuous training of personnel, and the implementation of technological solutions such as runway incursion monitoring systems.

Mandatory Actions

- Comply with clear requirements on safety management systems (SMS), accident and incident reporting, and the need for proactive risk management.
- Safety Management System (SMS): The establishment of an SMS is required for all certified aerodromes.
 - This involves hazard identification, risk assessment, and the development of measures to mitigate risks. All accidents and serious incidents must be reported immediately.
- Accident & Incident Reporting: Under EU Regulation 376/2014, European airports are mandated to report occurrences that could affect safety, including accidents and serious incidents.
 - Airports shall have protocols for mandatory and voluntary reporting systems.
 - Reports should be sent to the relevant national aviation authorities, who then share this information with EASA.
- Emergency Response Plan (ERP): Every airport must have a detailed ERP, which outlines how to manage aerodrome accidents and serious incidents. This plan must be updated regularly, tested, and coordinated with local emergency services.

Mandatory Reporting:

The aerodrome operator is required to implement a system that mandates the reporting of any accident, serious incident, and occurrence.

- This includes all personnel and organizations operating or providing services at the aerodrome.
- These events must be reported to the competent authority and, in some cases, to other relevant organizations, such as the provider of aerodrome equipment. According to ADR.OR.D.030(b)(1), the operator must ensure mandatory reporting within 72 hours of the occurrence being known

Voluntary Reporting:

In addition to mandatory reporting, the aerodrome's safety reporting system must allow for voluntary reporting.

- Enables personnel to report any defects, faults, or hazards that might not result in an accident or serious incident but could still impact safety.
- The reporting system should encourage voluntary reports by protecting the identity of the reporter and even allowing reports to be submitted anonymously, as detailed in ADR.OR.D.030(b)(2)

Encouraging Reporting and Safety Culture:

- To foster a strong safety culture, the system should ensure that the identity of reporters is protected and that there is no attribution of blame.
 - aligns with the "just culture" principles mentioned in ADR.OR.D.030(c). Additionally, feedback should be provided to the reporter on the analysis of the occurrence

Competence Development

- Continuous training for airport staff, particularly those involved in safety management, is crucial.
 - Airports should invest in regular competence development programs covering accident investigation, emergency response, safety reporting, and risk management

Next Steps

Sofema Aviation Services Provides Regulatory Training covering Airside Safety please see the following <https://sassofia.com/course/airside-safety-training-3-days/> for questions and comments please email team@sassofia.com