

Republic of Iraq
Civil Aviation Authority



ICAR 114

MANDATORY OCCURRENCE
REPORTING RULES

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COVER RULES

Having regard to the Basic Regulation Aviation Act 148/1974 of the State of Iraq, Chapter 10, Article 140 and in accordance with the SARPs of ICAO Annex 13 the sole objective of an occurrence reporting system shall be the prevention of accidents and incidents,

Whereas:

- (1) A high general level of safety should be ensured in civil aviation in the State of Iraq every effort should be made to reduce the number of accidents and incidents with a view to ensuring public confidence in aviation transport.
- (2) The rate of fatal accidents in civil aviation has remained fairly constant over the last decade. Nevertheless, the number of accidents could rise over the decades to come, due to an increase in air traffic and an increase in the technical complexity of aircraft.
- (3) Experience has shown that accidents are often preceded by safety-related incidents and deficiencies revealing the existence of safety hazards. Safety information is therefore an important resource for the detection of potential safety hazards. In addition, whilst the ability to learn from an accident is crucial, purely reactive systems have been found to be of limited use in continuing to bring forward improvements. Reactive systems should therefore be complemented by proactive systems which use other types of safety information to make effective improvements in aviation safety. The Iraqi Civil Aviation Authority (ICAA) and organisations should contribute to the improvement of aviation safety through the introduction of more proactive and evidence-based safety systems which focus on accident prevention based on the analysis of all relevant safety information, including information on civil aviation occurrences.
- (4) In order to improve aviation safety, relevant civil aviation safety information should be reported, collected, stored, protected, exchanged, disseminated and analysed, and appropriate safety action should be taken on the basis of the information collected. This proactive and evidence-based approach should be implemented by ICAA and by organisations as part of their safety management system.
- (5) The imposition on organisations of occurrence reporting obligations should be proportionate to the size of the organisation concerned and the scope of its activity. It should therefore be possible, in particular for smaller organisations, to decide to join or merge functions related to occurrence handling within the organisation, to share occurrence reporting tasks with other organisations of the same nature or to outsource the collection, evaluation, processing, analysis and storage of details of occurrences to specialised entities approved by the competent authorities of the State of Iraq. Such entities should comply with the protection and confidentiality principles established by these Rules. The outsourcing organisation should maintain appropriate control of the outsourced tasks and should be ultimately

accountable and responsible for the application of the requirements prescribed by these Rules.

- (6) It is necessary to ensure that front-line aviation professionals report occurrences that pose a significant risk to aviation safety. Voluntary reporting systems should complement the mandatory reporting systems, and both should allow individuals to report details of aviation safety-related occurrences. Mandatory and voluntary reporting systems should be set up within organisations and ICAA. The information collected should be transferred to the authority competent for appropriate monitoring in order to enhance aviation safety. Organisations should analyse those occurrences that could have an impact on safety, in order to identify safety hazards and take any appropriate corrective or preventive action. Organisations should send the preliminary results of their analyses to ICAA and should also send the final results if those results identify an actual or potential aviation safety risk. The ICAA should put in place a similar procedure for those occurrences that have been directly submitted to them and should adequately monitor the organisation's assessment and any corrective or preventive action taken.
- (7) Various categories of staff working or otherwise engaged in civil aviation witness events which are of relevance to accident prevention. They should therefore have access to tools enabling them to report such events, and their protection should be guaranteed. In order to encourage staff to report occurrences and enable them to appreciate more fully the positive impact which occurrence reporting has on air safety; they should be regularly informed about action taken under occurrence reporting systems.
- (8) The hazards and risk associated with complex motor-powered aircraft are very different from those associated with other types of aircraft. Therefore, while the entire aviation sector should be covered by these Rules, the obligations imposed by it should be proportionate to the sphere of activity and the complexity of different types of aircraft. Accordingly, information collected on occurrences involving aircraft other than complex motor-powered ones should be subject to simplified reporting obligations which are better suited to that branch of aviation.
- (9) The development of other means of collecting safety information in addition to the systems required by these Rules should be encouraged, with a view to collecting further information which could contribute to the improvement of aviation safety. Where organisations have existing and well-functioning safety information collection systems, they should be allowed to continue to use those systems alongside the systems to be established for the purpose of these Rules.
- (10) Safety investigation authorities and any entity entrusted with regulating civil aviation safety within the State of Iraq should have full access to details of occurrences collected and occurrence reports stored by State, in order to decide which incidents, require a safety investigation, as well as to identify where lessons can be learned in the interest of aviation safety and to fulfil their oversight obligations.
- (11) It is essential to have high-quality and complete data, as analysis and trends derived from inaccurate data may show misleading results and may lead to effort being focused on inappropriate action. In addition, such inaccurate data may lead

to a loss of confidence in the information produced by occurrence reporting schemes. In order to ensure the quality of occurrence reports, and to facilitate their completeness, they should contain certain minimum information, which may vary depending on the occurrence category. In addition, procedures should be implemented for checking the quality of information and avoiding inconsistency between an occurrence report and the details of the occurrence that were initially collected. Moreover, adequate guidance material should be developed by ICAA, notably to ensure the quality and to facilitate the completeness of data as well as the consistent and uniform integration of data into databases. Workshops should also be organised, notably by ICAA, to provide necessary support.

- (12) The ICAA should develop a risk classification scheme to ensure the identification of any rapid action needed when looking at high-risk individual safety occurrences. That scheme should also enable key risk areas to be identified from aggregated information. Such a scheme should help the relevant entities in their assessment of occurrences and in determining where best to focus their efforts.
- (13) To facilitate information exchange, occurrence reports should be stored in databases which should be compatible with the ADREP taxonomy (the International Civil Aviation Organisation (ICAO) taxonomy). For example: the European Coordination Centre for Aircraft Incident Reporting Systems (ECCAIRS) (the software used by all Member States and by the European Central Repository to store occurrence reports).
- (14) Organisations should store occurrence reports derived from details of occurrences collected under the mandatory and, where applicable, the voluntary reporting systems in one or more databases. It should be possible for the complexity of the database to be proportionate to the size of the organisation concerned and/or its significance with respect to the objectives of these Rules, and it should at least consist of a data file containing common mandatory data fields and, where applicable, specific mandatory data fields.
- (15) An occurrence involving an aircraft registered in the State of Iraq or operated by an organisation established in the State of Iraq should be reported even if it happened outside the territory of the State.
- (16) Information on occurrences should be exchanged within the neighboring States of Iraq to enhance the detection of actual or potential hazards. This information exchange should also enable neighboring States to have access to all information on occurrences which occur on their territory or in their airspace but which are reported to another State. This information exchange should enable the competent authorities of the neighboring States to obtain precise information about occurrences in their airspace and, where necessary, to take corrective action to counteract a risk identified on their territory.
- (17) The objective of the exchange of information on occurrences should be the prevention of aviation accidents and incidents. It should not be used to attribute blame or liability or to establish benchmarks for safety performance.
- (18) These Rules should apply to information on occurrences which is stored in the databases of organisations, registered in the State of Iraq.

- (19) All safety-related information should be available to ICAA, including the authorities responsible for investigating accidents and incidents within the State of Iraq.
- (20) The ICAA should deal with requests from interested parties from third countries or from international organisations.
- (21) Information contained in occurrence reports should be analysed, and safety risks identified. Any appropriate consequent action for improving aviation safety should be identified and implemented in a timely manner. Information on the analysis and follow-up of occurrences should be disseminated within organisations, competent authorities of the State of Iraq, since providing feedback on occurrences that have been reported incentivises individuals to report occurrences. Where applicable and when possible, information on the analysis and follow-up of occurrences should also be provided to individuals who have directly reported occurrences to the State of Iraq or ICAA. Such feedback should comply with these Rules on confidentiality and protection of the reporter and the persons mentioned in occurrence reports pursuant to these Rules.
- (22) These Rules should assist the State of Iraq, the ICAA and organisations in managing aviation safety risks. The safety management systems of organisations are complemented by the safety management systems of the State of Iraq and ICAA. While organisations manage safety risks associated with their specific activities, the competent authorities of the State of Iraq and ICAA manage safety risks for the aviation systems of the entire State, addressing common safety risks for aviation in the State of Iraq. The responsibilities of the ICAA and of the competent authorities of the State of Iraq should not exonerate organisations from their direct responsibilities in managing safety inherent in the products and in the services they provide. For that purpose, organisations should collect and analyse information on occurrences in order to identify and mitigate hazards associated with their activities. They should also assess associated safety risks and allocate resources to take prompt and appropriate safety risk mitigation measures. The overall process should be monitored by the relevant competent authority, which should, when necessary, require that additional action be taken to ensure that the safety deficiencies are correctly addressed. On the other hand, ICAA should complement the safety management systems of the organisations in the State of Iraq.
- (23) When determining the action to be included within its State Safety Programme and State Safety Plan, and in order to ensure that the action is evidence-based, the State of Iraq should use the information derived from the occurrence reports that have been collected and from their analysis.
- (24) The general public should be provided with general aggregated information on the level of aviation safety in the State of Iraq. That information should cover, in particular, trends and analysis deriving from the implementation of these Rules, and may be provided by publishing Safety Performance Indicators (SPI).
- (25) The civil aviation safety system is established on the basis of feedback and lessons learned from accidents and incidents. Occurrence reporting and the use of occurrence information for the improvement of safety depend on a relationship of

trust between the reporter and the entity in charge of the collection and assessment of the information. This requires strict application of rules on confidentiality. The purpose of protecting safety information from inappropriate use, and of limiting to interested parties participating in the improvement of civil aviation safety, is to ensure the continuing availability of safety information so that appropriate and timely preventive action can be taken and aviation safety improved. In this context, sensitive safety information should be protected in an appropriate way and its collection should be ensured by guaranteeing its confidentiality, protecting its source and ensuring the confidence of staff working in civil aviation in occurrence reporting systems. Appropriate measures should be put in place to ensure that information collected through occurrence reporting schemes is kept confidential and that access to it is restricted. National rules on freedom of information should take into account the necessary confidentiality of such information. The information collected should be adequately protected from unauthorised use or disclosure. It should be used strictly for the purpose of maintaining or improving aviation safety and should not be used to attribute blame or liability.

- (26) In order to ensure the confidence of employees or contracted personnel in the occurrence reporting system of the organisation, the information contained in occurrence reports should be protected appropriately and should not be used for purposes other than maintaining or improving aviation safety. The internal 'just culture' rules adopted by organisations pursuant to these Rules should contribute in particular to the achievement of this objective. In addition, the limitation of the transmission of personal details, or of information allowing the identification of the reporter or of the other persons mentioned in occurrence reports, by a clear separation between the department's handling occurrence reports and the rest of the organisation, may be an efficient way to achieve this objective.
- (27) A reporter or a person mentioned in occurrence reports should be adequately protected. In this context, occurrence reports should be disidentified and details relating to the identity of the reporter and of the persons mentioned in occurrence reports should not be entered into databases.
- (28) In addition, the civil aviation system should promote a 'safety culture' facilitating the spontaneous reporting of occurrences and thereby advancing the principle of a 'just culture'. 'Just culture' is an essential element of a broader 'safety culture', which forms the basis of a robust safety management system. An environment embracing 'safety culture' principles should not prevent action being taken where necessary to maintain or improve the level of aviation safety.
- (29) A 'just culture' should encourage individuals to report safety-related information. It should not, however, absolve individuals of their normal responsibilities. In this context, employees and contracted personnel should not be subject to any prejudice on the basis of information provided pursuant to these Rules, except in cases of willful misconduct or where there has been manifest, severe and serious disregard with respect to an obvious risk and profound failure of professional responsibility to take such care as is evidently required in the circumstances, causing foreseeable damage to a person or to property, or seriously compromising the level of aviation safety.

- (30) In order to encourage reporting of occurrences, it should be appropriate to protect not only reporters, but also persons mentioned in the occurrence reports concerned. However, such protection should not exonerate those persons from their reporting obligations under these Rules. In particular, in a situation where a person is mentioned in an occurrence report and has himself or herself the obligation to report that same occurrence, and intentionally fails to report it, then that person should lose his or her protection and face penalties in application of these Rules.
- (31) Without prejudice to national criminal law and the proper administration of justice, it is important to clearly demarcate the extent of the protection of the reporter and other persons mentioned in occurrence reports from prejudice or prosecution.
- (32) In order to enhance the confidence of individuals in the system, the handling of occurrence reports should be organised in such a way as to appropriately safeguard the confidentiality of the identity of the reporter and other persons mentioned in occurrence reports with regard to fostering a 'just culture'. The aim, wherever possible, should be to enable an independent occurrence handling system to be established.
- (33) Staff of organisations and of the ICAA who are involved in the evaluation, processing or analysis of occurrences have a significant role to play in the identification of safety hazards and safety deficiencies. Experience shows that when occurrences are analysed with the benefit of hindsight following an accident, the analysis leads to the identification of risks and deficiencies that might otherwise not have been identified. It is possible, therefore, that the persons involved in the evaluation, processing or analysis of occurrences may fear potential consequences in terms of prosecution before judicial authorities. Without prejudice to national criminal law and the proper administration of justice, the State of Iraq should not institute proceedings against persons who, in the competent authorities of the State of Iraq, are involved in the evaluation, processing or analysis of occurrences in respect of decisions taken as part of their duties which subsequently, and with the benefit of hindsight, prove to have been erroneous or ineffective but which, when they were taken and on the basis of the information available at that time, were proportional and appropriate.
- (34) Employees and contracted personnel should have the opportunity to report breaches of the principles delimiting their protection as established by these Rules, and should not be penalised for so doing. The State of Iraq should define the consequences for those who infringe the principles of protection of the reporter and of other persons mentioned in occurrence reports and should adopt remedies or impose penalties as appropriate.
- (35) Individuals may be discouraged from reporting occurrences by the fear of self-incrimination and the potential consequences in terms of prosecution before judicial authorities. The objectives of these Rules can be achieved without interfering unduly with the justice systems of the State of Iraq. It is therefore appropriate to provide that unpremeditated or inadvertent infringements of the law that come to the attention of ICAA solely through reporting pursuant to these Rules should not be the subject of disciplinary, administrative or legal proceedings, unless where otherwise provided by applicable national criminal law. However, the

rights of third parties to institute civil proceedings should not be covered by this prohibition and should be subject only to national law.

- (36) Nevertheless, in the context of developing a 'just culture' environment, the State of Iraq should retain the option of extending the prohibition on using occurrence reports as evidence against reporters in administrative and disciplinary proceedings to civil or criminal proceedings.
- (37) In addition, the cooperation between safety authorities and judicial authorities should be enhanced and formalised by means of advance arrangements between themselves which should respect the balance between the various public interests at stake and which should in particular cover, for example, access to and the use of occurrence reports contained in the national databases.
- (38) In order to supplement, amend or apply these Rules, the ICAA should consult the independent aviation safety analysts.
- (39) Penalties should, in particular, be applicable against any person who or entity which, contrary to these Rules, misuses information protected by these Rules; acts in a prejudicial manner against the reporter or other persons mentioned in occurrence reports, except in cases where the exemptions laid down in these Rules apply; does not establish an environment appropriate for allowing the collection of details of occurrences; does not analyse the information collected; does not act to address any safety or potential safety deficiencies detected; or does not share the information collected in application of these Rules.

Entry into force

1. These Rules repeals all previous documents related to Mandatory Occurrence Reporting Rules.
2. These Rules shall enter into force on 16 July 2024.
3. These Rules shall be binding in its entirety and directly applicable in the State of Iraq, Baghdad IRAQ,

Date:



**Director General
Iraqi Civil Aviation Authority**

17/10/2024
Bangen Rehani

Signature and Stamp

Article 1 – Objectives

- (1) These Rules aims to improve aviation safety by ensuring that relevant safety information relating to civil aviation is reported, collected, stored, protected, exchanged, disseminated and analysed.

These Rules ensures:

- (a) that, where appropriate, safety action is taken in a timely manner based on analysis of the information collected;
 - (b) the continued availability of safety information by introducing rules on confidentiality and on the appropriate use of information and through the harmonised and enhanced protection of reporters and persons mentioned in occurrence reports; and
 - (c) that aviation safety risks are considered and dealt with national level.
- (2) The sole objective of occurrence reporting is the prevention of accidents and incidents and not to attribute blame or liability.

Article 2 – Definitions

For the purposes of these Rules the following definitions apply:

- (1) 'reporter' means a natural person who reports an occurrence or other safety-related information pursuant to these Rules;
- (2) 'aircraft' means any machine that can derive support in the atmosphere from the reactions of the air other than the reactions of the air against the earth's surface;
- (3) 'incident' means an incident within the meaning of ICAO Annex 13, Chapter 1;
- (4) 'serious incident' means a serious incident within the meaning of ICAO Annex 13, Chapter 1;
- (5) 'accident' means an accident within the meaning of ICAO Annex 13, Chapter 1;
- (6) 'competent authority' is any person or organisation that has the legally delegated or invested authority, capacity, or power to perform a designated function in the State of Iraq;
- (7) 'disidentified information' means information arising from occurrence reports from which all personal data such as names or addresses of natural persons have been removed;
- (8) 'occurrence' means any safety-related event which endangers or which, if not corrected or addressed, could endanger an aircraft, its occupants or any other person and includes in particular an accident or serious incident;

- (9) 'organisation' means any organisation providing aviation products and/or which employs, contracts or uses the services of persons required to report occurrences in accordance with Article 4(6);
- (10) 'anonymisation' means the removal from occurrence reports of all personal details relating to the reporter and to the persons mentioned in occurrence reports and any details, including the name of the organisation(s) involved in the occurrence, which may reveal the identity of the reporter or of a third party or lead to that information being inferred from the occurrence report;
- (11) 'hazard' means a situation or an object with the potential to cause death or injury to a person, damage to equipment or a structure, loss of material, or a reduction of ability to perform a prescribed function;
- (12) 'safety investigation authority' means the permanent national civil aviation safety investigation authority conducting or supervising safety investigations.
- (13) 'just culture' means a culture in which front-line operators or other persons are not punished for actions, omissions or decisions taken by them that are commensurate with their experience and training, but in which gross negligence, wilful violations and destructive acts are not tolerated;
- (14) 'interested party' means any natural or legal person or any official body, whether or not having its own legal personality, that is in a position to participate in the improvement of aviation safety by having access to information on occurrences exchanged within the State of Iraq or neighboring States which falls within one of the categories of interested parties set out in [Annex II](#);
- (15) 'State Safety Programme' means an integrated set of legal acts and activities aimed at managing civil aviation safety in the State of Iraq;
- (16) 'safety management system' means a systematic approach to managing aviation safety including the necessary organisational structures, accountabilities, policies and procedures, and includes any management system that, independently or integrated with other management systems of the organisation, addresses the management of safety.

Article 3 – Subject matter and scope

- (1) These Rules lays down requirements on:
- (a) the reporting of occurrences which endanger or which, if not corrected or addressed, would endanger an aircraft, its occupants, any other person, equipment or installation affecting aircraft operations; and the reporting of other relevant safety-related information in that context;
 - (b) analysis and follow-up action in respect of reported occurrences and other safety-related information;
 - (c) the protection of aviation professionals;

- (d) appropriate use collected safety information;
 - (e) the dissemination of anonymised information to interested parties for the purpose of providing such parties with the information they need in order to improve aviation safety.
- (2) These Rules applies to occurrences and other safety-related information involving civil aircraft to which Basic Regulation Law No 148 of 1974 applies. However, these Rules shall not apply to occurrences and other safety-related information involving unmanned aircraft for which a certificate or declaration is not required. unless the occurrence or other safety-related information involving such unmanned aircraft resulted in a fatal or serious injury to a person or it involved aircraft other than unmanned aircraft.
- (3) The State of Iraq might decide to apply these Rules also to occurrences and other safety-related information involving the aircraft to which Basic Regulation Law No 148 of 1974 does not apply.

Article 4 – Mandatory reporting

- (1) Occurrences which may represent a significant risk to aviation safety and which fall into the following categories shall be reported by the persons listed in paragraph 6 through the mandatory occurrence reporting systems pursuant to this Article:
- (a) occurrences related to the operation of the aircraft, such as:
 - (i) collision-related occurrences;
 - (ii) take-off and landing-related occurrences;
 - (iii) fuel-related occurrences;
 - (iv) in-flight occurrences;
 - (v) communication-related occurrences;
 - (vi) occurrences related to injury, emergencies and other critical situations;
 - (vii) crew incapacitation and other crew-related occurrences;
 - (viii) meteorological conditions or security-related occurrences;
 - (b) occurrences related to technical conditions, maintenance and repair of aircraft, such as:
 - (i) structural defects;
 - (ii) system malfunctions;
 - (iii) maintenance and repair problems;
 - (iv) propulsion problems (including engines, propellers and rotor systems) and auxiliary power unit problems;
 - (c) occurrences related to air navigation services and facilities, such as:
 - (i) collisions, near collisions or potential for collisions;
 - (ii) specific occurrences of air traffic management and air navigation services (ATM/ANS);
 - (iii) ATM/ANS operational occurrences;

(d) occurrences related to aerodromes and ground services, such as:

- (i) occurrences related to aerodrome activities and facilities;
- (ii) occurrences related to handling of passengers, baggage, mail and cargo;
- (iii) occurrences related to aircraft ground handling and related services.

2. Each organisation established in the State of Iraq shall establish a mandatory reporting system to facilitate the collection of details of occurrences referred to in paragraph 1.
3. The State of Iraq shall establish a mandatory reporting system to facilitate the collection of details of occurrences including the collection of details of occurrences collected by organisations pursuant to paragraph 2.
4. The Iraqi Civil Aviation Authority (ICAA) shall establish a mandatory reporting system to facilitate the collection of details of occurrences, including the collection of details of occurrences collected pursuant to paragraph 2 by organisations which have been certified or approved by the ICAA.
5. The State of Iraq shall, by means of implementing acts, adopt a list classifying occurrences to be referred to when reporting occurrences pursuant to paragraph 1.

The State of Iraq shall include in those implementing acts a separate list classifying occurrences applicable to aircraft other than complex motor-powered aircraft. The list shall be a simplified version of the list referred to in the first subparagraph and shall, where appropriate, be adapted to the specificities of that branch of aviation.

6. The following natural persons shall report the occurrences referred to in paragraph 1 through the system established in accordance with paragraph 2 by the organisation which employs, contracts or uses the services of the reporter or, failing that, through the system established in accordance with paragraph 3 by the State of Iraq where their organization is established, or by the State which issued, validated or converted the pilot's licence, or through the system established in accordance with paragraph 4 by the ICAA:
 - (a) the pilot in command, or, in cases where the pilot in command is unable to report the occurrence, any other crew member next in the chain of command of an aircraft registered in the State of Iraq or an aircraft registered outside the State of Iraq, but used by an operator for which the State of Iraq ensures oversight of operations, or an operator established in the State of Iraq;
 - (b) a person engaged in designing, manufacturing, continuous airworthiness monitoring, maintaining or modifying an aircraft, or any equipment or part thereof, under the oversight of the State of Iraq or of the ICAA;
 - (c) a person who signs an airworthiness review certificate, or a release to service in respect of an aircraft or any equipment or part thereof, under the oversight of the State of Iraq or of the ICAA;

- (d) a person who performs a function which requires him or her to be authorised by the State of Iraq as a staff member of an air traffic service provider entrusted with responsibilities related to air navigation services or as a flight information service officer;
 - (e) a person who performs a function connected with the safety management of an airport to which the relevant regulation of the State of Iraq applies;
 - (f) a person who performs a function connected with the installation, modification, maintenance, repair, overhaul, flight-checking or inspection of air navigation facilities for which the State of Iraq ensures the oversight;
 - (g) a person who performs a function connected with the ground handling of aircraft, including fueling, load sheet preparation, loading, de-icing and towing at an airport covered by the relevant regulation of the State of Iraq;
7. The persons listed in paragraph 6 shall report occurrences within 72 hours of becoming aware of the occurrence, unless exceptional circumstances prevent this.
8. Following notification of an occurrence, any organisation established in the State of Iraq which is not covered by paragraph 9 shall report to the ICAA, as referred to in [Article 6\(3\)](#), the details of occurrences collected in accordance with paragraph 2 of this Article as soon as possible, and in any event **no later than 72 hours** after becoming aware of the occurrence.
9. Following notification of an occurrence, each organisation established in the State of Iraq which is certified or approved by the ICAA shall report to the ICAA the details of occurrences collected in accordance with paragraph 2 as soon as possible, and in any event **no later than 72 hours** after becoming aware of the occurrence.

Article 5 – Voluntary reporting

1. Each organisation established in the State of Iraq shall establish a voluntary reporting system to facilitate the collection of:
- (a) details of occurrences that may not be captured by the mandatory reporting system;
 - (b) other safety-related information which is perceived by the reporter as an actual or potential hazard to aviation safety.
2. The State of Iraq shall establish a voluntary reporting system to facilitate the collection of:
- (a) details of occurrences that may not be captured by the mandatory reporting system;
 - (b) other safety-related information which is perceived by the reporter as an actual or potential hazard to aviation safety.

That system shall also include, but shall not be limited to, the collection of information transferred by organisations pursuant to paragraph 6.

3. The ICAA shall establish a voluntary reporting system to facilitate the collection of:
- (a) details of occurrences that may not be captured by the mandatory reporting system;
 - (b) other safety-related information which is perceived by the reporter as an actual or potential hazard to aviation safety.

That system shall also include, but shall not be limited to, the collection of information transferred by organisations certified or approved by the ICAA pursuant to paragraph 5.

4. The voluntary reporting systems shall be used to facilitate the collection of details of occurrences and safety-related information:
- (a) not subject to mandatory reporting pursuant to [Article 4\(1\)](#);
 - (b) reported by persons who are not listed in [Article 4\(6\)](#).
5. Each organisation established in and certified or approved by the ICAA shall report to the ICAA, in a timely manner, details of occurrences and safety-related information which have been collected pursuant to paragraph 1 and which may involve an actual or potential aviation safety risk.
6. Each organisation established in the State of Iraq that is not certified or approved by the ICAA shall, in a timely manner, report to the competent authority of the State of Iraq, as designated pursuant to [Article 6\(3\)](#), the details of occurrences and other safety-related information which have been collected pursuant to paragraph 1 of this Article and which may involve an actual or potential aviation safety risk. The State of Iraq may require any organisation established in their territory to report the details of all occurrences collected pursuant to paragraph 1 of this Article.
7. The State of Iraq, the ICAA and organisations may establish other safety information collection and processing systems to collect details of occurrences that might not be captured by the reporting systems referred to in [Article 4](#) and in paragraphs 1, 2 and 3 of this Article. Those systems may include reporting to entities other than those set out in [Article 6\(3\)](#) and may involve the active participation of:
- (a) the aviation industry;
 - (b) professional organisations of aviation staff.
8. Information received from voluntary and mandatory reporting may be integrated into a single system.

Article 6 – Collection and storage of information

1. Each organisation established in the State of Iraq shall designate one or more persons to handle independently the collection, evaluation, processing, analysis and storage of details of occurrences reported pursuant to [Articles 4](#) and [5](#).

The handling of the reports shall be done with a view to preventing the use of information for purposes other than safety, and shall appropriately safeguard the confidentiality of the identity of the reporter and of the persons mentioned in occurrence reports, with a view to promoting a 'just culture'.

2. By agreement with the competent authority, small organisations may put in place a simplified mechanism for the collection, evaluation, processing, analysis and storage of details of occurrences. They may share those tasks with organisations of the same nature, while complying with the rules on confidentiality and protection pursuant to these Rules.
3. The State of Iraq may designate one or more competent authorities to establish a mechanism to independently collect, evaluate, process, analyse and store details of occurrences reported pursuant to [Articles 4](#) and [5](#).

The handling of the reports shall be done with a view to preventing the use of information for purposes other than safety, and shall appropriately safeguard the confidentiality of the identity of the reporter and of the persons mentioned in occurrence reports, with a view to promoting a 'just culture'.

The authorities which may be designated pursuant to the first subparagraph, either jointly or separately, are the following:

- (a) the national civil aviation authority; and/or
- (b) the safety investigation authority; and/or
- (c) any other independent body or entity based in the State that is entrusted with this function.

Where the State of Iraq designates more than one body or entity, it shall designate one of them as point of contact for the transfer of information referred to in [Article 8\(2\)](#).

4. The ICAA shall designate one or more persons to establish a mechanism to independently collect, evaluate, process, analyse and store details of occurrences reported in accordance with [Articles 4](#) and [5](#).

The handling of the reports shall be done with a view to preventing the use of information for purposes other than safety, and shall appropriately safeguard the confidentiality of the identity of the reporter and of the persons mentioned in occurrence reports, with a view to promoting a 'just culture'.

5. Organisations shall store occurrence reports drawn up on the basis of details of occurrences collected in accordance with [Articles 4](#) and [5](#) in one or more databases.

6. The competent authorities referred to in paragraph 3 shall store occurrence reports drawn up on the basis of details of occurrences collected in accordance with [Articles 4 and 5](#) in a national database.
7. Relevant information on accidents and serious incidents collected or issued by safety investigation authorities shall also be stored in the national database.
8. The ICAA shall store occurrence reports drawn up on the basis of details of occurrences collected in accordance with [Articles 4 and 5](#) in a database.
9. Safety investigation authorities shall have full access to their respective national database referred to in paragraph 6 for the purpose of discharging their responsibilities.
10. The ICAA shall have full access to their respective national database referred to in paragraph 6 for the purposes of their safety-related responsibilities.

Article 7 – Quality and content of occurrence reports

1. Occurrence reports referred to in [Article 6](#) shall contain at least the information listed in [Annex I](#).
2. Occurrence reports referred to in paragraphs 5, 6 and 8 of [Article 6](#) shall include a safety risk classification for the occurrence concerned. That classification shall be reviewed and if necessary amended, and shall be endorsed by the competent authority of the State of Iraq or the ICAA, in accordance with the common European risk classification scheme referred to in paragraph 5 of this Article.
3. Organisations, the ICAA shall establish data quality checking processes to improve data consistency, notably between the information collected initially and the report stored in the database.
4. The databases referred to in paragraphs 5, 6 and 8 of [Article 6](#) shall use formats which are:
 - (a) standardised to facilitate information exchange; and
 - (b) compatible with the ADREP taxonomy.
5. The State of Iraq, in close cooperation with the ICAA through the network of aviation safety analysts, referred to in [Article 13\(2\)](#), shall develop and implement risk classification scheme to enable the organisations, and the ICAA to classify occurrences in terms of safety risk.

Article 8 – Exchange of information

1. The State of Iraq and the ICAA may participate in an exchange of information by making all information relating to safety stored in their respective reporting databases available to the competent authorities of the other States.

2. The States shall also transfer information related to accidents and serious incidents to the International Civil Aviation (ICAO) as follows:
 - (a) during the course of the investigation: preliminary factual information on accidents and serious incidents;
 - (b) when the investigation is completed:
 - (i) the final investigation report; and
 - (ii) when available, a summary in English of the final investigation report.
3. The State of Iraq or the ICAA shall forward all pertinent safety-related information to the relevant authority of the involving State or their National Civil Aviation Authority (NAA) as soon as possible if, while collecting details of occurrences or when storing occurrence reports or carrying out an analysis in accordance with [Article 13\(6\)](#), it identifies safety matters which it considers either:
 - (a) to be of interest to other involved States or their NAAs; or
 - (b) to possibly require safety action to be taken by other involved States or their NAAs.

Article 9 – Dissemination of information

1. Any entity entrusted with regulating civil aviation safety in the State of Iraq, or any safety investigation authority, within the State of Iraq shall have secure access to information on occurrences contained in their data base. The information shall be used in accordance with [Articles 14](#) and [15](#).
2. Interested parties listed in [Annex II](#) may request access to certain information contained in the data base.

Interested parties, shall address requests for information to the ICAAs point of contact. Information relating to ongoing safety investigations conducted in accordance with these Rules shall not be disclosed to interested parties pursuant to this Article.

3. For security reasons, interested parties shall not be granted direct access to the data base.

Article 10 – Processing of requests and decisions

1. Requests for information contained in the data base shall be submitted using forms approved by the point of contact. Those forms shall contain at least the items set out in [Annex III](#).
2. A point of contact which receives a request shall verify that:
 - (a) the request is made by an interested party;

(b) it is competent to deal with that request.

3. A point of contact which receives a request shall evaluate on a case-by-case basis whether the request is justified and practicable. A point of contact may supply information to interested parties on paper or by using secure electronic means of communication.
4. Where the request is accepted, the point of contact shall determine the amount and the level of information to be supplied. Without prejudice to [Articles 14](#) and [15](#), the information shall be limited to what is strictly required for the purpose of the request.

Information unrelated to the interested party's own equipment, operations or field of activity shall be supplied only in aggregated or anonymised form. Information in non-aggregated form may be provided to the interested party if it provides a detailed written justification. That information shall be used in accordance with [Articles 14](#) and [15](#).

5. The point of contact shall supply interested parties listed in point (b) of [Annex II](#) only with information relating to the interested party's own equipment, operations or field of activity.
6. A point of contact receiving a request from an interested party listed in point (a) of [Annex II](#) may take a general decision to supply information on a regular basis to that interested party, provided that:
 - (a) the information requested is related to the interested party's own equipment, operations or field of activity;
 - (b) the general decision does not grant access to the entire content of the database;
 - (c) the general decision relates only to anonymised information.
7. The interested party shall use the information received pursuant to this Article subject to the following conditions:
 - (a) the interested party shall use the information only for the purpose specified in the request form, which should be compatible with the objective of these Rules as stated in [Article 1](#); and
 - (b) the interested party shall not disclose the information received without the written consent of the information provider and shall take the necessary measures to ensure appropriate confidentiality of the information received.
8. The decision to disseminate information pursuant to this Article shall be limited to what is strictly required for the purpose of its user.

Article 11 – Record of requests and exchange of information

1. The point of contact shall record each request received and the action taken pursuant to that request. That information shall be transmitted in a timely manner to the State of Iraq competent Authorities if and whenever a request is received and/or action is taken.

Article 12 – Occurrence analysis and follow-up at national level

1. Each organisation established in the State of Iraq shall develop a process to analyse occurrences collected in accordance with [Articles 4\(2\)](#) and [5\(1\)](#) in order to identify the safety hazards associated with identified occurrences or groups of occurrences. Based on that analysis, each organisation shall determine any appropriate corrective or preventive action, required to improve aviation safety.
2. When, following the analysis referred to in paragraph 1, an organisation identifies any appropriate corrective or preventive action required to address actual or potential aviation safety deficiencies, it shall:
 - (a) implement that action in a timely manner; and
 - (b) establish a process to monitor the implementation and effectiveness of the action.
3. Each organisation established in the State of Iraq shall regularly provide its employees and contracted personnel with information concerning the analysis of, and follow-up on, occurrences for which preventive or corrective action is taken.
4. Where an organisation established in the State of Iraq, which is not covered by paragraph 5, identifies an actual or potential aviation safety risk as a result of its analysis of occurrences or group of occurrences reported pursuant to [Articles 4\(8\)](#) and [5\(6\)](#), it shall transmit to the competent authority of the State of Iraq, within 30 days from the date of notification of the occurrence by the reporter:
 - (a) the preliminary results of the analysis performed pursuant to paragraph 1, if any; and
 - (b) any action to be taken pursuant to paragraph 2.

The organisation shall report the final results of the analysis, where required, as soon as they are available and, in principle, no later than three months from the date of notification of the occurrence.

The ICAA may request organisations to transmit to it the preliminary or final results of the analysis of any occurrence of which it has been notified but in relation to which it has received no follow-up or only the preliminary results.
5. Where an organisation established in the State of Iraq and certified or approved by the ICAA identifies an actual or potential aviation safety risk as a result of its analysis of occurrences or group of occurrences reported pursuant to [Articles 4\(9\)](#) and [5\(5\)](#),

it shall transmit to the ICAA, within 30 days from the date of notification of the occurrence by the reporter:

- (a) the preliminary results of the analysis performed pursuant to paragraph 1, if any; and
- (b) any action to be taken pursuant to paragraph 2.

The organisation certified or approved by the ICAA shall transmit to the ICAA the final results of the analysis, where required, as soon as they are available and, in principle, no later than three months from the date of notification of the occurrence.

The ICAA may request organisations to transmit to it the preliminary or final results of the analysis of any occurrence of which it has been notified but in relation to which it has received no follow-up or only the preliminary results.

6. The State of Iraq and the ICAA shall develop a process to analyse the information relating to occurrences which are directly reported to them in accordance with [Articles 4\(6\)](#), [5\(2\)](#) and [5\(3\)](#) in order to identify the safety hazards associated with those occurrences. Based on that analysis, they shall determine any appropriate corrective or preventive action required to improve aviation safety.
7. When, following the analysis referred to in paragraph 6, the State of Iraq or the ICAA identifies any appropriate corrective or preventive action required to address actual or potential aviation safety deficiencies, it shall:
 - (a) implement that action in a timely manner; and
 - (b) establish a process to monitor the implementation and effectiveness of the action.
8. For each occurrence or group of occurrences monitored in accordance with paragraph 4 or 5, the State of Iraq and the ICAA shall have access to the analysis made and shall appropriately monitor action taken by the organisations for which it is respectively responsible. If the conclusion is that the implementation and the effectiveness of the reported action is inappropriate to address actual or potential safety deficiencies, it shall ensure that additional appropriate action is taken and implemented by the relevant organisation.
9. The State of Iraq shall use information obtained from the analysis of occurrence reports to identify remedial action to be taken, if any, within the State Safety Programme.
11. In order to inform the public of the level of safety in civil aviation, the State of Iraq, through ICAA shall publish a safety review at least once a year. The safety review shall:

- (a) contain aggregated and anonymised information on the type of occurrences and safety-related information reported through its national mandatory and voluntary reporting systems;
- (b) identify trends;
- (c) identify the action it has taken.

Article 13 – Occurrence analysis and follow up

1. The ICAA and the competent authorities of the State of Iraq shall, in collaboration, participate regularly in the exchange and analysis of information contained in the data base. Without prejudice to the confidentiality requirements laid down in these Rules, observers may be invited on a case-by-case basis, where appropriate.
2. The ICAA and the competent authorities of the State of Iraq shall collaborate through a network of aviation safety analysts. The network of aviation safety analysts shall contribute to the improvement of aviation safety in the State of Iraq.
3. The ICAA shall support the activities of the network of aviation safety analysts by, for example, providing assistance for the preparation and organisation of the meetings of the network.

Article 14 – Confidentiality and appropriate use of information

1. The State of Iraq and organisations, in accordance with the national law, and the ICAA shall take the necessary measures to ensure the appropriate confidentiality of the details of occurrences received by them pursuant to [Articles 4, 5 and 9](#).
The State of Iraq, each organisation established in the State of Iraq, or the ICAA shall process personal data only to the extent necessary for the purposes of these Rules and without prejudice to national legal acts.
2. Information derived from occurrence reports shall be used only for the purpose for which it has been collected. The State of Iraq, the ICAA and organisations shall not make available or use the information on occurrences:
 - (a) in order to attribute blame or liability; or
 - (b) for any purpose other than the maintenance or improvement of aviation safety.

Article 15 – Protection of the information source

1. For the purposes of this Article, 'personal details' includes in particular names or addresses of natural persons.
2. Each organisation established in the State of Iraq shall ensure that all personal details are made available to staff of that organisation other than persons designated in accordance with [Article 6\(1\)](#) only where absolutely necessary in order to investigate occurrences with a view to enhancing aviation safety.

Disidentified information shall be disseminated within the organisation as appropriate.

3. The State of Iraq shall ensure that no personal details are ever recorded in the national database referred to in [Article 6\(6\)](#). Such disidentified information shall be made available to all relevant parties, for example to allow them to discharge their obligations in relation to aviation safety improvement.
4. The ICAA shall ensure that no personal details are ever recorded in the ICAA database referred to in [Article 6\(8\)](#). Such disidentified information shall be made available to all relevant parties, for example to allow them to discharge their obligations in relation to aviation safety improvement.
5. The States of Iraq and the ICAA shall not be prevented from taking any action necessary for maintaining or improving aviation safety.
6. Without prejudice to applicable national criminal law, the State of Iraq shall refrain from instituting proceedings in respect of unpremeditated or inadvertent infringements of the law which come to their attention only because they have been reported pursuant to [Articles 4](#) and [5](#).

The first subparagraph shall not apply in the cases referred to in paragraph 10. The State of Iraq may retain or adopt measures to strengthen the protection of reporters or persons mentioned in occurrence reports, and it may in particular apply these Rules without the exceptions referred to in paragraph 10.

7. If disciplinary or administrative proceedings are instituted under national law, information contained in occurrence reports shall not be used against:
 - (a) the reporters; or
 - (b) the persons mentioned in occurrence reports.

The first subparagraph shall not apply in the cases referred to in paragraph 10.

The State of Iraq may retain or adopt measures to strengthen the protection of reporters or persons mentioned in occurrence reports and it may in particular extend that protection to civil or criminal proceedings.

8. The State of Iraq may adopt or maintain in force legislative provisions ensuring a higher level of protection for reporters or for persons mentioned in occurrence reports than those established in these Rules.
9. Except where paragraph 10 applies, employees and contracted personnel who report or are mentioned in occurrence reports collected in accordance with [Articles 4](#) and [5](#) shall not be subject to any prejudice by their employer or by the organisation for which the services are provided on the basis of the information supplied by the reporter.
10. The protection under paragraphs 6, 7 and 9 of this Article shall not apply to any of the following situations:

- (a) in cases of wilful misconduct;
- (b) where there has been a manifest, severe and serious disregard of an obvious risk and profound failure of professional responsibility to take such care as is evidently required in the circumstances, causing foreseeable damage to a person or property, or which seriously compromises the level of aviation safety.

11. Each organisation established in the State of Iraq shall, after consulting its staff representatives, adopt internal rules describing how 'just culture' principles, in particular the principle referred to in paragraph 9, are guaranteed and implemented within that organisation.

The body designated pursuant to paragraph 12 may ask to review the internal rules of the organisations established in the State of Iraq.

12. The State of Iraq shall designate a body responsible for the implementation of paragraphs 6, 9 and 11.

Employees and contracted personnel may report to that body alleged infringements of the rules established by this Article. Employees and contracted personnel shall not be penalised for reporting alleged infringements. Employees and contracted personnel may inform the State of Iraq or the ICAA about such alleged infringements. Where appropriate, the designated body shall advise the relevant authorities concerning remedies or penalties in application of [Article 16](#).

Article 16 – Penalties

The State of Iraq shall lay down the rules on penalties applicable to infringements of these Rules. The penalties provided for shall be effective, proportionate and dissuasive.

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LIST OF REQUIREMENTS APPLICABLE TO THE MANDATORY AND VOLUNTARY OCCURRENCE REPORTING SCHEMES

Note: The data fields must be completed with the information requested. If it is not possible for the competent authorities of the State of Iraq or the ICAA to include that information because it has not been provided by the organisation or the reporter, the data field may be completed with the value 'unknown'. However, with a view to ensuring that the appropriate information is transmitted, use of that 'unknown' value should, to the best extent possible, be avoided, and the report should, where possible, be completed with the information later.

1. COMMON MANDATORY DATA FIELDS

When entering, in their respective databases, information on every occurrence mandatorily reported and, to the best extent possible, every occurrence voluntarily reported, organisations, the State of Iraq and the ICAA must ensure that occurrence reports recorded in their databases contain at least the following information:

- (1) **Headline**
 - Headline

- (2) **Filing Information**
 - Responsible Entity
 - File Number
 - Occurrence Status

- (3) **When**
 - UTC Date

- (4) **Where**
 - State/Area of Occurrence
 - Location of Occurrence

- (5) **Classification**
 - Occurrence Class
 - Occurrence Category

- (6) **Narrative**
 - Narrative Language
 - Narrative

- (7) **Events**
 - Event Type

- (8) **Risk classification**

2. SPECIFIC MANDATORY DATA FIELDS

2.1. Aircraft-related data fields

When entering, in their respective databases, information on every occurrence mandatorily reported and, to the best extent possible, every occurrence voluntarily reported, organisations, the State of Iraq and the ICAA must ensure that occurrence reports recorded in their databases contain at least the following information:

(1) Aircraft Identification

- State of Registry
- Make/Model/Series
- Aircraft serial number
- Aircraft Registration
- Call sign

(2) Aircraft Operation

- Operator
- Type of operation

(3) Aircraft Description

- Aircraft Category
- Propulsion Type
- Mass Group

(4) History of Flight

- Last Departure Point
- Planned Destination
- Flight Phase

(5) Weather

- Weather relevant

2.2. Data fields relating to air navigation services

When entering, in their respective databases, information on every occurrence mandatorily reported and, to the best extent possible, every occurrence voluntarily reported, organisations, the State of Iraq and the ICAA must ensure that occurrence reports recorded in their databases contain at least the following information:

(1) ATM relation

- ATM contribution
- Service affected (effect on ATM service)

(2) ATS Unit Name

2.2.1. Separation Minima Infringement/Loss of Separation and Airspace Infringement-related data fields

When entering, in their respective databases, information on every occurrence mandatorily reported and, to the best extent possible, every occurrence voluntarily reported, organisations, must ensure that occurrence reports recorded in their databases contain at least the following information:

(1) Airspace

- Airspace type
- Airspace class
- FIR/UIR name

2.3. Aerodrome-related data fields

When entering, in their respective databases, information on every occurrence mandatorily reported and, to the best extent possible, every occurrence voluntarily reported, organisations, the State of Iraq and the ICAA must ensure that occurrence reports recorded in their databases contain at least the following information:

(1) Location Indicator (ICAO indicator of the airport)

(2) Location on the aerodrome

2.4. Aircraft damage or personal injury-related data fields

When entering, in their respective databases, information on every occurrence mandatorily reported and, to the best extent possible, every occurrence voluntarily reported, organisations, the State of Iraq and the ICAA must ensure that occurrence reports recorded in their databases contain at least the following information:

(1) Severity

- Highest Damage
- Injury Level

(2) Injuries to persons

- Number of injuries on ground (fatal, serious, minor)
- Number of injuries on aircraft (fatal, serious, minor)

INTERESTED PARTIES

(a) List of interested parties which may receive information on the basis of a case-by-case decision under [Article 10\(4\)](#) or on the basis of a general decision under [Article 10\(6\)](#):

1. Manufacturers: designers and manufacturers of aircraft, engines, propellers and aircraft parts and appliances, and their respective associations; designers and manufacturers of air traffic management (ATM) systems and constituents; designers and manufacturers of systems and constituents for air navigation services (ANS); designers and manufacturers of systems and equipment used on the air side of aerodromes
2. Maintenance: organisations involved in the maintenance or overhaul of aircraft, engines, propellers and aircraft parts and appliances; in the installation, modification, maintenance, repair, overhaul, flight checking or inspection of air navigation facilities; or in the maintenance or overhaul of aerodrome air side systems, constituents and equipment
3. Operators: airlines and operators of aircraft and associations of airlines and operators; aerodrome operators and associations of aerodrome operators
4. Air navigation services providers and providers of ATM-specific functions
5. Aerodrome service providers: organisations in charge of ground handling of aircraft, including fuelling, loadsheet preparation, loading, de-icing and towing at an aerodrome, as well as rescue and firefighting, or other emergency services
6. Aviation training organisations
7. Third-country organisations: governmental aviation authorities and accident investigation authorities from third countries
8. International aviation organisations
9. Research: public or private research laboratories, centres or entities; or universities engaged in aviation safety research or studies

(b) List of interested parties which may receive information on the basis of a case-by-case decision under [Article 10\(4\)](#) and (5):

1. Pilots (on a personal basis)
2. Air traffic controllers (on a personal basis) and other ATM/ANS staff carrying out safety-related tasks
3. Engineers/technicians/air traffic safety electronics staff/aviation (or aerodrome) managers (on a personal basis)

4. Professional representative bodies of staff carrying out safety-related tasks

ANNEX I – OCCURRENCE RELATED TO THE OPERATION OF THE AIRCRAFT

Remark: This Annex is structured in such a way that the pertinent occurrences are linked with categories of activities during which they are normally observed, according to experience, in order to facilitate the reporting of those occurrences. However, this presentation must not be understood as meaning that occurrences must not be reported in case they take place outside the category of activities to which they are linked in the list.

1. AIR OPERATIONS

1. 1. Flight preparation

(1) Use of incorrect data or erroneous entries into equipment used for navigation or performance calculations which has or could have endangered the aircraft, its occupants or any other person.

(2) Carriage or attempted carriage of dangerous goods in contravention of applicable legislations including incorrect labelling, packaging and handling of dangerous goods.

1.2. Aircraft preparation

(1) Incorrect fuel type or contaminated fuel.

(2) Missing, incorrect or inadequate De-icing/Anti-icing treatment.

1.3. Take-off and landing

(1) Taxiway or runway excursion.

(2) Actual or potential taxiway or runway incursion.

(3) Final Approach and Take-off Area (FATO) incursion.

(4) Any rejected take-off.

(5) Inability to achieve required or expected performance during take-off, go-around or landing.

(6) Actual or attempted take-off, approach or landing with incorrect configuration setting.

(7) Tail, blade/wingtip or nacelle strike during take-off or landing.

(8) Approach continued against air operator stabilised approach criteria.

(9) Continuation of an instrument approach below published minimums with inadequate visual references.

(10) Precautionary or forced landing.

(11) Short and long landing.

(12) Hard landing.

1.4. Any phase of flight

(1) Loss of control.

(2) Aircraft upset, exceeding normal pitch attitude, bank angle or airspeed inappropriate for the conditions.

(3) Level bust.

(4) Activation of any flight envelope protection, including stall warning, stick shaker, stick pusher and automatic protections.

(5) Unintentional deviation from intended or assigned track of the lowest of twice the required navigation performance or 10 nautical miles.

(6) Exceedance of aircraft flight manual limitation.

(7) Operation with incorrect altimeter setting.

(8) Jet blast or rotor and prop wash occurrences which have or could have endangered the aircraft, its occupants or any other person.

(9) Misinterpretation of automation mode or of any flight deck information provided to the flight crew which has or could have endangered the aircraft, its occupants or any other person.

1.5. Other types of occurrences

(1) Unintentional release of cargo or other externally carried equipment.

(2) Loss of situational awareness (including environmental, mode and system awareness, spatial disorientation, and time horizon).

(3) Any occurrence where the human performance has directly contributed to or could have contributed to an accident or a serious incident.

2. TECHNICAL OCCURRENCES

2.1. Structure and systems

(1) Loss of any part of the aircraft structure in flight.

(2) Loss of a system.

(3) Loss of redundancy of a system.

(4) Leakage of any fluid which resulted in a fire hazard or possible hazardous contamination of aircraft structure, systems or equipment, or which has or could have endangered the aircraft, its occupants or any other person.

(5) Fuel system malfunctions or defects, which had an effect on fuel supply and/or distribution.

(6) Malfunction or defect of any indication system when this results in misleading indications to the crew.

(7) Abnormal functioning of flight controls such as asymmetric or stuck/jammed flight controls (for example: lift (flaps/slats), drag (spoilers), attitude control (ailerons, elevators, rudder) devices).

2.2. Propulsion (including engines, propellers and rotor systems) and auxiliary power units (APUs)

(1) Failure or significant malfunction of any part or controlling of a propeller, rotor or powerplant.

(2) Damage to or failure of main/tail rotor or transmission and/or equivalent systems.

(3) Flameout, in-flight shutdown of any engine or APU when required (for example: ETOPS (Extended range Twin engine aircraft Operations), MEL (Minimum Equipment List)).

(4) Engine operating limitation exceedance, including overspeed or inability to control the speed of any high-speed rotating component (for example: APU, air starter, air cycle machine, air turbine motor, propeller or rotor).

(5) Failure or malfunction of any part of an engine, powerplant, APU or transmission resulting in any one or more of the following:

(a) thrust-reversing system failing to operate as commanded;

(b) inability to control power, thrust or rpm (revolutions per minute);

(c) non-containment of components/debris.

3. INTERACTION WITH AIR NAVIGATION SERVICES (ANS) AND AIR TRAFFIC MANAGEMENT (ATM)

(1) Unsafe ATC (Air Traffic Control) clearance.

(2) Prolonged loss of communication with ATS (Air Traffic Service) or ATM Unit.

(3) Conflicting instructions from different ATS Units potentially leading to a loss of separation.

(4) Misinterpretation of radio-communication which has or could have endangered the aircraft, its occupants or any other person.

(5) Intentional deviation from ATC instruction which has or could have endangered the aircraft, its occupants or any other person.

4. EMERGENCIES AND OTHER CRITICAL SITUATIONS

(1) Any event leading to the declaration of an emergency ('Mayday' or 'PAN call').

(2) Any burning, melting, smoke, fumes, arcing, overheating, fire or explosion.

(3) Contaminated air in the cockpit or in the passenger compartment which has or could have endangered the aircraft, its occupants or any other person.

(4) Failure to apply the correct non-normal or emergency procedure by the flight or cabin crew to deal with an emergency.

(5) Use of any emergency equipment or non-normal procedure affecting in-flight or landing performance.

(6) Failure of any emergency or rescue system or equipment which has or could have endangered the aircraft, its occupants or any other person.

(7) Uncontrollable cabin pressure.

(8) Critically low fuel quantity or fuel quantity at destination below required final reserve fuel.

(9) Any use of crew oxygen system by the crew.

(10) Incapacitation of any member of the flight or cabin crew that results in the reduction below the minimum certified crew complement.

(11) Crew fatigue impacting or potentially impacting their ability to perform safely their flight duties.

5. EXTERNAL ENVIRONMENT AND METEOROLOGY

(1) A collision or a near collision on the ground or in the air, with another aircraft, terrain or obstacle (1).

(2) ACAS RA (Airborne Collision Avoidance System, Resolution Advisory).

(3) Activation of genuine ground collision system such as GPWS (Ground Proximity Warning System)/TAWS (Terrain Awareness and Warning System) 'warning'.

(4) Wildlife strike including bird strike.

(5) Foreign object damage/debris (FOD).

- (6) Unexpected encounter of poor runway surface conditions.
- (7) Wake-turbulence encounters.
- (8) Interference with the aircraft by firearms, fireworks, flying kites, laser illumination, high powered lights, lasers, Remotely Piloted Aircraft Systems, model aircraft or by similar means.
- (9) A lightning strike which resulted in damage to the aircraft or loss or malfunction of any aircraft system.
- (10) A hail encounter which resulted in damage to the aircraft or loss or malfunction of any aircraft system.
- (11) Severe turbulence encounter or any encounter resulting in injury to occupants or deemed to require a 'turbulence check' of the aircraft.
- (12) A significant wind shear or thunderstorm encounter which has or could have endangered the aircraft, its occupants or any other person.
- (13) Icing encounter resulting in handling difficulties, damage to the aircraft or loss or malfunction of any aircraft system.
- (14) Volcanic ash encounter

6. SECURITY

- (1) Bomb threat or hijack.
- (2) Difficulty in controlling intoxicated, violent or unruly passengers.
- (3) Discovery of a stowaway.

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ANNEX II — OCCURRENCES RELATED TO TECHNICAL CONDITIONS, MAINTENANCE AND REPAIR OF THE AIRCRAFT

1. MANUFACTURING

Products, parts or appliances released from the production organisation with deviations from applicable design data that could lead to a potential unsafe condition as identified with the holder of the type-certificate or design approval.

2. DESIGN

Any failure, malfunction, defect or other occurrence related to a product, part, or appliance which has resulted in or may result in an unsafe condition.

Remark: This list is applicable to occurrences occurring on a product, part, or appliance covered by the type-certificate, restricted type-certificate, supplemental type-certificate, ITSO authorisation, major repair design approval or any other relevant approval deemed to have been issued in the State of Iraq.

3. MAINTENANCE AND CONTINUING AIRWORTHINESS MANAGEMENT

(1) Serious structural damage (for example: cracks, permanent deformation, delamination, debonding, burning, excessive wear, or corrosion) found during maintenance of the aircraft or component.

(2) Serious leakage or contamination of fluids (for example: hydraulic, fuel, oil, gas or other fluids).

(3) Failure or malfunction of any part of an engine or powerplant and/or transmission resulting in any one or more of the following:

- (a) non-containment of components/debris;
- (b) failure of the engine mount structure.

(4) Damage, failure or defect of propeller, which could lead to in-flight separation of the propeller or any major portion of the propeller and/or malfunctions of the propeller control.

(5) Damage, failure or defect of main rotor gearbox/attachment, which could lead to in-flight separation of the rotor assembly and/or malfunctions of the rotor control.

(6) Significant malfunction of a safety-critical system or equipment including emergency system or equipment during maintenance testing or failure to activate these systems after maintenance.

(7) Incorrect assembly or installation of components of the aircraft found during an inspection or test procedure not intended for that specific purpose.

- (8) Wrong assessment of a serious defect, or serious non-compliance with MEL and Technical logbook procedures
- (9) Serious damage to Electrical Wiring Interconnection System (EWIS).
- (10) Any defect in a life-controlled critical part causing retirement before completion of its full life.
- (11) The use of products, components or materials, from unknown, suspect origin, or unserviceable critical components.
- (12) Misleading, incorrect or insufficient applicable maintenance data or procedures that could lead to significant maintenance errors, including language issue.
- (13) Incorrect control or application of aircraft maintenance limitations or scheduled maintenance.
- (14) Releasing an aircraft to service from maintenance in case of any non-compliance which endangers the flight safety.
- (15) Serious damage caused to an aircraft during maintenance activities due to incorrect maintenance or use of inappropriate or unserviceable ground support equipment that requires additional maintenance actions.
- (16) Identified burning, melting, smoke, arcing, overheating or fire occurrences.
- (17) Any occurrence where the human performance, including fatigue of personnel, has directly contributed to or could have contributed to an accident or a serious incident.
- (18) Significant malfunction, reliability issue, or recurrent recording quality issue affecting a flight recorder system (such as a flight data recorder system, a data link recording system or a cockpit voice recorder system) or lack of information needed to ensure the serviceability of a flight recorder system.

ANNEX III - OCCURRENCES RELATED TO NAVIGATION SERVICES AND FACILITIES

Remark: This Annex is structured in such a way that the pertinent occurrences are linked with categories of activities during which they are normally observed, according to experience, in order to facilitate the reporting of those occurrences. However, this presentation must not be understood as meaning that occurrences must not be reported in case they take place outside the category of activities to which they are linked in the list.

1. AIRCRAFT-RELATED OCCURRENCES

- (1) A collision or a near collision on the ground or in the air, between an aircraft and another aircraft, terrain or obstacle ⁽¹⁾, including near-controlled flight into terrain (near CFIT).
- (2) Separation minima infringement ⁽²⁾.
- (3) Inadequate separation ⁽³⁾.
- (4) ACAS RAs.
- (5) Wildlife strike including bird strike.
- (6) Taxiway or runway excursion.
- (7) Actual or potential taxiway or runway incursion.
- (8) Final Approach and Take-off Area (FATO) incursion.
- (9) Aircraft deviation from ATC clearance.
- (10) Aircraft deviation from applicable air traffic management (ATM) regulation:
 - (a) aircraft deviation from applicable published ATM procedures;
 - (b) airspace infringement including unauthorised penetration of airspace;
 - (c) deviation from aircraft ATM-related equipment carriage and operations, as mandated by applicable regulations.
- (11) Call sign confusion related occurrences.

2. DEGRADATION OR TOTAL LOSS OF SERVICES OR FUNCTIONS

- (1) Inability to provide ATM services or to execute ATM functions:
 - (a) inability to provide air traffic services or to execute air traffic services functions;

- (b) inability to provide airspace management services or to execute airspace management functions;
- (c) inability to provide air traffic flow management and capacity services or to execute air traffic flow management and capacity functions.
- (2) Missing or significantly incorrect, corrupted, inadequate or misleading information from any support service (1), including relating to poor runway surface conditions.
- (3) Failure of communication service.
- (4) Failure of surveillance service.
- (5) Failure of data processing and distribution function or service.
- (6) Failure of navigation service.
- (7) Failure of ATM system security which had or could have a direct negative impact on the safe provision of service.
- (8) Significant ATS sector/position overload leading to a potential deterioration in service provision.
- (9) Incorrect receipt or interpretation of significant communications, including lack of understanding of the language used, when this had or could have a direct negative impact on the safe provision of service.
- (10) Prolonged loss of communication with an aircraft or with other ATS unit.

3. OTHER OCCURRENCES

- (1) Declaration of an emergency ('Mayday' or 'PAN' call).
- (2) Significant external interference with Air Navigation Services (for example radio broadcast stations transmitting in the FM band, interfering with ILS (instrument landing system), VOR (VHF Omni Directional Radio Range) and communication).
- (3) Interference with an aircraft, an ATS unit or a radio communication transmission including by firearms, fireworks, flying kites, laser illumination, high-powered lights lasers, Remotely Piloted Aircraft Systems, model aircraft or by similar means.
- (4) Fuel dumping.
- (5) Bomb threat or hijack.
- (6) Fatigue impacting or potentially impacting the ability to perform safely the air navigation or air traffic duties.

(7) Any occurrence where the human performance has directly contributed to or could have contributed to an accident or a serious incident.

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ANNEX IV - OCCURRENCES RELATED TO AERODROMES AND GROUND SERVICES

1. SAFETY MANAGEMENT OF AN AERODROME

Remark: This Section is structured in such a way that the pertinent occurrences are linked with categories of activities during which they are normally observed, according to experience, in order to facilitate the reporting of those occurrences. However, this presentation must not be understood as meaning that occurrences must not be reported in case they take place outside the category of activities to which they are linked in the list.

1.1. Aircraft- and obstacle-related occurrences

- (1) A collision or near collision, on the ground or in the air, between an aircraft and another aircraft, terrain or obstacle (1).
- (2) Wildlife strike including bird strike.
- (3) Taxiway or runway excursion.
- (4) Actual or potential taxiway or runway incursion.
- (5) Final Approach and Take-off Area (FATO) incursion or excursion.
- (6) Aircraft or vehicle failure to follow clearance, instruction or restriction while operating on the movement area of an aerodrome (for example: wrong runway, taxiway or restricted part of an aerodrome).
- (7) Foreign object on the aerodrome movement area which has or could have endangered the aircraft, its occupants or any other person.
- (8) Presence of obstacles on the aerodrome or in the vicinity of the aerodrome which are not published in the AIP (Aeronautical Information Publication) or by NOTAM (Notice to Airmen) and/or that are not marked or lighted properly.
- (9) Push-back, power-back or taxi interference by vehicle, equipment or person.
- (10) Passengers or unauthorised person left unsupervised on apron.
- (11) Jet blast, rotor down wash or propeller blast effect.
- (12) Declaration of an emergency ('Mayday' or 'PAN' call).

1.2. Degradation or total loss of services or functions

- (1) Loss or failure of communication between:

- (a) aerodrome, vehicle or other ground personnel and air traffic services unit or apron management service unit;
 - (b) apron management service unit and aircraft, vehicle or air traffic services unit.
- (2) Significant failure, malfunction or defect of aerodrome equipment or system which has or could have endangered the aircraft or its occupants.
 - (3) Significant deficiencies in aerodrome lighting, marking or signs.
 - (4) Failure of the aerodrome emergency alerting system.
 - (5) Rescue and firefighting services not available according to applicable requirements.

1.3. Other occurrences

- (1) Fire, smoke, explosions in aerodrome facilities, vicinities and equipment which has or could have endangered the aircraft, its occupants or any other person.
- (2) Aerodrome security related occurrences (for example: unlawful entry, sabotage, bomb threat).
- (3) Absence of reporting of a significant change in aerodrome operating conditions which has or could have endangered the aircraft, its occupants or any other person.
- (4) Missing, incorrect or inadequate de-icing/anti-icing treatment.
- (5) Significant spillage during fuelling operations.
- (6) Loading of contaminated or incorrect type of fuel or other essential fluids (including oxygen, nitrogen, oil and potable water).
- (7) Failure to handle poor runway surface conditions.
- (8) Any occurrence where the human performance has directly contributed to or could have contributed to an accident or a serious incident.

2. GROUND HANDLING OF AN AIRCRAFT

Remark: This Section is structured in such a way that the pertinent occurrences are linked with categories of activities during which they are normally observed, according to experience, in order to facilitate the reporting of those occurrences. However, this presentation must not be understood as meaning that occurrences must not be reported in case they take place outside the category of activities to which they are linked in the list.

2.1. Aircraft- and aerodrome-related occurrences

- (1) A collision or near collision, on the ground or in the air, between an aircraft and another aircraft, terrain or obstacle (1).
- (2) Runway or taxiway incursion.
- (3) Runway or taxiway excursion.
- (4) Significant contamination of aircraft structure, systems and equipment arising from the carriage of baggage, mail or cargo.
- (5) Push-back, power-back or taxi interference by vehicle, equipment or person.
- (6) Foreign object on the aerodrome movement area which has or could have endangered the aircraft, its occupants or any other person.
- (7) Passengers or unauthorised person left unsupervised on apron.
- (8) Fire, smoke, explosions in aerodrome facilities, vicinities and equipment which has or could have endangered the aircraft, its occupants or any other person.
- (9) Aerodrome security-related occurrences (for example: unlawful entry, sabotage, bomb threat).

2.2. Degradation or total loss of services or functions

- (1) Loss or failure of communication with aircraft, vehicle, air traffic services unit or apron management service unit.
- (2) Significant failure, malfunction or defect of aerodrome equipment or system which has or could have endangered the aircraft or its occupants.
- (3) Significant deficiencies in aerodrome lighting, marking or signs.

2.3. Ground handling specific occurrences

- (1) Incorrect handling or loading of passengers, baggage, mail or cargo, likely to have a significant effect on aircraft mass and/or balance (including significant errors in loadsheet calculations).
- (2) Boarding equipment removed leading to endangerment of aircraft occupants.
- (3) Incorrect stowage or securing of baggage, mail or cargo likely in any way to endanger the aircraft, its equipment or occupants or to impede emergency evacuation.
- (4) Transport, attempted transport or handling of dangerous goods which resulted or could have resulted in the safety of the operation being endangered or led to an unsafe

condition (for example: dangerous goods incident or accident as defined in the ICAO Technical Instructions (1)).

(5) Non-compliance on baggage or passenger reconciliation.

(6) Non-compliance with required aircraft ground handling and servicing procedures, especially in de-icing, refuelling or loading procedures, including incorrect positioning or removal of equipment.

(7) Significant spillage during fuelling operations.

(8) Loading of incorrect fuel quantities likely to have a significant effect on aircraft endurance, performance, balance or structural strength.

(9) Loading of contaminated or incorrect type of fuel or other essential fluids (including oxygen, nitrogen, oil and potable water).

(10) Failure, malfunction or defect of ground equipment used for ground handling, resulting into damage or potential damage to the aircraft (for example: tow bar or GPU (Ground Power Unit)).

(11) Missing, incorrect or inadequate de-icing/anti-icing treatment.

(12) Damage to aircraft by ground handling equipment or vehicles including previously unreported damage.

(13) Any occurrence where the human performance has directly contributed to or could have contributed to an accident or a serious incident.

ANNEX V - OCCURRENCES RELATED TO AIRCRAFT OTHER THAN COMPLEX

For the purposes of this Annex:

- (a) 'Aircraft other than complex motor-powered aircraft' means any aircraft other than that defined in Article 1(6) of Law No 148 of 1974;
- (b) 'Sailplane' has the meaning assigned in Article 1(6) of Law No 148 of 1974;
- (c) 'Lighter-than-air vehicles' has the meaning assigned in point ML10 of the section

1. AIRCRAFT OTHER THAN COMPLEX MOTOR-POWERED AIRCRAFT EXCLUDING SAILPLANES AND LIGHTER-THAN-AIR VEHICLES

Remark: This Section is structured in such a way that the pertinent occurrences are linked with categories of activities during which they are normally observed, according to experience, in order to facilitate the reporting of those occurrences. However, this presentation must not be understood as meaning that occurrences must not be reported in case they take place outside the category of activities to which they are linked in the list.

1.1. Air operations

- (1) Unintentional loss of control.
- (2) Landing outside of intended landing area.
- (3) Inability or failure to achieve required aircraft performance expected in normal conditions during take-off, climb or landing.
- (4) Runway incursion
- (5) Runway excursion.
- (6) Any flight which has been performed with an aircraft which was not airworthy, or for which flight preparation was not completed, which has or could have endangered the aircraft, its occupants or any other person.
- (7) Unintended flight into IMC (Instrument Meteorological Conditions) conditions of aircraft not IFR (Instrument flight rules) certified, or a pilot not qualified for IFR, which has or could have endangered the aircraft, its occupants or any other person.
- (8) Unintentional release of cargo (1).

1.2. Technical occurrences

- (1) Abnormal severe vibration (for example: aileron or elevator 'flutter', or of propeller).

- (2) Any flight control not functioning correctly or disconnected.
- (3) A failure or substantial deterioration of the aircraft structure.
- (4) A loss of any part of the aircraft structure or installation in flight.
- (5) A failure of an engine, rotor, propeller, fuel system or other essential system.
- (6) Leakage of any fluid which resulted in a fire hazard or possible hazardous contamination of aircraft structure, systems or equipment, or risk to occupants.

1.3. Interaction with air navigation services and air traffic management

- (1) Interaction with air navigation services (for example: incorrect services provided, conflicting communications or deviation from clearance) which has or could have endangered the aircraft, its occupants or any other person.
- (2) Airspace infringement.

1.4. Emergencies and other critical situations

- (1) Any occurrence leading to an emergency call.
- (2) Fire, explosion, smoke, toxic gases or toxic fumes in the aircraft.
- (3) Incapacitation of the pilot leading to inability to perform any duty.

1.5. External environment and meteorology

- (1) A collision on the ground or in the air, with another aircraft, terrain or obstacle (2).
- (2) A near collision, on the ground or in the air, with another aircraft, terrain or obstacle (1) requiring an emergency avoidance manoeuvre to avoid a collision.
- (3) Wildlife strike including bird strike which resulted in damage to the aircraft or loss or malfunction of any essential service.
- (4) Interference with the aircraft by firearms, fireworks, flying kites, laser illumination, high powered lights lasers, Remotely Piloted Aircraft Systems, model aircraft or by similar means.
- (5) A lightning strike resulting in damage to or loss of functions of the aircraft.
- (6) Severe turbulence encounter which resulted in injury to aircraft occupants or in the need for a post-flight turbulence damage check of the aircraft.
- (7) Icing including carburettor icing which has or could have endangered the aircraft, its occupants or any other person.

2. SAILPLANES (GLIDERS)

Remark: This Section is structured in such a way that the pertinent occurrences are linked with categories of activities during which they are normally observed, according to experience, in order to facilitate the reporting of those occurrences. However, this presentation must not be understood as meaning that occurrences must not be reported in case they take place outside the category of activities to which they are linked in the list.

2.1. Air operations

- (1) Unintentional loss of control.
- (2) An occurrence where the sailplane pilot was unable to release either the winch cable or the aerotow rope and had to do so using emergency procedures.
- (3) Any release of the winch cable or the aerotow rope if the release has or could have endangered the sailplane, its occupants or any other person.
- (4) In the case of a powered sailplane, an engine failure during take-off.
- (5) Any flight which has been performed with a sailplane which was not airworthy, or for which an incomplete flight preparation has or could have endangered the sailplane, its occupants or any other person.

2.2. Technical occurrences

- (1) Abnormal severe vibration (for example: aileron or elevator 'flutter', or of propeller).
- (2) Any flight control not functioning correctly or disconnected.
- (3) A failure or substantial deterioration of the sailplane structure.
- (4) A loss of any part of the sailplane structure or installation in flight.

2.3. Interaction with air navigation services and air traffic management

- (1) Interaction with air navigation services (for example: incorrect services provided, conflicting communications or deviation from clearance) which has or could have endangered the sailplane, its occupants or any other person.
- (2) Airspace infringements.

2.4. Emergencies and other critical situations

- (1) Any occurrence leading to an emergency call.
- (2) Any situation where no safe landing area remains available.
- (3) Fire, explosion, smoke, or toxic gases or fumes in the sailplane.

(4) Incapacitation of the pilot leading to inability to perform any duty.

2.5. External environment and meteorology

(1) A collision on the ground or in the air, with an aircraft, terrain or obstacle (1).

(2) A near collision, on the ground or in the air, with an aircraft, terrain or obstacle (1) requiring an emergency avoidance manoeuvre to avoid a collision.

(3) Interference with the sailplane by firearms, fireworks, flying kites, laser illumination, high powered lights lasers, Remotely Piloted Aircraft Systems, model aircraft or by similar means.

(4) A lightning strike resulting in damage to the sailplane.

3. LIGHTER-THAN-AIR VEHICLES (BALLOONS AND AIRSHIPS)

Remark: This Section is structured in such a way that the pertinent occurrences are linked with categories of activities during which they are normally observed, according to experience, in order to facilitate the reporting of those occurrences. However, this presentation must not be understood as meaning that occurrences must not be reported in case they take place outside the category of activities to which they are linked in the list.

3.1. Air operations

(1) Any flight which has been performed with a lighter-than-air vehicle which was not airworthy, or for which an incomplete flight preparation has or could have endangered the lighter-than-air vehicle, its occupants or any other person.

(2) Unintended permanent extinction of the pilot light.

3.2. Technical occurrences

(1) Failure of any of the following parts or controls: dip tube on fuel cylinder, envelope pulley, control line, tether rope, valve seal leak on burner, valve seal leak on fuel cylinder, carabiner, damage to fuel line, lifting gas valve, envelope or ballonet, blower, pressure relief valve (gas balloon), winch (tethered gas balloons).

(2) Significant leakage or loss of lifting gas (for example: porosity, unseated lifting gas valves).

3.3. Interaction with air navigation services and air traffic management

(1) Interaction with air navigation services (for example: incorrect services provided, conflicting communications or deviation from clearance) which has or could have endangered the lighter-than-air vehicle, its occupants or any other person.

(2) Airspace infringement.

1 Obstacle includes vehicle.

3.4. Emergencies and other critical situations

- (1) Any occurrence leading to an emergency call.
- (2) Fire, explosion, smoke or toxic fumes in the lighter-than-air vehicle (beyond the normal operation of the burner).
- (3) Lighter-than-air vehicle's occupants ejected from basket or gondola.
- (4) Incapacitation of the pilot leading to inability to perform any duty.
- (5) Unintended lift or drag of ground crew, leading to fatality or injury of a person.

3.5. External environment and meteorology

- (1) A collision or near collision on the ground or in the air, with an aircraft, terrain or obstacle **(1)** which has or could have endangered the lighter-than-air vehicle, its occupants or any other person.
.
- (2) Interference with the lighter-than-air vehicle by firearms, fireworks, flying kites, laser illumination, high powered lights lasers, Remotely Piloted Aircraft Systems, model aircraft or by similar means.
- (3) Unexpected encounter of adverse weather conditions which has or could have endangered the lighter-than-air vehicle, its occupants or any other person.

Note **(1)**: Obstacle includes vehicle

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ANNEX VI – RISK CLASSIFICATION SCHEME (RCS)

The Risk Classification (RCS) shall consist of the following two steps:

STEP 1: Determination of the values of the two variables: severity and probability.

STEP 2: Scoring of the safety risk matrix based on the two determined values of variables.

STEP 1: DETERMINATION OF THE VALUES OF THE VARIABLES

1. Severity of the potential accident outcome

1.1. Identification

The identification of the severity of the potential accident outcome shall follow the following two steps:

(a) a determination of the most likely type of accident that the occurrence under assessment could have escalated to (the so-called key risk area);

(b) a determination of the potential loss of life category based on aircraft size and proximity to populated or high-risk areas.

There are following key risk areas:

a. airborne collision: a collision between aircraft while both aircraft are airborne; or between aircraft and other airborne objects (excluding birds and wildlife);

b. aircraft upset: an undesired aircraft state characterised by unintentional divergences from parameters normally experienced during operations, which might ultimately lead to an uncontrolled impact with terrain;

c. collision on runway: a collision between an aircraft and another object (other aircraft, vehicles, etc.) or person that occurs on a runway of an aerodrome or other pre-designated landing area. It does not include collisions with birds or wildlife;

d. excursion: an occurrence when an aircraft leaves the runway or movement area of an aerodrome or landing surface of any other pre-designated landing area, without getting airborne. It includes high-impact vertical landings for rotorcraft or vertical take-off and landing aircraft and balloons or airships;

e. fire, smoke and pressurisation: an occurrence involving cases of fire, smoke, fumes or pressurisation situations that may become incompatible with human life. This includes occurrences involving fire, smoke or fumes affecting any part of an aircraft, in flight or on the ground, which is not the result of impact or malicious acts;

f. ground damage: damage to aircraft induced by operation of aircraft on ground on any other ground area than a runway or predesignated landing area, as well as damage during maintenance;

g. obstacle collision in flight: collision between an airborne aircraft and obstacles rising from the surface of the earth. Obstacles include tall buildings, trees, power cables, telegraph wires and antennae as well as tethered objects;

h. terrain collision: an occurrence where an airborne aircraft collides with terrain, without indication that the flight crew was unable to control the aircraft. It includes instances when the flight crew is affected by visual illusions or degraded visual environment;

i. other injuries: an occurrence where fatal or non-fatal injuries have been inflicted, which cannot be attributed to any other key risk area;

j. security: an act of unlawful interference against civil aviation. It includes all incidents and breaches related to surveillance and protection, access control, screening, implementation of security controls and any other acts intended to cause malicious or wanton destruction of aircraft and property, endangering or resulting in unlawful interference with civil aviation and its facilities. Includes both physical and cyber security events.

The potential loss of life shall be categorised in the following way:

(a) more than 100 possible fatalities – where the occurrence under assessment involves at least any of the following:

- one large certified aircraft with more than 100 potential passengers on board;
- an equivalent size aircraft for cargo;
- one aircraft of any type in a heavily populated area or in a high-risk area or both;
- any situation involving any type of aircraft where more than 100 fatalities may be possible;

(b) between 20 to 100 possible fatalities – where the occurrence under assessment involves at least any of the following:

- one medium certified aircraft with 20 to 100 potential passengers on board or equivalent size for cargo aircraft;
- any situation where 20 to 100 fatalities may be possible;

(c) between 2 to 19 possible fatalities where the occurrence under assessment involves at least any of the following:

- one small certified aircraft with up to 19 potential passengers on board;
- an equivalent size for cargo aircraft;
- any situation where 2 to 19 fatalities may be possible;

(d) 1 possible fatality – where the occurrence under assessment involves at least any of the following:

- one uncertified aircraft, that is aircraft not subject to European Union Aviation Safety Agency certification requirements;
- any situation where a single fatality may be possible;

(e) 0 possible fatalities – where the occurrence under assessment involves personal injuries only, regardless of the number of minor and serious injuries as long as there are no fatalities.

1.2 Determination

The severity of the accident shall result in one of the following severity scores:

- **'A'** which stands for no likelihood of an accident;
- **'E'** which stands for an accident involving minor and serious injury (not life changing) or minor aircraft damage;
- **'I'** which stands for an accident involving a single fatality, life changing injury or substantial damage accident;
- **'M'** which stands for a major accident with limited number of fatalities, life changing injuries or destruction of the aircraft;
- **'S'** which stands for a significant accident with potential for fatalities and injuries;
- **'X'** which stands for an extreme catastrophic accident with the potential for significant number of fatalities.

The severity score shall be calculated by combining the key risk area and the potential loss of life as laid down in the following table:

KEY RISK AREA	CATEGORY	SEVERITY SCORE
Airborne collision	More than 100 possible fatalities	X
	Between 20 to 100 possible fatalities	S
	Between 2 to 19 possible fatalities	M
	1 possible fatality	I
Aircraft upset	More than 100 possible fatalities	X
	Between 20 to 100 possible fatalities	S
	Between 2 to 19 possible fatalities	M
	1 possible fatality	I

Excursions	Between 20 to 100 possible fatalities	S
	Between 2 to 19 possible fatalities	M
	1 possible fatality	I
	0 possible fatalities	E
Fire, smoke and pressurisation	More than 100 possible fatalities	X
	Between 20 to 100 possible fatalities	S
	Between 2 to 19 possible fatalities	M
	1 possible fatality	I
Ground damage	Between 2 to 19 possible fatalities	M
	1 possible fatality	I
	0 possible fatalities	E
Obstacle collision in flight	More than 100 possible fatalities	X
	Between 20 to 100 possible fatalities	S
	Between 2 to 19 possible fatalities	M
	1 possible fatality	I

Terrain collision	More than 100 possible fatalities	X
	Between 20 to 100 possible fatalities	S
	Between 2 to 19 possible fatalities	M
	1 possible fatality	I
Other injuries	Between 20 to 100 possible fatalities	S
	Between 2 to 19 possible fatalities	M
	1 possible fatality	I
	0 possible fatalities	E

Security	More than 100 possible fatalities	X
	Between 20 to 100 possible fatalities	S
	Between 2 to 19 possible fatalities	M
	1 possible fatality	I
	0 possible fatalities	E

2. Probability of the potential accident outcome

The probability of the worst likely accident outcome shall be obtained by using the RCS barrier model defined in Section 2.1.

2.1. RC barrier model

The purpose of the RCS barrier model is to assess the effectiveness (that is the number and the strength) of the barriers in the safety system laid down in the Table in Section

2.1.1 which were remaining between the actual occurrence and the worst likely accident outcome. Ultimately, the RC barrier model shall determine how close the occurrence under assessment has been to the potential accident.

2.1.1. Barriers

The RC barrier model consists of 8 barriers, ordered in a logical sequence and weighted as per the following table:

Barrier number	Barrier	Barrier weight
1	'Aircraft, equipment and infrastructure design', includes maintenance and correction, operation support, the prevention of problems related to technical factors that could lead to an accident.	5
2	'Tactical planning', includes organisational and individual planning prior to the flight or other operational activity that supports the reduction of the causes and contributors to accidents.	2
3	'Regulations, procedures, processes', includes effective, understandable and available regulations, procedures and processes that are complied with (with the exclusion of the use of procedures for recovery barriers).	3
4	'Situational awareness and action', includes human vigilance for operational threats which ensures identification of operational hazards and effective action to prevent an accident.	2
5	'Warning systems operation and action' that could prevent an accident and which are fit for purpose, functioning, operational and are complied with.	3
6	'Late recovery from a potential accident situation'	1
7	'Protections', when an event has occurred, the level of the outcome is mitigated or prevents the escalation of the occurrence by intangible barriers or providence	1
8	'Low energy occurrence' scores the same as 'Protections', but for low-energy key risk areas only (ground damage, excursions, injuries). 'Not applicable' for all other key risk areas.	1

2.1.2. Barrier effectiveness

The effectiveness of each barrier shall be classified as follows:

- 'Stopped' if the barrier prevented the accident from occurring;
- 'Remaining Known': if it is known whether the barrier remained between the occurrence under assessment and the potential accident outcome;
- 'Remaining Assumed': if it is assumed that the barrier remained between the occurrence under assessment and the potential accident outcome;
- 'Failed Known': if it is known that the barrier has failed;
- 'Failed Assumed': if it is assumed that the barrier have failed even if insufficient or no information is available to determine this;
- 'Not Applicable': if the barrier is not relevant to the occurrence under assessment.

2.1.3. Barrier assessment

The barriers shall be assessed in two steps:

Step 1: To identify which of the barriers defined in the table in section 2.1.1. (1-8) stopped the occurrence from escalating into the potential accident outcome (referred to as the 'stopping barrier').

Step 2: To identify in accordance with section 2.1.2 the effectiveness of the remaining barriers. The remaining barriers are those barriers listed in the table in section 2.1.1 which are placed between the stopping barrier and the potential accident outcome. The barriers listed in the table in section 2.1.1 which are placed before the stopping barrier shall not be considered to have contributed to the prevention of the accident outcome and consequently those barriers shall not be scored as 'Stopped' or 'Remaining'.

Calculation

The probability of the potential accident outcome is the numerical value resulting of the following steps:

Step 1: A sum of all the barrier weights (1 to 5) laid down in the table in section 2.1.1 of all the assessed barriers that were scored either 'Stopped', 'Remaining known' or 'Remaining assumed'. The 'Failed' and 'Not Applicable' barriers shall not be counted for the final score, as those barriers could not have prevented the accident. The resulting barrier weight sum is a numerical value between 0 and 18.

Step 2: The barrier weight sum corresponds to a barrier score between 0 and 9 as per the following table, covering the full range between strong and weak remaining barriers.

Barrier weight sum	Corresponding barrier score
0 No barriers left. Worst likely accident outcome realised.	0
1-2	1
3-4	2
5-6	3
7-8	4
9-10	5
11-12	6
13-14	7
15-16	8
17-18	9

STEP 2: SCORING OF THE SAFETY RISK WITHIN THE ERCS MATRIX

The safety risk score is a two-digit value where the first digit corresponds to the alphabetic value resulting from the calculation of the severity of the occurrence (severity score A to X) and the second digit represents the numerical value from the calculation of the corresponding score of the occurrence (0 to 9).

The safety risk score shall be put into the RCS matrix.

For each given safety risk score there is also a numerical equivalent score for aggregation and analysis purposes which is explained below under 'Numerical equivalent score'.

The RCS matrix reflects the safety risk score and the numerical associated figures of an occurrence as follows:

SEVERITY		CLASSIFICATION (RCS Score)											
Potential Accident Outcome	Score												
Extreme catastrophic accident with the potential for significant number of fatalities (100+) Significant accident with potential for fatalities and injuries (20-100) Major accident with limited amount of fatalities (2-19), life changing injuries or destruction of the aircraft An accident involving single individual fatality, life changing injury or substantial aircraft damage An accident involving minor and serious injury (not life changing) or minor aircraft damage No likelihood of an accident	X	Pending Risk Assessment	X9	X8	X7	X6	X5	X4	X3	X2	X1	X0	
	S		S9	S8	S7	S6	S5	S4	S3	S2	S1	S0	
	M		M9	M8	M7	M6	M5	M4	M3	M2	M1	M0	
	I		I9	I8	I7	I6	I5	I4	I3	I2	I1	I0	
	E		E9	E8	E7	E6	E5	E4	E3	E2	E1	E0	
	A		<i>No Implication to Safety</i>										
	Corresponding Barrier Score		9	8	7	6	5	4	3	2	1	0	
	Barrier Weight Sum		17-18	15-16	13-14	11-12	9-10	7-8	5-6	3-4	1-2	0	
PROBABILITY OF THE POTENTIAL ACCIDENT OUTCOME													

In addition to the safety risk score and to facilitate the determination of the urgency of the recommended action to be taken about the occurrence, the following three colours could be used in the RCS matrix:

Colour	ERCS score	Meaning
RED	X0, X1, X2, S0, S1, S2, M0, M1, I0	High risk. Occurrences with the highest risk.
YELLOW	X3, X4, S3, S4, M2, M3, I1, I2, E0, E1	Elevated risk. Occurrences with intermediate risk
GREEN	X5 to X9, S5 to S9, M4 to M9, I3 to I9, E2 to E9.	Low risk occurrences

The green area of the matrix contains lower risk values. They provide data for in-depth analysis on safety related occurrences that could, either in isolation or in conjunction with other events, increase the risk values of such occurrences.
Numerical equivalent score

Each RCS score is assigned a corresponding numerical value of risk magnitude to facilitate the aggregation and numerical analysis of multiple occurrences with an RCS score:

ERCS Score	X9	X8	X7	X6	X5	X4	X3	X2	X1	X0
Corresponding numerical value	0,001	0,01	0,1	1	10	100	1000	10000	100000	1000000
ERCS Score	S9	S8	S7	S6	S5	S4	S3	S2	S1	S0
Corresponding numerical value	0,0005	0,005	0,05	0,5	5	50	500	5000	50000	500000
ERCS Score	M9	M8	M7	M6	M5	M4	M3	M2	M1	M0
Corresponding numerical value	0,0001	0,001	0,01	0,1	1	10	100	1000	10000	100000
ERCS Score	I9	I8	I7	I6	I5	I4	I3	I2	I1	I0
Corresponding numerical value	0,00001	0,0001	0,001	0,01	0,1	1	10	100	1000	10000
ERCS Score	E9	E8	E7	E6	E5	E4	E3	E2	E1	E0
Corresponding numerical value	0,000001	0,00001	0,0001	0,001	0,01	0,1	1	10	100	1000

Both column 10 and the row A in the matrix bear the value 0 as the corresponding numerical value.

