



# **Qatar Civil Aviation Regulations**

**No. 004 of 2017**

**Guidance Material to QCAR 004-2017 on  
the Mandatory and Voluntary Reporting,  
Analysis, Classification and Follow-up of  
Safety Occurrences in Civil Aviation**

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## GUIDANCE MATERIAL

### QCAA REGULATION NO 004-2017

Initial Issue - June 2017

#### **1. How will Regulation QCAR 004-2017 enhance aviation safety?**

The State of Qatar is committed to ensure a high level of aviation safety and to protect citizens by working to prevent aircraft accidents and incidents.

The prompt reporting of safety occurrences by aviation professionals, and others, helps to ensure the continued safety of aviation operations. It allows an understanding to be developed of where safety risks lie, and helps decision makers in the industry and the Qatar Civil Aviation Authority (QCAA) to adopt effective mitigating measures. Occurrence reporting is vital to the prevention of aircraft accidents and incidents. Only with this information can aviation safety issues be properly understood and addressed.

The aviation safety system has historically been a reactive and prescriptive safety system, with safety improvements resulting from advances in technology, compliance with prescriptive regulations, and lessons learned from aircraft accidents. While air transport remains one of the safest forms of travel, the continued expansion of air traffic presents a significant challenge if the number of air accidents is to be prevented from increasing in line with this growth. It is therefore important that any actual or potential threat to aviation safety is reported so that it can be addressed and help ensure the rate of incidents is driven down.

To help achieve this continually improving level of safety performance, the QCAA is moving towards a more proactive, evidence-based, risk and performance oriented safety system. The success of this approach is also dependent upon the systematic and continuous collection of safety data and information to enable hazards to be identified, assessed and addressed. In addition, this approach supports the QCAA's risk-based oversight of regulated organisations and enables its resources to be focused on the greatest risks.

The prime objective is to ensure that good quality intelligence is available to support the safety management activities of the whole Qatar aviation community. The information provided through the collection and analysis of occurrence reports under this Regulation enables the industry and the regulator to be better informed about the risks they are facing, and to take informed decisions about the measures necessary to mitigate those risks.

This approach is consistent with ICAO's rules which put occurrence reporting and analysis at the heart of safety management.

#### **2. What "occurrences" are covered by the Regulation?**

"Occurrences" are safety-related events involving all aspects of aircraft operations, and the activities conducted to support aircraft operations, that endanger or which, if not corrected or addressed, could endanger an aircraft, its occupants or any other person.

There are two main categories of occurrences: those for which there is a legal obligation to submit a report (Mandatory Reports - see *Article 4* of the Regulation) where there is, or could be a significant risk to aviation safety, and those which may be reported (Voluntary Reports - see *Article 5* of the Regulation) where the reporter perceives there to be an actual or potential hazard to safety.

Annexes IV to VIII of the Regulation provide examples of the type of events that should be reported under the Mandatory Occurrence Reporting System <sup>[1]</sup> (MORS).

To facilitate voluntary reporting the Regulation imposes a legal obligation on organisations and the QCAA ( *Article 5* ) to establish Voluntary Occurrence Reporting Systems (VORS). This is intended to encourage and promote the collection of relevant safety information.

### 3. How are reports to be submitted?

Occurrences may be reported by using one of the following options:

- Aviation professionals are encouraged to submit reports using the mandatory or voluntary reporting systems of the organisation which either employs the reporter, or contracts or uses their services. This enables occurrence data to be integrated into the safety management system of an organisation;
- Persons, including aviation professionals, may submit mandatory and voluntary report directly to the Authority (For details of how to do this see below) The reporting of an occurrence through the system of the Authority may be used in the absence of any organisation, or in a situation where the reporter has no confidence in the reporting system of an organisation <sup>[2]</sup>;
- Organisations should submit reports to the Authority using the output of their data collection systems, or directly to the Authority. Organisations may establish arrangements that enable an efficient and timely submission of reports and eventually link their systems directly to the Authority's database.

The choice of reporting system is exclusive: only one report is normally required to be made by the reporter. This is without prejudice to other reporting obligations contained in other legal acts or to any specific arrangements established between the reporter and the Authority.

Reports to the Authority should be submitted via email using the following address: [safety.reports@caa.gov.qa](mailto:safety.reports@caa.gov.qa). Where alternative arrangements have previously been made directly with the Authority these may be used until the new database (see below) is introduced. If absolutely necessary, reports may be submitted by post however, see Section 10 which addresses the subject of deadlines for submitting reports.

The QCAA is introducing a new database for its safety reports. This will enable reporters to submit reports directly into the database and, in time, to interrogate the database to see how their reports have been acted upon. More information on this new database, together with instructions on how to submit a report, or a series of reports directly to the database, will be communicated and published at the appropriate time.

[1] ICAO refers to these as "Mandatory Safety Reports".

[2] Whereas the most direct reporting channel is encouraged (the organisation's reporting system), direct reporting to the Authority by a person employed by an organisation, or whose services are contracted or used by this organisation, is not prevented. It is recognised that situations may occur where reporters are not confident in the reporting system of their organisations and who may therefore wish to use another, independent reporting channel. This is consistent with the objective of fostering a 'Just Culture'. It aims at ensuring confidence of aviation professionals in occurrence reporting systems.

#### 4. Can I see how my report has been processed?

In the interest of encouraging an open and just culture of reporting, anyone who submits a report may request information regarding the reports that they have submitted. In the future, access to the QCAA’s new occurrence database will be provided for reporters so that they may see their own reports and the actions that have been taken, if any, as a result of the report(s).

#### 5. Who should report occurrences?

Aviation professionals (see *Article 4(5)*) are under a legal obligation to submit mandatory reports, whilst voluntary reports may be submitted by aviation professionals or by anyone else who is concerned that aviation safety has, or may have been jeopardised.

It is therefore important to clearly identify those who are under a legal obligation to report occurrences:

- Pilots

Article 4(5)(a) refers to " *the pilot in command, or, in cases where the pilot in command is unable to report covers situations where t*

The reference to " *any other crew member next in the chain of command*" is intended to co

These situations should be covered and described by organisations within their safety mana

- Aircraft design / manufacturing / initial airworthiness personnel
- Continued airworthiness personnel
- ATM/ANS personnel
- Aerodrome personnel

This also includes persons whose services (e.g. ground handling organisations, bird control, the context of the safety management system of the aerodrome because of their aviation r

- ANS facilities personnel
- Ground handling personnel

Reporting obligations in the context of the mandatory reporting system are therefore a combination of persons subject to mandatory reporting obligations and occurrences for which reports are mandatory in a specific area of activity. These reporting obligations are detailed in the table below.

*Table 1. Obligations of reporting in the context of mandatory occurrence reporting systems (MORS)*

<b>Role of reporter</b>	<b>Occurrences to be reported</b>
Pilot in command - Art.4(5)(a) - when flying complex motor-powered aircraft	Occurrences related to the operation of the aircraft - Annex IV of Regulation 004-2017
Manufacturing staff members - Art.4(5)(b)	Occurrences related to manufacturing- Annex V.1 of Regulation 004-2017
Design staff members - Art.4(5)(b)	Occurrences related to design - Annex V.2 of Regulation 004-2017

Maintenance staff members - Art.4(5) (b)	Occurrences related to maintenance and continuing airworthiness management - Annex V.3 of Regulation 004-2017
Airworthiness certificate reviewers - Art.4(5)(c)	Occurrences related to maintenance and continuing airworthiness management - Annex V.3 of Regulation 004-2017
Air traffic controllers and flight information service officer - Art.4(5)(d)	Occurrences related to related to air navigation services and facilities - Annex VI of Regulation 004-2017
Safety manager of an airport - Art.4(5) (e)	Occurrences related to aerodromes and ground services - Annex VII.1 of Regulation 004-2017
Air navigation facilities personnel - Art.4(5)(f)	Occurrences related to related to air navigation services and facilities - Annex VI of Regulation 004-2017
Ground handling personnel - Art.4(5) (g)	Occurrences related to related to aerodromes and ground services - Annex VII.2 of Regulation 004-2017
Pilot in command - Art.4(5)(a) - when flying aircraft other than complex motor-powered aircraft	Occurrences related to related to operation of the aircraft - Annex VIII of Regulation 004-2017

Regulation 004-2017 in its Annexes IV, VI, VII.1, VII.2, VIII.1, VIII.2 and VIII.3 states that the structure of the Annex or Section is made to ensure 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”*. It highlights that this should 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”*. This means, for example, that the Regulation applies to all operations involving aircraft issued with a civil Type Certificate regardless of the type of operation that an individual aircraft was undertaking at the time of the occurrence.

This same approach also applies in all other sectors of the industry where there is any potential impact on the safety of civil aviation, even though no civil aircraft may have been directly involved in the occurrence.

## 6. Interaction with other reporting requirements

Reporting requirements that exist under other Qatari Aviation Law are aligned with reporting requirements under Regulation 004-2017. This means that reporting obligations under the Civil Aviation Law and its implementing rules on one hand and reporting obligations under Regulation 004-2017 on the other hand are compatible. These reporting obligations can be discharged using one reporting channel, and this is confirmed in the Regulation ( *Recital 6* ).

In addition, a person who holds more than one role subject to the obligation to report can discharge all those obligations with a single report.

Regarding the reporting requirements under the Civil Aviation Law, while efforts have been made to align the list of occurrences to be reported, the list of reporters and the timeline under which occurrences shall be reported, requirements related to other aspects such as reporting formats may require further alignment. A rulemaking task will be initiated to ensure alignment of all requirements and support the implementation of a single reporting system. In the meantime, it is important that individuals and organisations familiarise themselves with the various reporting requirements.

Specific regulations will be published separately covering accident and incident investigation.

### **7. Is it necessary to report occurrences that happen outside of Qatar?**

The reporting requirement covers all occurrences involving aircraft registered in Qatar or operated by an organisation established in Qatar, even if the occurrence happened outside the territory of Qatar.

### **8. Is it necessary to report occurrences involving foreign aircraft in Qatar?**

Any event occurring within the State of Qatar considered as having endangered, or with the potential to endanger an aircraft, its occupants or a third party, should be reported, regardless of whether the aircraft involved is on the Qatari register or not.

Note that in cases where a foreign aircraft is involved, the operator is under an obligation only to report to its own authority. Organisations established in Qatar, such as aerodrome operators or air navigation service providers, should submit a report of the occurrence to the QCAA. This will enable the Authority to notify and liaise with the authority of the state of registration as necessary.

### **9. If several reporters are aware of the same reportable occurrence, are they all required to report it?**

Situations may occur where several reporters subject to mandatory reporting obligations are aware of the same occurrence.

In a situation where reporters employed, or whose services are contracted or used by different organisations are aware of the same reportable occurrence, they are all required to report that occurrence.

In the case where reporters employed, or whose services are contracted or used by the same organisation, are aware of the same reportable occurrence while being physically together, it is not necessary for all of them to report the occurrence, so long as they ensure that a report is submitted. They can all submit separate reports but are not considered under the obligation to do so. When providing follow-up information of the occurrence, and in the interests of the improvement of safety, it may be beneficial to include information from other persons aware of the occurrence.

### **10. What is the deadline for reporting an occurrence?**

**Occurrences should be reported as soon as possible.** In any event, reports should be submitted to the Authority no later than 72 hours after the occurrence, unless exceptional circumstances prevent this ( *Article 4(6)* ).

The 72-hour period starts from the moment a reporter learns of the occurrence, usually meaning when they either witness the occurrence or are involved in it.

Any circumstances delaying the reporting of an occurrence beyond the 72-hour deadline would be exceptional. This may for example include situations in which the reporter is unable to access a means to report the occurrence.

In some cases, an individual may be made aware of an occurrence through the automatic reporting systems of their organisation (e.g. Flight Data Monitoring programme, post processing of radar tracks etc.) and not during actual operation. In such cases, the 72-hour period starts when the potential reporter first becomes aware of this occurrence.

### **11. What is the format for an occurrence report?**

There is no specified format for reports submitted by individual reporters. The format to be used by an aviation professional to report an occurrence to their organisation may however be defined by that organisation to ensure consistency with its own safety database.

Reports submitted to the Authority in the future via the QCAA website will follow a standard format as the form will contain drop-down menus to help ensure consistency of data.

In general, reporting forms and means to report should be developed to be user-friendly so it is straightforward for potential reporters to report occurrences. The aim should be to facilitate the easy collection of information from the front-line individuals into the management system of the organisation or into the system of the Authority.

Organisations are required to submit reports in a prescribed format and include certain information (*Article 7*). This requirement applies to all reportable occurrences (MORs and VORs).

In addition, organisations are required to use data quality checking processes and to classify occurrences according to their safety risk assessment process.

Organisations should aim to provide the initial report in as complete a form as possible, notably regarding the safety assessment, as not all occurrences will be subject to a follow-up report. However, it is recognised that some of the required information may only become available after the occurrence has been analysed or further investigation has been carried out. It is also recognised that the period required for the occurrence to be reported may be insufficient to allow the organisation to provide complete information in its initial notification.

### **12. What information should be included in an occurrence report?**

Reporters are encouraged to include as much information as possible in their report. For this purpose, reporters may use Annex I of Regulation 004-2017 as a reference for the information that should be included in each specific circumstance. A description of the occurrence is expected to be included in the report. Furthermore, the report should include any factors relevant to the occurrence, including contributing human factors. Inclusion of these details will help enable a better understanding of safety hazards to be developed and lead to a more accurate identification of the safety risks.

### **13. Are reports confidential?**

The Regulation includes several provisions that limit the possible disclosure and use of the information reported and which are intended to protect reporters and any person mentioned in a report.

- i. Within organisations

Organisations are required to take the necessary measures to ensure the appropriate confidentiality of occurrences they collect and to comply with rules on the processing of personal data.

However, reports submitted to an organisation may not necessarily be anonymous. This will depend of the type of reporting system used, as some organisations operate confidential reporting systems in addition to their mandatory and voluntary reporting systems.

Organisations are not required to fully anonymise reports collected, but are required to take the necessary measures to ensure the appropriate confidentiality of the details of occurrences contained in their databases ( *Article 13(1)* ). A clear separation between the department handling occurrence reports and the rest of the organisation may be an efficient way to achieve this objective and is therefore encouraged where practicable.

Organisations should refrain from including names and personal details when transferring occurrences reports to the Authority. If names are included then they should be entered in the format name so that the information can be easily removed for protection.

Organisations should process personal data only to the extent necessary for the purposes of the Regulation and in accordance with applicable personal data rules ( *Article 13(1)* ).

Information may be used to maintain or improve aviation safety. This covers in particular the measures and actions foreseen under Article 12. It also includes existing procedures and actions (e.g. airworthiness directives, safety information bulletins etc), including the sharing of lessons learnt with an organisation's personnel.

#### ii. Outside of organisations

The Regulation ensures the confidentiality of an individual reporter's identity and of any other person involved in reports stored in the Authority's occurrence database.

### **14. Can a report be used against the reporter or anyone mentioned in it?**

The Regulation includes measures to protect occurrence reporters and persons mentioned in occurrence reports against disciplinary, administrative or legal proceedings.

The aviation safety system is based on feedback and lessons learned from accidents and incidents, and the reporting of information is crucial to bringing about safety improvements. It also highlights the need to establish an environment in which potential reporters feel confident in the reporting systems and feel able to report the relevant safety information. The necessity to create such an environment lies behind the protection principles contained in the Regulation (limitation of information use or availability, Just Culture principles within an organisation, non-self-incrimination principle, etc.). The objective is to create an environment in which people feel confident to submit reports and therefore ensure the continued availability of relevant safety information.

However, aviation professionals (and organisations) cannot be exonerated from their responsibilities and it is necessary to find the right balance between full impunity and a "blame culture". This balance is notably supported by the definition of "Just Culture" ( *Article 2* ), and by Article 14. A 'Just Culture' should encourage individuals to report safety-related information but should not absolve individuals of their normal responsibilities. It is defined as 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 (Article 2).

#### i. In the context of an organisation

The Regulation contains provisions which prevent certain actions from being taken against reporters and persons mentioned in an occurrence report whilst also identifying unacceptable behaviours that are not covered by this protective framework.

This means that if a person reports an occurrence to their organisation, the organisation is not allowed to apportion blame to that person or to impose prejudice on them based on the occurrence reported. This rule also applies if the person is not the reporter but is mentioned in the occurrence report.

There are two exceptions to this principle (*Article 14(9)*) where investigation identified:

- willful misconduct; or
- situations 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.

The objective is to clearly set, in the legislation, the line between acceptable behaviours (which shall not be punished) and unacceptable behaviours (which may be punished).

Furthermore, the Regulation states additional principles limiting the possibilities for an organisation to disclose or use occurrence reports. Those limitations to the disclosure or use of occurrence reports apply within the organisation as well as outside of it.

There are however some exceptions to those principles:

- Firstly, in a situation where safety might be endangered, information on occurrences may be shared or used with a view to maintain or improve aviation safety. It is therefore understood that sharing or using information on occurrences in the cases detailed in Article 14(9) with the view to address the risks to safety is allowed by the Regulation.
- Secondly, exceptions may apply in those situations where an investigation is being conducted in accordance with applicable Qatari accident or incident investigation regulations, as the provisions of such regulations may have precedent in such cases.

In this latter case, (the opening of a formal accident or incident investigation by the accident investigation authority), occurrence reports shall not be made available or used for purposes other than aviation safety unless the designated competent authority (see ICAO Annex 13 Appendix 2 protection of accident and incident investigation records) decides that the benefits of the disclosure of the occurrence report outweigh the adverse domestic and international impact that such action may have on that or any future safety investigation. If it is concluded that the information on occurrences should be disclosed, then the organisation should make it available to the requesting authority.

An organisation shall only disseminate personal details within the organisation in those cases where it is essential to progress the investigation or to ensure the safety actions are properly taken. In this regard, the organisation may use the same protocols and agreements as the ones established and consulted with staff representatives to deal with other safety information (e.g. Flight Data Monitoring).

To support all these legal provisions, each organisation is required to adopt internal rules describing how Just Culture principles are guaranteed and implemented within that organisation (*Article 14(10)*). It is required that staff representatives be consulted before the adoption of these internal rules.

ii. In the context of the State of Qatar

In addition to limitations to the use and disclosure within and by organisations, the Regulation also includes provisions limiting the use of an occurrence report by the State, and guaranteeing its confidentiality.

The exceptions contained in Article 14(9) (see section i. above) also apply to those principles.

This means that outside those unacceptable behaviour situations, the State is not allowed to open a proceeding if it is made aware of a situation only because an occurrence was reported under Regulation 004-2017. However, in those exceptional cases where the opening of a criminal proceeding based on an occurrence report is allowed, national law has precedent and applies. But limitation to the possibility of disclosing information on occurrences remains applicable in all cases.

### **15. What steps can be taken if it is considered that the above protection rules have been infringed?**

There may be situations where an aviation professional considers that the protection principles have not been complied with, for example if they have been subject to prejudice from their employer based on an occurrence report, or if a legal proceeding has been opened.

The potential for such cases arising is recognised and the Article 14(11) of the Regulation provides for employees and contracted personnel to report to the Authority alleged infringements of the protection rules.

### **16. How is information shared with the industry and other parties?**

Access to occurrences stored in the Authority's database is provided for in the Regulation if the purpose of sharing this information is the improvement of aviation safety. Under this condition, the Authority is permitted to provide access to its database (partly or entirely) to its approved organisations. The Authority encourages the establishment of feedback loops with the organisations reporting to it, especially in cases where identified safety issues fall under a third party's responsibility. In such instances, the feedback provided by the Authority helps to build trust in the system and it improves quality of the data.

The accident and incident investigation authority will have full access to the occurrence database.

Organisations are required however to respect the provisions relating to disclosure or use of information on occurrences contained in the Authority's database.

### **17. Which organisations are subject to Regulation 004-2017?**

Regulation 004-2017 contains several provisions applicable to "*each organisation established in the State of Qatar*". It means that among the organisations which are subject to the Regulation only those which are "*established in the State of Qatar*" are subject to those provisions. The Regulation applies to all the facilities within the scope of the organisation's approval, regardless of their location.

### **18. How are the occurrence reports processed?**

The reporting flow from an occurrences initial reporting until its registration in the Authority's databank is shown in the diagram below, which also illustrates the deadlines and stages of the reporting.

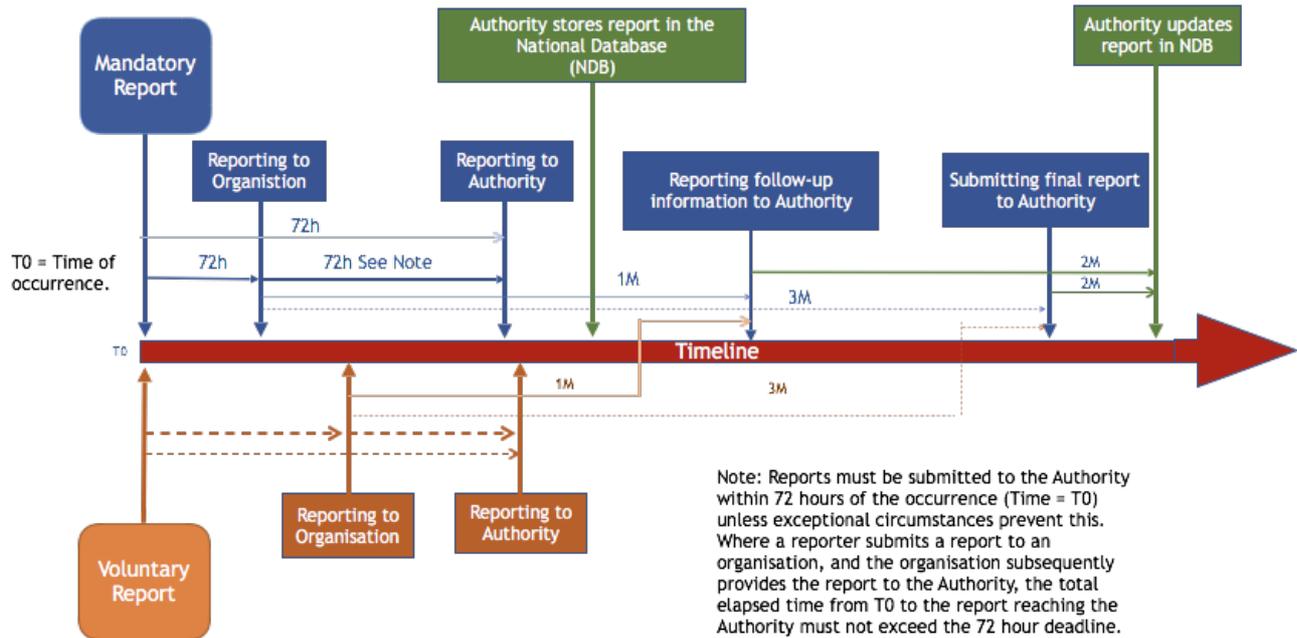


Diagram 1. Flow of information under Regulation 004-2017

This reporting flow starts from the moment the occurrence is detected (T0). From this moment, the individual shall report it to the organisation or to the Authority **as soon as possible**, but in any event no later than 72 hours if it falls within the mandatory scheme. In this case, the organisation then has 72 hours to report the occurrence to the Authority.

In certain specific situations, the identification of the occurrence might involve an additional stage before this reporting flow starts.

In cases where an organisation learns about an occurrence through its automatic data capturing systems (e.g. FDM) and if it has requested a retrospective report to be made, the 72 hours starts when it receives the retrospective report from the reporter.

## 19. What information should Organisations transfer to the Authority?

Organisations should use their knowledge and expertise and, if necessary, liaise with the Authority, to determine what types of occurrences are considered to involve an actual or potential aviation safety risk. This should ensure an alignment between the occurrences that the organisation intends to transfer from the VOR scheme and the ones that the Authority expects to receive under the mandatory scheme. It should also help to ensure harmonisation among all organisations. When an occurrence is reported to an organisation, a decision needs to be made as to whether or not it falls under the MOR or VOR scheme, and therefore what the applicable notification obligations are. In a situation where a reporter has transferred the report under VORS, the organisation may reclassify it into MOR, and vice-versa.

The Authority has the option to request organisations to provide occurrences they have collected under their VORS ( *Article 5(4)* ). The Authority may require this on a case by case basis, or by adopting a general measure requiring organisations to provide analysis and follow-up related information for all reportable occurrences.

All occurrences collected by the organisation (MOR and VOR) are subject to analysis and follow-up requirements ( *Article 12(1) and (2)* ). However only reportable ones (MOR) are subject to further reporting obligations.

It is recognised that the analysis and follow-up of occurrences is already taking place in the context of existing processes such as safety management systems mandated under the Implementing Rules of the Civil Aviation Law. It is not intended to require another system to be established alongside the existing safety management system of an organisation.

Organisations are encouraged to include in the notification sent to the Authority all available relevant information. If possible, this should also include an indication of whether any further analysis and follow-up will be made regarding the occurrence, and the assessment of, and any actions to be taken to address the safety risks identified.

## **20. Compliance with the standardised format and the ADREP compatibility requirements.**

Organisations are required to submit reports in a format which is compatible with the ADREP taxonomy <sup>[3]</sup>( *Article 7(4)* ). Organisations are encouraged to discuss and agree with the Authority how they will submit reports, and the format of reports, to ensure they are compatible with ADREP.

## **21. Compliance with the mandatory data fields requirement.**

Occurrence databases of organisations should contain the mandatory data fields listed in Annex I ( *Article 7(1)* ) of the Regulation.

If the information of any mandatory attribute is not known, the attribute may be transmitted with the value "Unknown". Other attributes may be relevant only in specific circumstances (e.g. "Not applicable").

Mandatory data fields should be in an ADREP compatible format ( *Article 7(4)* ).

## **22. What are the requirements for risk classification?**

Risk classification is one of the mandatory data fields that should be completed for each reportable occurrence. It is recognised that, where analysis and follow up is required, any early risk assessment will be based on information available at the time of the initial report and may need to be revised.

Any methodology may be used to classify risks, for example an ICAO 5x5 risk matrix, ARMS (Aviation Risk Management Solutions), a 3x3 risk matrix, a simple high, medium or low risk score, or something bespoke.

## **23. Data quality checking processes.**

Organisations' data quality checking processes should address the following areas:

- Errors in data entry
- Completeness of data, especially mandatory data
- Correct use of the ADREP taxonomy
- Ensuring data consistency, notably between the information collected initially and the information stored in the database ( *Article 7(3)* ).

[3] The Accident/Incident Data Reporting (ADREP) system is operated and maintained by ICAO.