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**SOUTH AMERICAN AIG REGIONAL COOPERATION MECHANISM (ARCM)**

**FOURTH MEETING OF AIG AUTHORITIES  
(Brasilia, Brazil, 23 to 25 May 2017)**

**Agenda item 3: Revision of AIG regulations**

**PROPOSALS FOR AMENDMENT OF AIG STATE REGULATION IN ACCORDANCE  
WITH AMENDMENT 15 OF ANNEX 13**

(Presented by the Secretary of the ARCM)

**Summary**

This working paper presents to the Fourth Meeting of AIG Authorities (AIG-SAM/4) the proposals for amendment of AIG State regulation within the framework of the South American AIG Regional Cooperation Mechanism (ARCM) in accordance with Amendment 15 to Annex 13.

**References**

- Adoption of Amendment 15 to Annex 13.
- Annex 13 – Aircraft accident and incident investigation
- Doc 9756, Part I — Organization and planning
- Doc 9962 - Manual on accident and incident investigation policies and procedures
- Doc 9946 - Manual on regional accident and incident investigation organization
- *Model Aircraft Accidents and Incident Investigation (AIG) Act* (English only), available at: <http://www.icao.int/safety/Implementation/Pages/Resources.aspx>
- *Model Aircraft Accidents and Incident Investigation (AIG) Regulations* (English only), available at: <http://www.icao.int/safety/Implementation/Pages/Resources.aspx>
- Doc 10053 - Manual on protection of safety information, Part I – Protection of accident and incident investigation records
- State AIG Regulation, developed by ARCM
- AIG Regulations of SAM States

**1. Background**

1.1 At the fifth meeting of its 207<sup>th</sup> Session, held on 22 February 2016, the ICAO Council adopted Amendment 15 to the International Standards and Recommended Practices, Aircraft Accident and Incident Investigation (Annex 13 to the Convention on International Civil Aviation).

1.2 Amendment 15 stems from the recommendations of the Safety Management Panel (SMP), the Safety Information Protection Task Force (SIP TF) and the Group of Experts on Protection of Accident and Incident Records (GEPAIR).

1.3 Amendment 15 to Annex 13 is aimed at:

- a) improving protection of accident and incident investigation records;
- b) providing a means of protecting investigation records under custody or control of the accident investigation authority;
- c) prioritising the protection of those records that, because of their nature, are most sensitive, such as CVR and AIR;
- d) assisting States with the designation of the “appropriate authority” and with the application of the balancing test for conflicting interests; and
- e) assisting States with the incorporation of the protections described in paragraph 5.12 into national laws and regulations.

1.4 According to the latest results obtained within the framework of the activities of the ICAO Universal safety oversight audit programme (USOAP), one of the audit areas with the lowest effective implementation (EI) regarding the safety oversight capability of SAM States continues to be the area of accident and incident investigation (AIG).

1.5 In this area, it was noted that one of the subgroups with the lowest average effective implementation in SAM States was that concerned with legislation and regulations.

1.6 The harmonisation of requirements among States will facilitate the standardisation of accident and incident investigations in SAM States. This should improve efficacy and efficiency, and optimise the use of resources of ARCM member States.

1.7 The implementation of harmonised AIG regulations in the ARCM will facilitate the investigation process, significantly enhancing the safety oversight capability of SAM States and compliance with Annex 13, other related Annexes, and AIG protocol question (PQ) requirements under the continuous monitoring approach (CMA) of the Universal safety oversight audit programme (USOAP).

## **2. Development of the amendment**

2.1 In order to allow ARCM States to incorporate Amendment 15 to Annex 13 into their legislation and regulations, a task force has been established with experts of Argentina, Brazil, Colombia, Ecuador, Guyana, Panama, Peru, and Venezuela to develop a proposal consistent with such amendment that would provide guidance and facilitate its incorporation.

2.2 Upon analysing Amendment 15 in detail, the task force for the incorporation of Amendment 15 to Annex 13 into the AIG legislation and regulation of ARCM States considered the following steps:

- a) **Establishment of an independent accident investigation authority (for those States that do not have an independent authority)**
  1. development or modification of legislation or regulations concerning the functions of an accident investigation authority, as appropriate;

2. in the case of those States that lack the necessary resources, consider the implementation of a Regional Accident and Incident Investigation Organisation (RAIO); and
3. official adoption of the legislation or regulations thus developed or modified, as appropriate.

b) **Protection of accident and incident investigation records**

1. development or modification of legislation to incorporate the protection of investigation records mentioned in Paragraph 5.12 of Annex 13, as appropriate;
2. development or modification of regulations and policies to incorporate the designation of the “appropriate authority” and concepts related to the “balancing test for conflicting interests”; and
3. official adoption of the legislation, regulations and policies, as appropriate.

### 3. Conclusions

3.1 The AIG reality in the SAM Region poses the need and the challenge to work towards the strengthening of the AIG Regional Cooperation Mechanism (ARCM) so as to permit the establishment of a legal and technological relationship that will benefit the SAM Region in the area of aircraft accident and incident investigation.

3.2 This activity, which is consistent with the objectives of the ICAO Global aviation safety plan (GASP), is also an excellent opportunity to work in a collaborative environment and to allow the Region to improve its AIG effective implementation (EI) levels, which are currently below 70%.

3.3 Furthermore, it will strengthen AIG capabilities, allow for a better use of limited State resources, and reduce accident rates in all segments of civil aviation.

3.4 Accordingly, the Technical Committee of the ARCM incorporated Amendment 15 to Annex 13 into the State AIG regulation of the ARCM, as shown in **Appendix A**.

3.5 **Appendix B** to this working paper contains the text of Amendment 15 to Annex 13.

### 4. Suggested action

4.1 In view of the foregoing, the AIG Authorities of the Region are invited to:

- a) take note and discuss the information provided in this working paper and in **Appendices A and B**;
- b) approve the proposal of amendment to the State AIG Regulation of the ARCM;
- c) authorise the establishment of a **pilot project** with those States that wish to participate, with the purpose of:

- ✓ developing or modifying model legislation to include the protection of the investigation records mentioned in Paragraph 5.12 of Annex 13, as appropriate;
- ✓ developing or modifying model regulations and policies to include the designation of the “appropriate authority” and concepts related to the “balancing test of conflicting interests”; and
- ✓ supporting States with the official adoption of legislation, regulations and policies, as appropriate.

- END -

South American AIG Regional Cooperation Mechanism (ARCM)

# **AIG State Regulation**

## **Aviation accident and incident investigation**

~~First~~ **Second edition**  
~~June 2015~~ **May 2017**







**AIG State Regulation**  
**Aircrafts accidents and incidents investigation**  
**List of effective pages**

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<b>Chapter 2</b> Applicability	2-18	Original	June 2015
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## AIG STATE REGULATION

### FOREWORD

This Regulation has been designed to guarantee a high level of civil aviation safety and to spare no effort to reduce the number of accidents and incidents, thus enhancing public confidence in air transport.

The expeditious holding of investigations into civil aviation accidents and incidents improves safety and helps prevent accidents and incidents.

Information, analysis and release of the results of accidents and incidents relating to safety are important, principally to improve aviation safety.

It should be noted that the Convention on International Civil Aviation, signed in Chicago on December 7, 1944 (the Chicago Convention), that provides for the application of actions necessary to guarantee the safe operation of aircraft. Particular account should be taken of Annex 13 to the Chicago Convention and its subsequent amendments, which establish international standards and recommended practices for the Aviation accident and incident investigation, and also the definitions of the terms State of Registry, State of the Operator, State of Design or State of Manufacture and State of Occurrence used in said Convention.

In accordance with the international standards and recommended practices established in Annex 13 to the Chicago Convention, accidents and serious incidents investigations should be carried out under the responsibility of the State where the accident or serious incident happened or the State of Registry whenever it is impossible to establish definitively that the place where the accident or serious incident happened is located in the territory of a State. An ARCM member State can delegate to another State the task of carrying out the investigation or ask for its help. The accidents and incidents investigations in the **AIG regional cooperation mechanism (ARCM)** should be carried out analogously.

In order to increase the safety rates of civil aviation among ARCM member States of the SAM region, they must have a good knowledge of the existing investigation requirements and its applicability. Maintaining this capability will come down to acceptable risk, in a global context, provided that contributing factors are identified, which will allow the making of safety recommendations, necessary for preventing future accidents.

Although some member States face restrictions in their legal frameworks which impede the fulfilment of certain rules from Annex 13, it is important that the States try to seek, at the highest decision-making level, the importance of adopting the appropriate civil aviation safety actions, and if necessary, to modify the legal structures so as to provide investigators with the capacity and autonomy to carry out the investigations, according to what is highly advisable in any investigation process.

Consequently, it is important to consider that it is not the ARCM cooperation mechanism's intention to interfere neither with the States autonomy, nor with the management of their investigation processes. However, it is important that all processes described in these Regulations are observed during the investigation, so that there is a better performance in its application, and that the investigation cycle is completed in all its phases following the necessary and corresponding safety recommendations for the prevention of future accidents.

The main objective of these Regulations is to harmonize the AIG requirements within the ARCM member States and the observance of the standards and recommended practices deriving from Annex 13. This will improve ARCM States AIG effective implementation, and contribute to reducing the accidents and incidents rates in the SAM Region.

The scope of an investigation will depend on the lessons that can be derived from them to improve safety, especially considering the need of a wise use of the investigation resources available in the ARCM.

The investigation of accidents and incidents occurred in civil aviation is to be conducted by an independent authority in charge of the investigations, or under its control, to avoid any interest conflicts or any possible exterior interference in the determination of the causes of the events under investigation.

AIG Authorities play a key role in the aviation accident and incident investigation process. Their work is of utmost importance for the determination of an accident or incident causes. Therefore, it is essential that they carry out their investigations completely independently and that they have the financial, material and human resources necessary to conduct the investigation efficiently and effectively.

AIG national authorities' capabilities should be reinforced; cooperation among them is necessary to improve the efficiency of the investigation and prevention of civil aviation accidents and incidents in the SAM Region.

AIG Authorities' coordination role has to be recognized and reinforced in a South American context, so as to generate a real added value in safety, based on the existing cooperation between these authorities and the investigation resources available in the ARCM member States, which should be used in the most cost-effective way and in economies of scale.

Since assuring clear rights for aviation accidents and incidents investigations is essential, the member States, respecting its existing legislations on the competence of the authorities responsible for legal investigation and, where appropriate, in close cooperation with them, must ensure that the authorities in charge of the investigations are able to do their mission in the best of conditions, for the benefit of aviation safety. AIG Authorities must have, therefore, immediate and unrestricted access to the scene of the accident and be provided with all the necessary elements to fulfill the requirements of an investigation, without undermining the legal investigation's objectives.

An efficient investigation is possible only if important pieces of evidence are duly preserved.

One of the civil aviation safety management methods is based on the relations and lessons drawn from the accidents and incidents, which requires a strict application of the provisions on confidentiality to guarantee the future availability of valuable information sources. In this context, sensitive safety data should be adequately protected.

An accident raises a whole range of different public interests, such as the prevention of future accidents and the sound administration of justice. Those interests extend beyond the single interests of parties concerned and the specific occurrence. In order to guarantee the general public interest, a fair balance between the interests is necessary.

The civil aviation sector must also promote a non-punitive environment that facilitates the spontaneous notification of occurrences, thus taking forward the principle of *culture of equity*.

The information provided by a person within the framework of investigations should not be used against such person, in accordance with the constitutional principles and the national law.

ARCM member States will be able to limit the instances in which a decision of disclosure concerning the information obtained during an investigation without affecting the proper function of the judicial system.

It is important for accidents and incidents prevention that relevant information is

communicated as soon as possible, particularly including reports and recommendations concerning safety drawn from the investigations.

Recommendations concerning safety drawn from an accident or serious incident investigation, or of any other nature, such as studies concerning safety, should always be considered by the competent authority and, in the circumstances, be implemented to guarantee the correct civil aviation accidents and incidents prevention.

In order to improve the means that the investigators have to determine the accidents and incidents causes and to increase the recurrent incidents prevention capacity, investigation progress should be promoted, in relation to both the real-time positioning of aircraft and the possibility of access to the information from the flight recorder in its physical absence. Such progress would constitute an important advance regarding safety.

Experience has shown that on some occasions it is difficult to rapidly obtain the list of persons on board the aircraft, but it is also important to fix a deadline within which said lists could be requested to an operator. Furthermore, the data in those lists should be protected against unauthorized use and disclosure. Likewise, in order to minimize the risks to the investigators in charge of the investigations in the scene of the accident, it is necessary to have information related to dangerous goods on board the aircraft which has suffered an accident.

Assistance to the victims of aviation accidents and to their families should be adequately specified.

The way in which Member States and the airlines face an accident and its consequences is of crucial importance. In this regard, Member States should have emergency plans that, in particular, provide for emergency services at the airport, as well as assistance to the victims of civil aviation accidents and to their families. Airlines should also have a plan of assistance to the victims of civil aviation accidents and to their families. Particular attention is to be paid to the support to the victims, their families and associations, as well as the communication among them.

Since the objective of these Regulations is the establishment of common requisites in the field of investigation, at times, this objective could not be achieved efficiently by the ARCM member States without a true commitment in the area of aviation accidents and incidents investigation.

## Chapter 1

### Definitions

The terms and expressions shown below are used in the standards and recommended practices for aviation accidents and incidents investigation, they have the following meanings:

**Accident**.- Any occurrence associated with the operation of an aircraft which, in the case of a manned aircraft, takes place between the time any person boards the aircraft with the intention of flight until such time as all such persons have disembarked, or in the case of an unmanned aircraft, takes place between the time the aircraft is ready to move with the purpose of flight until such time as it comes to rest at the end of the flight and the primary propulsion system is shut down, in which:

- a) a person is fatally or seriously injured as a result of:
  - being in the aircraft, or
  - direct contact with any part of the aircraft, including parts which have become detached from the aircraft, or
  - direct exposure to jet blast,
  - except when the injuries are from natural causes, self-inflicted or inflicted by other persons, or when the injuries are to stowaways hiding outside the areas normally available to the passengers and crew; or
- b) the aircraft sustains damage or structural failure which:
  - adversely affects the structural strength, performance or flight characteristics of the aircraft, and
  - would normally require major repair or replacement of the affected component,
  - except for engine failure or damage, when the damage is limited to a single engine (including its cowlings or accessories), to propellers, wing tips, antennas, probes, vanes, tires, brakes, wheels, fairings, panels, landing gear doors, windscreens, the aircraft skin (such as small dents or puncture holes), or for minor damages to main rotor blades, tail rotor blades, landing gear, and those resulting from hail or bird strike (including holes in the radome); or
- c) the aircraft is missing or is completely inaccessible.

**Accredited representative**.- A person designated by a State, on the basis of his or her qualifications, for the purpose of participating in an investigation conducted by another State. Where the State has established an accident investigation authority, the designated accredited representative would normally be from that authority.

**Adviser**.- A person appointed by a State, on the basis of his or her qualifications, for the purpose of assisting its accredited representative in an investigation.

**AIG Authority**.- ~~The organization in charge of the accidents and incidents investigation in the State.~~

**Accident investigation authority**.- The authority designated by a State as responsible for aircraft accident and incident investigations within the context of this Annex.

AIG Specialist / Expert.- The specialist or expert person in a specific area related to aviation accidents and incidents investigation, who is available for the allocation of specific action (e.g. development of AIG requirements and procedures), upon request of a member State.

Aircraft.- 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.

ARCM Executive Committee.- designates the Executive Committee established by virtue of Article 9 of ARCM organization and functions manual, consisting of the AIG Authorities of ARCM member States.

ARCM Focal Points.- AIG specialists, appointed by AIG Authorities from ARCM member States, to maintain an agile communication link with the AIG Technical Committee and promote and coordinate ARCM activities within its Authority.

ARCM Investigator.- The aviation accidents and incidents investigator available for the appointment of an accident or incident investigation, whenever a member State requires it.

ARCM Investigator-in-charge.- A person charged, on the basis of his or her qualifications, with the responsibility for the organization, conduct and control of an investigation.

ARCM Regulations.- AIG Regional Cooperation Mechanism (ARCM) Regulations, which describes the objectives, functions, organizational structure, and other provisions for the ARCM operation.

Causes.- Actions, omissions, events, conditions, or a combination thereof, which led to the accident or incident. The identification of causes does not imply the assignment of fault or the determination of administrative, civil or criminal liability.

Chicago Convention.- The Convention on International Civil Aviation signed in Chicago on 7 December 1944.

Contributing factors.- Actions, omissions, events, conditions, or a combination thereof, which, if eliminated, avoided or absent, would have reduced the probability of the accident or incident occurring, or mitigated the severity of the consequences of the accident or incident. The identification of contributing factors does not imply the assignment of fault or the determination of administrative, civil or criminal liability.

Flight recorder.- Any type of recorder installed in the aircraft for the purpose of complementing accident/incident investigation.

GASP.- The global ICAO plan for aviation safety

GASR.- The route map for aviation safety on a worldwide scale, prepared by the safety strategy Group and approved by the ICAO Council on 15 June 2006.

Incident.- An occurrence, other than an accident, associated with the operation of an aircraft which affects or could affect the safety of operation.

Investigation.- A process conducted for the purpose of accident prevention which includes the gathering and analysis of information, the drawing of conclusions, including the determination of causes and/or contributing factors and, when appropriate, the making of safety recommendations.

Investigator-in-charge.- A person charged, on the basis of his or her qualifications, with the responsibility for the organization, conduct and control of an investigation.

Nothing in the above definition is intended to preclude the functions of an investigator-in-charge being assigned to a commission or other body.

Maximum mass.- Maximum certificated take-off mass.

Maximum weight (mass).- Maximum certificated take-off weight (mass).

Member State.- An ARCM member state which is part of the Regional Cooperation Mechanism (ARCM) of South America.

Operator.- A person, organization or enterprise engaged in or offering to engage in an aircraft operation.

Preliminary Report.- The communication used for the prompt dissemination of data obtained during the early stages of the investigation.

President of the General Board.- President of the General Board conformed by the ARCM AIG Authorities, who shall be elected among its members for a one year term and may be re-elected for equal and successive terms.

Safety recommendation.- A proposal of the accident investigation authority, based on information derived from the investigation, made with the intention of preventing accidents or incidents and which in no case has the purpose of creating a presumption of blame or liability for an accident or incident. In addition to the safety recommendations arising from accident and incident investigations, safety recommendations may result from diverse sources, including safety studies.

Serious incident.- An incident involving circumstances indicating that there was a high probability of an accident and associated with the operation of an aircraft which, in the case of a manned aircraft, takes place between the time any person boards the aircraft with the intention of flight until such time as all such persons have disembarked, or in the case of an unmanned aircraft, takes place between the time the aircraft is ready to move with the purpose of flight until such time as it comes to rest at the end of the flight and the primary propulsion system is shut down.

*The difference between an accident and a serious incident lies only in the result.*

*Examples of serious incidents can be found in Attachment C.*

Serious injury.- An injury which is sustained by a person in an accident and which:

- a) requires hospitalization for more than 48 hours, commencing within seven days from the date the injury was received; or
- b) results in a fracture of any bone (except simple fractures of fingers, toes or nose); or
- c) involves lacerations which cause severe haemorrhage, nerve, muscle or tendon damage; or
- d) involves injury to any internal organ; or
- e) involves second or third degree burns, or any burns affecting more than 5 per cent of the body surface; or
- f) involves verified exposure to infectious substances or injurious radiation.

State of Design.- The State having jurisdiction over the organization responsible for the type design.

State of Manufacture.- The State having jurisdiction over the organization responsible for the final assembly of the aircraft.

State of Occurrence.- The State in the territory of which an accident or incident occurs.

State of the Operator.- The State in which the operator's principal place of business is located or, if there is no such place of business, the operator's permanent residence.

State of Registry.- The State on whose register the aircraft is entered.

*Note.- In the case of the registration of aircraft of an international operating agency on other than a national basis, the States constituting the agency are jointly and severally bound to assume the obligations which, under the Chicago Convention, attach to a State of Registry. See, in this regard, the Council Resolution of 14 December 1967 on Nationality and Registration of Aircraft Operated by International Operating Agencies which can be found in Policy and Guidance Material on the Economic Regulation of International Air Transport (Doc 9587).*

State safety programme (SSP). An integrated set of regulations and activities aimed at improving safety.

## **Chapter 2**

### **Applicability**

2.1 Unless otherwise stated, the specifications in this Regulation apply to activities following accidents and incidents wherever they occurred.

2.2 In this Regulation the specifications concerning the State of the Operator apply only when an aircraft is leased, chartered or interchanged and when that State is not the State of Registry and if it discharges, in respect of this Regulation, in part or in whole, the functions and obligations of the State of Registry.

## Chapter 3

### General

#### Objective of the investigation

3.1 The sole objective of the investigation of an accident or incident shall be the prevention of accidents and incidents. It is not the purpose of this activity to apportion blame or liability.

#### INDEPENDENCE OF INVESTIGATIONS

3.2 A State shall establish an accident investigation authority that is independent from State aviation authorities and other entities that could interfere with the conduct or objectivity of an investigation.

Note.— Guidance on the independence of an accident investigation authority is contained in the Manual of Aircraft Accident and Incident Investigation (Doc 9756), Part I — Organization and Planning and the Manual on Accident and Incident Investigation Policies and Procedures (Doc 9962).

#### Protection of evidence, custody and removal of aircraft

##### Responsibility of the State of occurrence

###### General

3.3 The AIG Authority as State of occurrence shall take all reasonable measures to protect the evidence and to maintain safe custody of the aircraft and its contents for such a period as may be necessary for the purposes of an investigation. Protection of evidence shall include the preservation, by photographic or other means, of any evidence which might be removed, effaced, lost or destroyed. Safe custody shall include protection against further damage, access by unauthorized persons, pilfering and deterioration.

##### Request from State of registry, State of the operator, State of design or State of manufacture

3.4 If a request is received from the State of registry, the State of the operator, the State of design or the State of manufacture that the aircraft, its contents, and any other evidence remain undisturbed pending inspection by an accredited representative of the requesting State, the AIG Authority shall take all necessary steps to comply with such request, so far as this is reasonably practicable and compatible with the proper conduct of the investigation; provided that the aircraft may be moved to the extent necessary to extricate persons, animals, mail and valuables, to prevent destruction by fire or other causes, or to eliminate any danger or obstruction to air navigation, to other transport or to the public, and provided that it does not result in undue delay in returning the aircraft to service where this is practicable.

##### Release from custody

3.5 Subject to the provisions of 3.2 and 3.3, the AIG Authority shall release custody of the aircraft, its contents or any parts thereof as soon as they are no longer required in the investigation, to any person or persons from the AIG Authority duly designated by the State of registry or the State of the operator, as applicable. For this purpose the AIG Authority shall facilitate access to the aircraft, its contents or any parts thereof, provided that, if the aircraft, its contents, or any parts thereof lie in an area within which the AIG Authority finds it impracticable to grant such access, it shall itself effect removal to a point where access can be given.

## Chapter 4

### Notification

#### Accidents or serious incidents in the national territory to aircraft of another contracting State

#### Responsibility of the AIG Authority

#### Forwarding

4.1 The AIG Authority, as the State of occurrence shall forward a notification of accident or serious incident, with a minimum of delay and by the most suitable and quickest means available, to:

- a) the State of registry;
- b) the State of the operator;
- c) the State of design
- d) the State of manufacture; and
- e) the International Civil Aviation Organization, when the aircraft involved is of a maximum mass of over 2 250 kg or is a turbojet-powered aeroplane, and to the ARCM, all events regardless of weight (mass) of the aircraft.

However, when the AIG Authority, as the State of occurrence, is not aware of a serious incident, the State of registry or the State of the operator, as appropriate, shall forward a notification of such an incident to the State of design, the State of manufacture and the State of occurrence.

#### Format and content

4.2 The notification shall be in plain language and contain as much of the following information as is readily available, but its dispatch shall not be delayed due to lack of complete information:

- a) for accidents the identification abbreviation ACCID, for serious incidents INCID;
- b) manufacturer, model, nationality and registration marks, and serial number of the aircraft;
- c) name of owner, operator and hirer, if any, of the aircraft;
- d) qualification of the pilot in command, and nationality of crew and passengers;
- e) date and time (local time or UTC) of the accident or serious incident;
- f) last point of departure and point of intended landing of the aircraft;
- g) position of the aircraft with reference to an easily defined geographical point and latitude and longitude;
- h) number of crew and passengers; on board, killed and seriously injured; others, killed and seriously injured;

- i) description of the accident or serious incident and the extent of damage to the aircraft so far as is known;
- j) an indication to what extent the investigation will be conducted or is proposed to be delegated by the State of Occurrence;
- k) physical characteristics of the accident or serious incident area, as well as an indication of access difficulties or special requirements to reach the site;
- l) identification of the originating authority and means to contact the investigator in charge and the accident AIG Authority of the State of occurrence at any time; and
- m) presence and description of dangerous goods on board the aircraft.

### **Language**

4.3 The notification shall be prepared in one of the working languages of ICAO, taking into account the language of the recipient(s), whenever it is possible to do so without causing undue delay.

### **Additional information**

4.4 As soon as it is possible to do so, the AIG Authority shall dispatch the details omitted from the notification as well as other known relevant information.

### **Responsibility of as State of registry, State of the operator, State of design and State of manufacture**

#### **Information - Participation**

4.5 Reserved

4.6 Upon receipt of the notification, The AIG Authority as the State of registry, the State of the operator, the State of design and the State of manufacture shall, as soon as possible, provide the State of occurrence with any relevant information available to them regarding the aircraft and flight crew involved in the accident or serious incident. Each State shall also inform the State of occurrence whether it intends to appoint an accredited representative and if such an accredited representative is appointed the name and contact details; as well as the expected date of arrival if the accredited representative will travel to the State of occurrence.

4.7 Upon receipt of the notification, as State of the Operator, the AIG Authority shall, with a minimum of delay and by the most suitable and quickest means available, provide the State of occurrence with details of dangerous goods on board the aircraft

**Accidents or serious incidents in the territory of the State of registry, in a non-contracting State or outside the territory of any State**

**Responsibility of as State of Registry**

**Forwarding**

4.8 When the State of registry institutes the investigation of an accident or serious incident, the AIG Authority shall forward a notification, in accordance with 4.2 and 4.3 above, with a minimum of delay and by the most suitable and quickest means available, to:

- a) the State of the operator;
- b) the State of design;
- c) the State of manufacture; and
- d) the International Civil Aviation Organization, when the aircraft involved is of a maximum mass of over 2 250 kg or is a turbojet-powered aeroplane, and to the ARCM all the occurrences regardless of the aircraft weight (mass).

**Responsibility of as State of the operator, State of design and State of manufacture**

**Information — Participation**

4.9 Reserved

4.10 Upon receipt of the notification, as State of the operator, State of design, and State of manufacture, the AIG Authority shall, upon request, provide the State of registry with any relevant information available to them regarding the flight crew and the aircraft involved in the accident or serious incident. The AIG Authority shall also inform the State of registry and occurrence whether it intends to appoint an accredited representative, and if such an accredited representative is appointed, the name and contact details; as well as the expected date of arrival if the accredited representative will be present at the investigation.

4.11 Upon receipt of the notification, as State of the operator, State of design, and State of manufacture, the AIG Authority shall, with a minimum of delay and by the most suitable and quickest means available, provide the State of registry with details of dangerous goods on board the aircraft.

## Chapter 5

### Investigation

#### Responsibility for instituting and conducting the investigation

##### Accidents or incidents in the national territory

###### State of occurrence

5.1 The AIG Authority shall institute an investigation into the circumstances of the accident and be responsible for the conduct of the investigation, but it may delegate the whole or any part of the conducting of such investigation to another State, in ARCM, or a Regional accident Investigation Organization (RAIO) by mutual arrangement and consent. In any event, the AIG Authority shall use every means to facilitate the investigation.

5.1.1 The AIG Authority shall institute an investigation into the circumstances of a serious incident and be responsible for the conduct of the investigation, but it may delegate the whole or any part of the conducting of such investigation to another State, in an ARCM, or a RAIO by mutual arrangement and consent. In any event, State of Occurrence shall use every means to facilitate the investigation.

5.1.2 The AIG Authority shall institute an investigation into the circumstances of a serious incident and shall be responsible for its conduction and for notifying ICAO when the aircraft has a maximum weight (mass) that exceeds 2 250 kg. Such a State may delegate the whole or any part of the conducting of such investigation to another State, in the ARCM, or a RAIO by mutual arrangement and consent. In any event the AIG Authority shall use every means to facilitate the investigation.

*Nota.- If an AIG Authority of a State member of the ARCM investigates serious incidents involving aircrafts of 2250 kg or less, up to 1 kg, this Authority may notify the information of these serious incidents to the ARCM.*

##### Accidents or Incidents in the territory of a non-contracting State

###### State of registry

5.2 Reserved

##### Accidents or incidents outside the territory of any State

###### State of registry

5.3 When the location of the accident or the serious incident cannot definitely be established as being in the territory of any State, the AIG Authority, as State of registry, shall institute and conduct any necessary investigation of the accident or serious incident. However, it may delegate the whole or any part of the investigation to another State by mutual arrangement and consent.

5.3.1 States nearest the scene of an accident in international waters shall provide such assistance as they are able and shall, likewise, respond to requests by the State of Registry.

5.3.2 Reserved

## Organization and conduct of the investigation

### Responsibility of the AIG Authority

*Note.- Nothing in the following provisions is intended to preclude the State conducting the investigation from calling upon the best technical expertise from any source.*

#### General

5.4 The AIG authority in charge of the investigation shall have independence in the conduct of the investigation and have unrestricted authority over its conduct, consistent with the provisions of this Regulation. The investigation shall normally include:

- a) the gathering, recording and analysis of all available relevant information on that accident or incident;
- b) the protection of certain accident and incident investigation records in accordance with 5.12;
- c) if appropriate, the issuance of safety recommendations;
- d) if possible, the determination of the causes, contributing factors and/or latent conditions; and
- d) the completion of the final report.

When possible, the scene of the accident shall be visited, the wreckage examined and statements taken from witnesses. The extent of the investigation and the procedure to be followed in carrying out such an investigation shall be determined by the AIG authority, depending on the lessons it expects to draw from the investigation for the improvement of safety.

5.4.1 Any investigation conducted in accordance with the provisions of this regulation shall be separate from any judicial or administrative proceedings to apportion blame or liability.

5.4.2 The AIG Authority shall develop documented policies and procedures detailing its accident duties. These shall include: organization and planning; investigation; and reporting.

5.4.3 The AIG Authority shall ensure that any investigations conducted under the provisions of this Regulation and Annex 13, have unrestricted access to all evidentiary material without delay ~~and are not impeded by administrative or judicial investigation or proceedings.~~

5.4.4 A State should ensure cooperation between its accident investigation authority and judicial authorities so that an investigation is not impeded by administrative or judicial investigations or proceedings.

*Note.— Cooperation may be achieved by legislation, protocols, agreements or other arrangements, and may cover the following subjects: access to the site of the accident; preservation of and access to evidence; initial and ongoing debriefings of the status of each process; exchange of information; appropriate use of safety information; and resolution of conflicts.*

### Investigator-in-charge — Designation

5.5 The AIG Authority shall designate the investigator-in-charge of the investigation and shall initiate the investigation immediately.

#### **Investigator-in-charge — Access and control**

5.6 The investigator-in-charge shall have unhampered access to the wreckage and all relevant material, including flight recorders and ATS records, and shall have unrestricted control over it to ensure that a detailed examination can be made without delay by authorized personnel participating in the investigation.

#### **Flight recorders — Accidents and incidents**

5.7 Effective use shall be made of flight recorders in the investigation of an accident or an incident. The AIG Authority shall arrange for the read-out of the flight recorders without delay.

5.8 In the event that the AIG Authority does not have adequate facilities to read out the flight recorders, it shall use the facilities made available to it by other States, giving consideration to the following:

- a) the capabilities of the read-out facility;
- b) the timeliness of the read-out; and
- c) the location of the read-out facility.

#### **Autopsy examinations**

5.9 The AIG Authority conducting the investigation into a fatal accident shall arrange for complete autopsy examination of fatally injured flight crew and, subject to the particular circumstances, of fatally injured passengers and cabin attendants, by a pathologist, preferably experienced in accident investigation. These examinations shall be expeditious and complete.

#### **Medical examinations**

5.9.1 When appropriate, the AIG Authority conducting the investigation shall arrange for medical examination of the crew, passengers and involved aviation personnel, by a physician, preferably experienced in accident investigation. These examinations shall be expeditious.

#### **Coordination — Judicial authorities**

5.10 The AIG Authority shall recognize the need for coordination between the investigator-in-charge and the judicial authorities. Particular attention shall be given to evidence which requires prompt recording and analysis for the investigation to be successful, such as the examination and identification of victims and read-outs of flight recorder recordings.

#### **Informing aviation security authorities**

5.11 If, in the course of an investigation it becomes known, or it is suspected, that an act of unlawful interference was involved, the investigator-in-charge shall immediately initiate action to ensure

that the aviation security authorities of the State(s) concerned are so informed.

### **Non-disclosure of records Protection of accident and incident investigation records**

5.12 The AIG Authority shall not make the following records available for purposes other than accident or incident investigation, unless the ~~appropriate authority for the administration of justice in~~ competent authority designated by that State determines, in accordance with national laws and subject to Appendix 2 and 5.12.5, that their disclosure outweighs the likely adverse domestic and international impact such action may have on that or any future investigations:

~~da)~~ cockpit voice recordings and airborne image recordings and any transcripts from such recordings;

b) records in the custody or control of the accident investigation authority being:

a1) all statements taken from persons by the accident investigation authority in the course of their investigation;

b2) all communications between persons having been involved in the operation of the aircraft;

c3) medical or private information regarding persons involved in the accident or incident;

e4) recordings and transcriptions transcripts of recordings from air traffic control units;

~~f) cockpit airborne image recordings and any part or transcripts from such recordings; and~~

g5) analysis of and opinions expressed in the analysis of about information, including flight recorder information, made by the accident investigation authority and accredited representatives in relation to the accident or incident.; and

6) the draft Final Report of an accident or incident investigation.

5.12.1 **5.12.1 Recommendation.**— The AIG authority should determine whether any other records obtained or generated by the accident investigation authority, as a part of an accident or incident investigation, need to be protected in the same way as the records listed in 5.12.

5.12.2 ~~5.12.4~~ These records listed in 5.12 shall be included in the ~~Final Report~~ or its appendices only when pertinent to the analysis of the accident or incident. Parts of the records not relevant to the analysis shall not be disclosed.

*Note 1.— Information contained in the The records listed above, in 5.12 which includes include information relating to given voluntarily by persons interviewed during the investigation of an accident or incident., could be utilized inappropriately for subsequent disciplinary, civil, administrative and criminal proceedings. The disclosure or use of ~~such information is distributed~~, for purposes where the disclosure or use is not necessary in the interest of safety ~~it may mean that, in the future, the information will no longer be openly disclosed to investigators. Lack of access to such information would impede the investigation process and seriously affect flight aviation safety.~~*

5.12.3 ~~5.12.2~~ The names of the persons involved in the accident or incident shall not be disclosed to the public by the accident investigation authority.

5.12.4 States shall ensure that requests for records in the custody or control of the accident investigation authority are directed to the original source of the information, where available.

**5.12.4.1 Recommendation.**— The accident investigation authority should retain, where possible, only copies of records obtained in the course of an investigation.

5.12.5 States shall take measures to ensure that audio content of cockpit voice recordings as well as image and audio content of airborne image recordings are not disclosed to the public.

5.12.6 States issuing or receiving a draft Final Report shall take measures to ensure that it is not disclosed to the public.

*Note.*— Appendix 2 contains additional provisions on the protection of accident and incident investigation records. These provisions appear separately for convenience but form part of the SARPs.

### Reopening of investigation

5.13 If, after the investigation has been closed, new and significant evidence becomes available, the AIG Authority shall reopen it. However, when the State which conducted the investigation did not institute it, that State shall first obtain the consent of the State which instituted the investigation.

### Responsibility of the State

#### Information — Accidents and incidents

5.14 The AIG Authority shall, on request from the State conducting the investigation of an accident or an incident, provide that State with all the relevant information available to it.

**5.14.1 Recommendation.**— *The AIG Authority should cooperate to determine the limitations on disclosure or use that will apply to information before it is exchanged between them for the purposes of an accident or incident investigation.*

5.15 Any State, the facilities or services of which have been, or would normally have been, used by an aircraft prior to an accident or an incident, and which has information pertinent to the investigation, shall provide such information to the AIG Authority.

### Responsibility of the State of registry and the State of the operator

#### Flight recorders — Accidents and serious incidents

5.16 When an aircraft involved in an accident or a serious incident lands in a State other than the State of occurrence, the State of registry or the State of the operator shall, on request from the AIG Authority, furnish the latter State with the flight recorder records and, if necessary, the associated flight recorders.

### Organizational information

5.17 The State of registry and the State of the operator, on request from the AIG Authority, shall provide pertinent information on any organization whose activities may have directly or indirectly influenced the operation of the aircraft.

## Participation in the investigation

### Participation of the State of registry, the State of the operator, the State of design and the State of manufacture

#### Rights

5.18 The AIG Authority shall entitle the State of registry, the State of the operator, the State of design and the State of manufacture to appoint an accredited representative to participate in the investigation.

5.19 The State of registry or the State of the operator shall appoint one or more advisers, proposed by the operator, to assist its accredited representative.

5.19.1 When neither the State of registry, nor the State of the operator appoints an accredited representative, the AIG Authority shall invite the operator to participate, subject to the procedures of the State conducting the investigation.

5.20 The State of design and the State of manufacture shall be entitled to appoint one or more advisers, proposed by the organizations responsible for the type design and the final assembly of the aircraft, to assist their accredited representatives.

5.21 When neither the State of design nor the State of manufacture appoint an accredited representative, the AIG Authority shall invite the organizations responsible for the type design and the final assembly of the aircraft to participate, subject to the procedures of the AIG Authority.

#### Obligations

5.22 When the AIG Authority conducting an investigation of an accident to an aircraft of a maximum mass of over 2 250 kg specifically requests participation by the State of registry, the State of the operator, the State of design or the State of manufacture, the State(s) concerned shall each appoint an accredited representative.

### Participation of other States

#### Rights

5.23 Any State which on request provides information, facilities or experts to the AIG Authority shall be entitled to appoint an accredited representative to participate in the investigation.

### Entitlement of accredited representatives

#### Advisers

5.24 A State entitled to appoint an accredited representative shall also be entitled to appoint one or more advisers to assist the accredited representative in the investigation.

5.24.1 Advisers assisting accredited representatives shall be permitted, under the accredited representatives' supervision, to participate in the investigation to the extent necessary to enable the accredited representatives to make their participation effective.

### **Participation**

5.25 Participation in the investigation shall confer entitlement to participate in all aspects of the investigation, under the control of the investigator-in-charge, in particular to:

- a) visit the scene of the accident;
- b) examine the wreckage;
- c) obtain witness information and suggest areas of questioning;
- d) have full access to all relevant evidence as soon as possible;
- e) receive copies of all pertinent documents;
- f) participate in read-outs of recorded media;
- g) participate in off-scene investigative activities such as component examinations, technical briefings, tests and simulations;
- h) participate in investigation progress meetings including deliberations related to analysis, findings, causes, contributing factors and safety recommendations; and
- i) make submissions in respect of the various elements of the investigation.

However, participation of States other than the State of registry, the State of the operator, the State of design and the State of manufacture may be limited to those matters which entitled such States to participation under 5.23.

### **Obligations**

5.26 Accredited representatives and their advisers:

- a) shall provide the AIG Authority conducting the investigation with all relevant information available to them; and
- b) shall not divulge information on the progress and the findings of the investigation without the express consent of the AIG Authority conducting the investigation.

## **Participation of States having suffered fatalities or serious injuries to its citizens**

### **Rights and entitlement**

5.27 A State which has a special interest in an accident by virtue of fatalities or serious injuries to its citizens shall be entitled to appoint an expert who shall be entitled to:

- a) visit the scene of the accident;

- b) have access to the relevant factual information which is approved for public release by the AIG Authority, and information on the progress of the investigation; and
- c) receive a copy of the Final Report.

This will not preclude the State from also assisting in the identification of victims and in meetings with survivors from that State.

5.28 The AIG Authority shall release, at least during the first year of the investigation, established factual information and indicate the progress of the investigation in a timely manner.

## Chapter 6

### Final Report

6.1 The format of the final report in the Manual on aircraft accidents and incidents investigation reporting shall be used by the AIG Authority. However, it may be adapted to the circumstances of the accident or incident.

#### Responsibility of any State

##### Release of information – Consent

6.2 The AIG Authority shall not circulate, publish or give access to a draft report or any part thereof, or any documents obtained during an investigation of an accident or incident, without the express consent of the authority which conducted the investigation, unless such reports or documents have already been published or released by that latter State.

#### Responsibility of the State conducting the investigation

##### Consultation

6.3 The AIG Authority conducting the investigation shall send a copy of the draft final report to the following States inviting their significant and substantiated comments on the report as soon as possible:

- a) the State that instituted the investigation;
- b) the State of registry;
- c) the State of the operator;
- d) the State of design;
- e) the State of manufacture;
- f) any State that participated in the investigation as per Chapter 5; and
- g) the ARCM.

If the AIG Authority receives comments within sixty days of the date of the transmittal letter, it shall either amend the draft final report to include the substance of the comments received or, if desired by the State that provided comments, append the comments to the final report. If the AIG Authority receives no comments within sixty days of the date of the first transmittal letter, it shall issue the final report in accordance with 6.4, unless an extension of that period has been agreed by the States concerned.

6.3.1 The AIG Authority shall send, through the State of the operator, a copy of the draft final report to the operator to enable the operator to submit comments on the draft final report

6.3.2 The AIG Authority shall send, through the State of design and the State of manufacture, a copy of the draft final report to the organizations responsible for the type design and the final assembly of the aircraft to enable them to submit comments on the draft final report.

### **Recipient States**

6.4 The final report of the investigation of an accident shall be sent with a minimum of delay by the AIG Authority to:

- a) the State that instituted the investigation;
- b) the State of registry;
- c) the State of the operator;
- d) the State of design;
- e) the State of manufacture;
- f) any State that participated in the investigation;
- g) any State having suffered fatalities or serious injuries to its citizens; and
- h) any State that provided relevant information, significant facilities and services or experts.

### **Release of the final report**

6.5 In the interest of accident prevention, the AIG Authority shall make the final report publicly available as soon as possible and, if possible, within twelve months.

6.6 If the report cannot be made publicly available within twelve months, the AIG Authority shall make an interim statement publicly available on each anniversary of the occurrence, detailing the progress of the investigation and any safety issues raised.

6.7 When the AIG Authority that has conducted an investigation into an accident or an incident involving an aircraft of a maximum mass of over 5 700 kg has released a final report, that authority shall send to the International Civil Aviation Organization a copy of the final report..

### **Safety recommendations**

6.8 At any stage of the investigation of an accident or incident, the accident or incident investigation authority of the State conducting the investigation shall recommend in a dated transmittal correspondence to the appropriate authorities, including those in other States, any preventive action that it considers necessary to be taken promptly to enhance aviation safety

6.9 The AIG Authority shall address, when appropriate, any safety recommendations arising out of its investigations in a dated transmittal correspondence to the accident investigation authorities of other State(s) concerned and, when ICAO documents are involved, to ICAO.

### **Responsibility of a State receiving or issuing safety recommendations**

#### **Action on safety recommendations**

6.10 The AIG Authority that receives safety recommendations shall inform the proposing State, within ninety days of the date of the transmittal correspondence, of the preventive action taken or under consideration, or the reasons why no action will be taken.

6.11 The AIG Authority issuing a safety recommendation shall implement procedures to record the responses to the safety recommendation issued.

6.12 When the AIG Authority receives a safety recommendation shall implement procedures to monitor the progress of the action taken in response to that safety recommendation.

## Chapter 7

### ADREP Reporting

#### Preliminary report

#### Responsibilities of the AIG Authority

##### Accidents to aircraft over 2 250 kg

7.1 When the aircraft involved in an accident is of a maximum mass of over 2 250 kg, the AIG Authority shall send the preliminary report to:

- a) the State of registry or the State of occurrence, as appropriate;
- b) the State of the operator;
- c) the State of design;
- d) the State of manufacture;
- e) any State that provided relevant information, significant facilities and services or experts;
- f) the International Civil Aviation Organization; and
- g) the ARCM.

##### Accidents to aircraft of 2 250 kg or less

7.2 When an aircraft, not covered by 7.1, is involved in an accident and when airworthiness or matters considered to be of interest to other States are involved, the AIG Authority shall forward the preliminary report to:

- a) the State of registry or the State of occurrence, as appropriate;
- b) the State of the operator;
- c) the State of design;
- d) the State of manufacture;
- e) any State that provided relevant information, significant facilities and services or experts;  
and
- f) the ARCM.

#### Language

7.3 The preliminary report shall be submitted to appropriate States and to the International Civil Aviation Organization in one of the working languages of ICAO.

## **Dispatch**

7.4 The preliminary report shall be sent by facsimile, e-mail, or airmail within thirty days of the date of the accident unless the accident/incident data report has been sent by that time. When matters directly affecting safety are involved, it shall be sent as soon as the information is available and by the most suitable and quickest means available.

### **Accident/Incident data report**

#### **Responsibilities of the AIG Authority**

##### **Accidents to aircraft over 2 250 kg**

7.5 When the aircraft involved in an accident is of a maximum mass of over 2 250 kg, the AIG Authority shall send, as soon as practicable after the investigation, the accident data report to the International Civil Aviation Organization and the ARCM.

### **Additional information**

7.6 Reserved

##### **Incidents to aircraft over 5 700 kg**

7.7 If the AIG Authority conducts an investigation into an incident to an aircraft of a maximum mass of over 5 700 kg, that authority shall send, as soon as is practicable after the investigation, the incident data report to the International Civil Aviation Organization and the ARCM.

### **Data reporting to the ARCM**

#### **Accidents to aircraft of 2 250 kg or less**

7.8 If the AIG Authority conducts an investigation into an accident to an aircraft of a maximum mass of over 2 250 kg or less, that authority shall send, as soon as is practicable after the investigation, the accident data report to the ARCM.

#### **Incidents to aircraft of 5 700 kg or less**

7.9 If the AIG Authority conducts an investigation into an incident to an aircraft of a maximum mass of over 5 700 kg, that authority shall send, as soon as is practicable after the investigation, the incident data report to the ARCM.

## Chapter 8

### Accident Prevention Measures

#### Database and preventive actions

8.1 The AIG Authority shall establish and maintain an accident and incident database to facilitate the effective analysis of information on actual or potential safety deficiencies and to determine any preventive actions required.

8.2 Reserved

8.3 In addition to safety recommendations arising from accident and incident investigations, safety recommendations may result from diverse sources, including safety studies. If safety recommendations are addressed to an organization in another State, they ~~should~~ shall also be transmitted to that organization by the AIG Authority through that State's accident investigation authority.

## Chapter 9

### Training

9.1 The AIG Authority shall establish and keep valid a training programme where the type of training that must be provided for investigators is detailed. The training programme shall include basic training, practical on-the-job training (OJT), regular training, and specialized training, with indication of the duration, when appropriate. The training programme shall include basic and regular training in on-the-scene safety for investigators.

9.2 The AIG Authority shall establish a regular training plan where the type of training to be provided for the established period is detailed in order of priority. The type and frequency of the training shall be enough for the investigators to acquire and have a level of knowledge, skills, competence and qualifications in accordance with the rights and obligations assigned.

9.3 The AIG Authority shall establish and introduce a system to keep the training records of the investigators, including OJT.

## APPENDIX 1

### FORMAT OF THE FINAL REPORT

(See Chapter 6)

#### PURPOSE

The purpose of this format is to present the final report in a convenient and uniform manner.

Detailed guidance on completing each section of the final report is found in the *Manual of aircraft accident and incident investigation*.

#### FORMAT

**Title.** The final report begins with a title comprising:

name of the operator; manufacturer, model, nationality and registration marks of the aircraft; place and date of the accident or incident.

**Synopsis.** Following the title is a synopsis describing briefly all relevant information regarding:

notification of accident to national and foreign authorities; identification of the accident investigation authority and accredited representation; organization of the investigation; authority releasing the report and date of publication;

and concluding with a brief résumé of the circumstances leading to the accident.

**Body.** The body of the Final Report comprises the following main headings:

1. Factual information
2. Analysis
3. Conclusions
4. Safety recommendations

each heading consisting of a number of subheadings as outlined in the following:

**Appendices.** Include as appropriate.

*Note.- In preparing a Final Report, using this format, ensure that:*

- a) *all information relevant to an understanding of the factual information, analysis and conclusions is included under each appropriate heading;*
- b) *where information in respect of any of the items in 1.— Factual information is not available, or is irrelevant to the circumstances leading to the accident, a note to this effect is included under the appropriate subheadings.*

#### 1. FACTUAL INFORMATION

1.1 **History of the flight.** A brief narrative giving the following information:

- ✓ Flight number, type of operation, last point of departure, time of departure (local time or UTC), point of intended landing.

- ✓ Flight preparation, description of the flight and events leading to the accident, including reconstruction of the significant portion of the flight path, if appropriate.
- ✓ Location (latitude, longitude, elevation), time of the accident (local time or UTC), whether day or night.

1.2 **Injuries to persons.** Completion of the following, (in numbers):

<i>Injuries</i>	<i>Crew</i>	<i>Pasengers</i>	<i>Others</i>
Fatal			
Serious			
Minor/None			

*Note.- Fatal injuries include all deaths determined to be a direct result of injuries sustained in the accident. Serious injury is defined in Chapter 1 of the AIG Regulation of the State.*

1.3 **Damage to aircraft.** Brief statement of the damage sustained by aircraft in the accident (destroyed, substantially damaged, slightly damaged, no damage).

1.4 **Other damage.** Brief description of damage sustained by objects other than the aircraft.

1.5 **Personnel information:**

- a) Pertinent information concerning each of the flight crew members including: age, validity of licences, ratings, mandatory checks, flying experience (total and on type) and relevant information on duty time.
- b) Brief statement of qualifications and experience of other crew members.
- c) Pertinent information regarding other personnel, such as air traffic services, maintenance, etc., when relevant.

1.6 **Aircraft information:**

- a) Brief statement on airworthiness and maintenance of the aircraft (indication of deficiencies known prior to and during the flight to be included, if having any bearing on the accident).
- b) Brief statement on performance, if relevant, and whether the mass and centre of gravity were within the prescribed limits during the phase of operation related to the accident. (If not and if of any bearing on the accident give details.)
- c) Type of fuel used.

1.7 **Meteorological information:**

- a) Brief statement on the meteorological conditions appropriate to the circumstances including both forecast and actual conditions, and the availability of meteorological information to the crew.
- b) Natural light conditions at the time of the accident (sunlight, moonlight, twilight, etc.).

1.8 **Aids to navigation.** Pertinent information on navigation aids available, including landing aids such as ILS, MLS, NDB, PAR, VOR, visual ground aids, etc., and their effectiveness at the time.

1.9 **Communications.** Pertinent information on aeronautical mobile and fixed service communications and their effectiveness.

1.10 **Aerodrome information.** Pertinent information associated with the aerodrome, its facilities and condition, or with the take-off or landing area if other than an aerodrome.

1.11 **Flight recorders.** Location of the flight recorder installations in the aircraft, their condition on recovery and pertinent data available therefrom.

1.12 **Wreckage and impact information.** General information on the site of the accident and the distribution pattern of the wreckage; detected material failures or component malfunctions. Details concerning the location and state of the different pieces of the wreckage are not normally required unless it is necessary to indicate a break-up of the aircraft prior to impact. Diagrams, charts and photographs may be included in this section or attached in the Appendices.

1.13 **Medical and pathological information.** Brief description of the results of the investigation undertaken and pertinent data available therefrom..

*Note.— Medical information related to flight crew licences should be included in 1.5 — Personnel information.*

1.14 **Fire.** If fire occurred, information on the nature of the occurrence, and of the fire fighting equipment used and its effectiveness.

1.15 **Survival aspects.** Brief description of search, evacuation and rescue, location of crew and passengers in relation to injuries sustained, failure of structures such as seats and seat-belt attachments.

1.16 **Tests and research.** Brief statements regarding the results of tests and research.

1.17 **Organizational and management information.** Pertinent information concerning the organizations and their management involved in influencing the operation of the aircraft. The organizations include, for example, the operator, the air traffic services, airway, aerodrome and weather service agencies, and the regulatory authority. The information could include, but not be limited to, organizational structure and functions, resources, economic status, management policies and practices, and regulatory framework.

1.18 **Additional information.** Relevant information not already included in 1.1 to 1.17.

1.19 **Useful or effective investigation techniques.** When useful or effective investigation techniques have been used during the investigation, briefly indicate the reason for using these techniques and refer here to the main features as well as describing the results under the appropriate subheadings 1.1 to 1.18.

## 2. ANALYSIS

Analyse, as appropriate, only the information documented in 1. — Factual information and which is relevant to the determination of conclusions and causes and/or contributing factors.

### 3. CONCLUSIONS

List the findings, causes and/or contributing factors established in the investigation. The list of causes and/or contributing factors should include both the immediate and the deeper systemic causes and/or contributing factors.

*Note.- As stated in 6.1, the final report format presented in this Appendix 1 may be adapted to the circumstances of the accident or incident. Thus, the AIG Authority may use either “causes” or “contributing factors”, or both, in the Conclusions.*

### 4. SAFETY RECOMMENDATIONS

As appropriate, briefly state any recommendations made for the purpose of accident prevention and identify safety actions already implemented.

### APPENDICES

Include, as appropriate, any other pertinent information considered necessary for the understanding of the report.

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## APPENDIX 2. PROTECTION OF ACCIDENT AND INCIDENT INVESTIGATION RECORDS

### 1. INTRODUCTION

*Note 1.— The disclosure or use of records listed in Chapter 5, 5.12, in criminal, civil, administrative or disciplinary proceedings, or their public disclosure, can have adverse consequences for persons or organizations involved in accidents and incidents, likely causing them or others to be reluctant to cooperate with accident investigation authorities in the future. The determination on disclosure or use required by 5.12 is designed to take account of these matters.*

*Note 2.— In accordance with 5.12, the provisions specified in this Appendix are intended to:*

- a) assist States in developing national laws, regulations and policies to protect accident and incident investigation records appropriately; and*
- b) assist the competent authority in making the determination as required by 5.12.*

1. Throughout this Appendix:

- a) balancing test refers to the determination by the competent authority, in accordance with 5.12, of the impact the disclosure or use of accident and incident investigation records may have on current or future investigations; and*
- b) record(s) refers to those listed in 5.12.*

*Note.— Provisions on the use and protection of safety information and related sources other than accident and incident investigation records are included in Annex 19 — Safety Management.*

### 2. GENERAL

2.1 States shall accord the protections in 5.12 and this Appendix to the entire recording of the cockpit voice recorder and airborne image recorder, and any transcripts from such recordings. These protections shall apply from the time an accident or incident occurs and continue after the publication of the Final Report.

2.2 States shall accord the protections in 5.12 and this Appendix to the other records listed in 5.12 b). These protections shall apply from the time they come into the custody or control of the accident investigation authority and continue after the publication of the Final Report.

#### ***Non-disclosure of audio or image recordings to the public***

2.3 States shall take action to achieve the non-disclosure of audio content of cockpit voice recordings as well as image and audio content of airborne image recordings to the public, as per 5.12.5 of this Annex, such as:

- a) prevention of disclosure through the adoption of national laws, regulations and policies; or
- b) adoption of authoritative safeguards such as protective orders, closed proceedings or in-camera review; or

- c) prevention of disclosure of recordings, through technical means such as encrypting or overwriting, before returning the cockpit voice recorders or airborne image recorders to the owners.

*Note.— Ambient workplace recordings required by SARPs contained in the Annexes to the Chicago Convention, such as cockpit voice recordings and airborne image recordings, may be perceived as constituting an invasion of privacy for operational personnel if they are disclosed or used for purposes other than those for which the recordings were made.*

### **3. COMPETENT AUTHORITY**

In accordance with 5.12, each State shall designate a competent authority or competent authorities appropriate to the task of administering the balancing test.

*Note.— Different competent authorities may be designated for different circumstances. For example, the competent authority designated for applying the balancing test in criminal or civil proceedings may be a judicial authority. Another competent authority may be designated for applying the balancing test in cases where the purpose of the request for disclosure is for public accessibility.*

### **4. ADMINISTRATION OF THE BALANCING TEST**

4.1 Where the request is for a record to be disclosed or used in a criminal, civil, administrative or disciplinary proceeding, the competent authority shall be satisfied that a material fact in question in the proceedings cannot be determined without that record, before administering the balancing test.

*Note.— A material fact in question is a legal term used to refer to a fact that is significant or essential to the matter at hand; that one party alleges and that the other controverts; and is to be determined by the competent authority administering the balancing test.*

4.2 When administering the balancing test, the competent authority shall take into consideration factors such as:

- a) the purpose for which the record was created or generated;
- b) the requester's intended use of that record;
- c) whether the rights or interests of a person or organization will be adversely affected by the disclosure or use of that record;
- d) whether the person or organization to whom that record relates has consented to make that record available;
- e) whether suitable safeguards are in place to limit the further disclosure or use of that record;
- f) whether that record has been or can be de-identified, summarized or aggregated;
- g) whether there is an urgent need to access that record to prevent a serious risk to health or life;

- h) whether that record is of a sensitive or restrictive nature; and
- i) whether that record reasonably indicates that the accident or incident may have been caused by an act or omission considered, in accordance with national laws and regulations, to be gross negligence, wilful misconduct, or done with criminal intent.

*Note 1.— The administration of the balancing test can be done once for a certain category of records and the result incorporated into national laws and regulations.*

*Note 2.— The competent authority may need to administer a balancing test for determining whether to permit the disclosure of a record, and a separate balancing test for determining whether to permit the use of a record.*

*Note 3.— Guidance material on the balancing test can be found in the Manual on the Protection of Safety Information, Part I — Protection of Accident and Incident Investigation Records (Doc 10053).*

## 5. RECORDS OF THE DECISIONS

**Recommendation.**— *The competent authority should record the reasons for its determination when administering the balancing test. The reasons should be made available and referred to as necessary for subsequent decisions.*

*Note.— States may submit the decisions recorded to the International Civil Aviation Organization in one of the working languages of the Organization to be archived in a public database.*

## 6. FINAL REPORT

**Recommendation.**— *In order to limit the use of the Final Report for purposes other than the prevention of accidents and incidents, States should consider:*

- a) instituting a separate investigation for those other purposes; or
- b) differentiating between the parts of the Final Report in order to allow the use of factual information contained therein while preventing use of analysis, conclusions and safety recommendations for apportioning blame or liability; or
- c) preventing the use of the Final Report as evidence in proceedings to apportion blame or liability.

*Note.— In accordance with Chapter 6, 6.5, Final Reports are publicly available in the interest of accident prevention and are not subject to protection under 5.12 of this Annex. However, the use of portions of the Final Report, in particular the analysis, conclusions and safety recommendations, as evidence before national courts in view of assigning blame or determining liability is against the purposes for which the investigation was undertaken.*

## 7. ACCIDENT AND INCIDENT INVESTIGATION PERSONNEL

**Recommendation.**— *In the interest of safety and in accordance with Chapter 3, 3.1, of this Annex, States should consider that accident investigation personnel not be compellable to give an opinion on matters of blame or liability in civil, criminal, administrative or disciplinary proceedings.*

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**ATTACHMENT A****RIGHTS AND OBLIGATIONS OF THE STATE  
OF THE OPERATOR IN RESPECT OF ACCIDENTS AND INCIDENTS  
INVOLVING LEASED, CHARTERED OR INTERCHANGED AIRCRAFT**

The standards and recommended practices of Annex 13 — *Aircraft accident and incident investigation* were developed when the State of registry and the State of the operator normally were the same. In recent years, however, international aircraft leasing and interchanging arrangements have developed so that in many instances the State of the operator is different from the State of registry.

Leasing or interchange arrangements sometimes include the provision of flight crews from the State of registry. However, more often, flight crews are provided by the State of the operator and the aircraft operated under national legislation of the State of the operator. Similarly, a variety of arrangements for airworthiness can emerge from these arrangements. Airworthiness responsibility may rest, wholly or partly, with the State of the operator or State of registry. Sometimes the operator, in conformity with an airworthiness control system specified by the State of registry, carries out maintenance and keeps records.

In the event of an accident or an incident, it is important that any State which has assumed responsibility for the safety of an aircraft has the right to participate in an investigation, at least in respect of that responsibility. It is also important that the State conducting the investigation should have speedy access to all documents and other information relevant to that investigation.

When the location of an accident or an incident cannot definitely be established as being in the territory of another State, the State of the operator, after consultation with the State of registry, should accept full or partial responsibility for the conduct of the investigation.

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## ATTACHMENT B NOTIFICATION AND REPORTING CHECKLIST

Note.— In this checklist, the following terms have the meaning indicated below:

- ✓ International occurrences: accidents and serious incidents occurring in the territory of a contracting State to aircraft registered in another contracting State.
- ✓ Domestic occurrences: accidents and serious incidents occurring in the territory of the State of registry.
- ✓ Other occurrences: accidents and serious incidents occurring in the territory of a non-contracting State, or outside the territory of any State.

### 1. NOTIFICATION OF ACCIDENTS AND SERIOUS INCIDENTS

From	For	Send to	State AIG Regulation reference
State of occurrence	International occurrences: All aircraft	State of registry State of the operator State of design State of manufacture the International Civil Aviation Organization, when the aircraft involved is of a maximum mass of over 2 250 kg or is a turbojet-powered aeroplane, and to the ARCM, all events regardless of weight (mass) of the aircraft. <b>Note.</b> - If an AIG Authority of a State member of the ARCM investigates serious incidents involving aircrafts of 2250 kg or less, up to 1 kg, this Authority may notify the information of these serious incidents to the ARCM.	4.1
State of registry	Domestic and other occurrences: All aircraft	State of the operator State of design State of manufacture the International Civil Aviation Organization, when the aircraft involved is of a maximum mass of over 2 250 kg or is a turbojet-powered aeroplane, and to the ARCM all the occurrences regardless of the aircraft weight (mass). <b>Note.</b> - If an AIG Authority of a State member of the ARCM investigates serious incidents involving aircrafts of 2250 kg or less, up to 1 kg, this Authority may notify the information of these serious incidents to the ARCM.	4.8

### 2. FINAL REPORT

#### Accidents and incidents wherever they occurred

From	Type of report	Concerning	Send to	Annex 13 reference
State conducting the investigation	FINAL REPORT	All aircraft	State instituting the investigation State of registry State of the operator State of design	6.4

State of manufacture  
State having interest  
because of fatalities  
State providing information,  
significant facilities and services or  
experts

Aircraft over 5 700 kg

ICAO

6.7

### 3. ADREP REPORT

#### Accidents and incidents wherever they occurred

<i>From</i>	<i>Type of report</i>	<i>Concerning</i>	<i>Send to</i>	<i>Annex 13 reference</i>
State conducting the investigation	PRELIMINARY REPORT	Accidents to aircraft over 2 250 kg	State of registry or State of occurrence State of the operator State of design State of manufacture State providing information, significant facilities and services or experts ICAO	7.1
		Accidents to aircraft of 2 250 kg or less if airworthiness or matters of interest are involved	Same as above, <i>except</i> ICAO	7.2
	ACCIDENT DATA REPORT	Accidents to aircraft over 2 250 kg	ICAO	7.5
	INCIDENT DATA REPORT	Incidents to aircraft over 5 700 kg	ICAO	7.7

### 4. ACCIDENT PREVENTION MEASURES

#### Safety matters of interest to other States

<i>From</i>	<i>Type of report</i>	<i>Concerning</i>	<i>Send to</i>	<i>Annex 13 reference</i>
States making safety recommendations	Safety recommendations	Recommendations made to another State	Accident investigation authority in that State	6.8 8.3
		ICAO documents	ICAO	6.9

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**ATTACHMENT C****LIST OF EXAMPLES OF SERIOUS INCIDENTS**

1. The term “serious incident” is defined in Chapter 1 as follows:

***Serious incident.*** An incident involving circumstances indicating that there was a high probability of an accident and associated with the operation of an aircraft which, in the case of a manned aircraft, takes place between the time any person boards the aircraft with the intention of flight until such time as all such persons have disembarked, or in the case of an unmanned aircraft, takes place between the time the aircraft is ready to move with the purpose of flight until such time as it comes to rest at the end of the flight and the primary propulsion system is shut down.

2. The incidents listed are typical examples of incidents that are likely to be serious incidents. The list is not exhaustive and only serves as guidance to the definition of serious incident.

- a) Near collisions requiring an avoidance manoeuvre to avoid a collision or an unsafe situation or when an avoidance action would have been appropriate.
- b) Collisions not classified as accidents.
- c) Controlled flight into terrain only marginally avoided.
- d) Aborted take-offs on a closed or engaged runway, on a taxiway<sup>1</sup> or unassigned runway.
- e) Take-offs from a closed or engaged runway, from a taxiway<sup>1</sup> or unassigned runway.
- f) Landings or attempted landings on a closed or engaged runway, on a taxiway<sup>1</sup> or unassigned runway.
- g) Gross failures to achieve predicted performance during take-off or initial climb.
- h) Fires and/or smoke in the cockpit, in the passenger compartment, in cargo compartments or engine fires, even though such fires were extinguished by the use of extinguishing agents.
- i) Events requiring the emergency use of oxygen by the flight crew.
- j) Aircraft structural failures or engine disintegrations, including uncontained turbine engine failures, not classified as an accident.
- k) Multiple malfunctions of one or more aircraft systems seriously affecting the operation of the aircraft.
- l) Flight crew incapacitation in flight.
- m) Fuel quantity level or distribution situations requiring the declaration of an emergency by the pilot, such as insufficient fuel, fuel exhaustion, fuel starvation, or inability to use all usable fuel on board.
- n) Runway incursions classified with severity A. The Manual on the prevention of runway incursions (Doc 9870) contains information on the severity classifications.

- o) Take-off or landing incidents. Incidents such as under-shooting, overrunning or running off the side of runways.
  - p) System failures, weather phenomena, operations outside the approved flight envelope or other occurrences which caused or could have caused difficulties controlling the aircraft.
  - q) Failures of more than one system in a redundancy system mandatory for flight guidance and navigation.
  - r) The unintentional or, as an emergency measure, the intentional release of a slung load or any other load carried external to the aircraft.
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**ATTACHMENT D****GUIDELINES FOR FLIGHT RECORDER  
READ-OUT AND ANALYSIS****Initial response**

1. The aftermath of a major accident is a demanding time for any State's investigation authority. One of the immediate items requiring a decision is where to have the flight recorders read out and analysed. It is essential that the flight recorders be read out as early as possible after an accident. Early identification of problem areas can affect the investigation at the accident site where evidence is sometimes transient. Early identification of problem areas may also result in urgent safety recommendations which may be necessary to prevent a similar occurrence.

2. Many States do not have their own facilities for the playback and analysis of flight recorder information (both voice and data) and consequently request assistance from other States. It is essential, therefore, that the accident investigation authority of the State conducting the investigation make timely arrangements to read out the flight recorders at a suitable read-out facility.

**Choice of facility**

3. The investigating State may request assistance from any State that, in its opinion, can best serve the investigation. The manufacturer's standard replay equipment and playback software, which are typically used by airlines and maintenance facilities, are not considered adequate for investigation purposes. Special recovery and analysis techniques are usually required if the recorders have been damaged.

4. Facilities for the read-out of flight recorders should have the following capabilities:
- a) the ability to disassemble and read out recorders that have sustained substantial damage;
  - b) the ability to play back the original recording/memory module without the need for the use of a manufacturer's copy device or the recorder housing that was involved in the accident or incident;
  - c) the ability to manually analyse the raw binary waveform from digital tape flight data recorders;
  - d) the ability to enhance and filter voice recordings digitally by means of suitable software; and
  - e) the capability to graphically analyse data, to derive additional parameters not explicitly recorded, to validate the data by cross-checking and other analytical methods to determine data accuracy and limitations.

**Participation by the State of manufacture (or design) and the State of the operator**

5. The State of manufacture (or design) has airworthiness responsibilities and the expertise normally required to read out and analyse flight recorder information. Since flight recorder information can often reveal airworthiness problems, the State of manufacture (or Design) should have a representative present when the flight recorder read-out and analysis are being conducted in a State other than the State of manufacture (or design).

6. The State of the operator has regulatory responsibilities regarding the flight operation and can provide insights into operational issues which may be specific to the operator. Since flight recorder information can reveal operational problems, the State of the operator should also have a representative present when the flight recorder read-out and analysis are being conducted..

**Recommended procedures**

7. The flight data recorder and the cockpit voice recorder should be read out by the same facility, because they contain complementary data which can help validate each recording and aid in determining timing and synchronization.

8. Flight recorders should not be opened or powered up and original recordings should not be copied (particularly not by high-speed copy devices) prior to the read-out because of the risk of damage to the recordings.

9. The facility at which the flight recorders are read out for another State should be given an opportunity to comment on the final report in order to ensure that the characteristics of the flight recorder analysis have been taken into account.

10. The facility at which the flight recorders are read out may require the expertise of the aircraft manufacturer and the operator in order to verify the calibration data and validate the recorded information.

11. The State conducting the investigation may leave the original recordings, or a copy of them, with the read-out facility until the investigation is completed, in order to facilitate the timely resolution of additional requests or clarifications, providing that the facility has adequate security procedures to safeguard the recordings.

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## ATTACHMENT E

### LEGAL GUIDANCE FOR THE PROTECTION OF INFORMATION FROM SAFETY DATA COLLECTION AND PROCESSING SYSTEMS

#### 1. INTRODUCTION

1.1 The protection of safety information from inappropriate use is essential to ensure its continued availability, since the use of safety information for other than safety-related purposes may inhibit the future availability of such information, with an adverse effect on safety. This fact was recognized by the 35th Session of the ICAO Assembly, which noted that existing national laws and regulations in many States may not adequately address the manner in which safety information is protected from inappropriate use.

1.2 The guidance contained in this Attachment is therefore aimed at assisting States enact national laws and regulations to protect information gathered from safety data collection and processing systems (SDCPS), while allowing for the proper administration of justice. The objective is to prevent the inappropriate use of information collected solely for the purpose of improving aviation safety.

1.3 Because of the different legal systems in States, the legal guidance must allow States the flexibility to draft their laws and regulations in accordance with their national policies and practices.

1.4 The guidance contained in this Attachment, therefore, takes the form of a series of principles that have been distilled from examples of national laws and regulations provided by States. The concepts described in these principles could be adapted or modified to meet the particular needs of the State enacting laws and regulations to protect safety information.

1.5 Throughout this Attachment:

- a) *safety information* refers to information contained in SDCPS established for the sole purpose of improving aviation safety, and qualified for protection under specified conditions in accordance with 3.1 below;
- b) *operational personnel* refers to personnel involved in aviation operations who are in a position to report safety information to SDCPS. Such personnel include, but are not limited to, flight crews, air traffic controllers, aeronautical station operators, maintenance technicians, cabin crews, flight dispatchers and apron personnel;
- c) *inappropriate use* refers to the use of safety information for purposes different from the purposes for which it was collected, namely, use of the information for disciplinary, civil, administrative and criminal proceedings against operational personnel, and/or disclosure of the information to the public;
- d) SDCPS refers to processing and reporting systems, databases, schemes for exchange of information, and recorded information and include:
  - 1) records pertaining to accident and incident investigations, as described in Chapter 5 of this Annex;

- ~~2) mandatory incident reporting systems, as described in Annex 19, Chapter 5;~~
- ~~3) voluntary incident reporting systems, as described in Annex 19, Chapter 5; and~~
- ~~4) self-disclosure reporting systems, including automatic data capture systems, as described in Annex 6, Part I, Chapter 3, as well as manual data capture systems.~~

~~— Note. — Information on safety data collection and processing systems can be found in the Safety Management Manual (SMM) (Doc 9859)..~~

## **2. GENERAL PRINCIPLES**

~~2.1 — The sole purpose of protecting safety information from inappropriate use is to ensure its continued availability so that proper and timely preventive actions can be taken and aviation safety improved.~~

~~2.2 — It is not the purpose of protecting safety information to interfere with the proper administration of justice in States.~~

~~2.3 — National laws and regulations protecting safety information should ensure that a balance is struck between the need for the protection of safety information in order to improve aviation safety, and the need for the proper administration of justice.~~

~~2.4 — National laws and regulations protecting safety information should prevent its inappropriate use.~~

~~2.5 — Providing protection to qualified safety information under specified conditions is part of a State's safety responsibilities.~~

## **3. PRINCIPLES OF PROTECTION**

~~3.1 — Safety information should qualify for protection from inappropriate use according to specified conditions that should include, but not necessarily be limited to: the collection of information was for explicit safety purposes and the disclosure of the information would inhibit its continued availability.~~

~~3.2 — The protection should be specific for each SDCPS, based upon the nature of the safety information it contains.~~

~~3.3 — A formal procedure should be established to provide protection to qualified safety information, in accordance with specified conditions.~~

~~3.4 — Safety information should not be used in a way different from the purposes for which it was collected.~~

~~3.5 The use of safety information in disciplinary, civil, administrative and criminal proceedings should be carried out only under suitable safeguards provided by national law.~~

#### ~~4. PRINCIPLES OF EXCEPTION~~

~~Exceptions to the protection of safety information should only be granted by national laws and regulations when:~~

- ~~a) there is evidence that the occurrence was caused by an act considered, in accordance with the law, to be conduct with intent to cause damage, or conduct with knowledge that damage would probably result, equivalent to reckless conduct, gross negligence or willful misconduct;~~
- ~~b) an appropriate authority considers that circumstances reasonably indicate that the occurrence may have been caused by conduct with intent to cause damage, or conduct with knowledge that damage would probably result, equivalent to reckless conduct, gross negligence or willful misconduct; or~~
- ~~c) a review by an appropriate authority determines that the release of the safety information is necessary for the proper administration of justice, and that its release outweighs the adverse domestic and international impact such release may have on the future availability of safety information.~~

#### ~~5. PUBLIC DISCLOSURE~~

~~5.1 Subject to the principles of protection and exception outlined above, any person seeking disclosure of safety information should justify its release.~~

~~5.2 Formal criteria for disclosure of safety information should be established and should include, but not necessarily be limited to, the following:~~

- ~~a) disclosure of the safety information is necessary to correct conditions that compromise safety and/or to change policies and regulations;~~
- ~~b) disclosure of the safety information does not inhibit its future availability in order to improve safety;~~
- ~~c) disclosure of relevant personal information included in the safety information complies with applicable privacy laws; and~~
- ~~d) disclosure of the safety information is made in a de-identified, summarized or aggregate form.~~

#### ~~6. RESPONSIBILITY OF THE CUSTODIAN OF SAFETY INFORMATION~~

~~Each SDCPS should have a designated custodian. It is the responsibility of the custodian of safety information to apply all possible protection regarding the disclosure of the information, unless:~~

- ~~a) the custodian of the safety information has the consent of the originator of the information for disclosure; or~~
- ~~b) the custodian of the safety information is satisfied that the release of the safety information is in accordance with the principles of exception.~~

## **7. PROTECTION OF RECORDED INFORMATION**

~~\_\_\_\_\_ Considering that ambient workplace recordings required by legislation, such as cockpit voice recorders (CVRs), may be perceived as constituting an invasion of privacy for operational personnel that other professions are not exposed to:~~

- ~~a) subject to the principles of protection and exception above, national laws and regulations should consider ambient workplace recordings required by legislation as privileged protected information, i.e. information deserving enhanced protection; and~~
  - ~~b) national laws and regulations should provide specific measures of protection to such recordings as to their confidentiality and access by the public. Such specific measures of protection of workplace recordings required by legislation may include the issuance of orders of non-public disclosure.~~
- ~~\_\_\_\_\_~~

**ATTACHMENT F E****GUIDANCE FOR THE DETERMINATION OF AIRCRAFT DAMAGE**

1. If an engine separates from an aircraft, the event is categorized as an accident even if damage is confined to the engine.
2. A loss of engine cowls (fan or core) or reverser components which does not result in further damage to the aircraft is not considered an accident.
3. Occurrences where compressor or turbine blades or other engine internal components are ejected through the engine tail pipe are not considered an accident.
4. A collapsed or missing radome is not considered an accident unless there is related substantial damage in other structures or systems.
5. Missing flap, slat and other lift augmenting devices, winglets, etc., that are permitted for dispatch under the configuration deviation list (CDL) are not considered to be an accident.
6. Retraction of a landing gear leg, or wheels-up landing, resulting in skin abrasion only. If the aircraft can be safely dispatched after minor repairs, or patching, and subsequently undergoes more extensive work to effect a permanent repair, then the occurrence would not be classified as an accident.
7. If the structural damage is such that the aircraft depressurizes, or cannot be pressurized, the occurrence is categorized as an accident.
8. The removal of components for inspection following an occurrence, such as the precautionary removal of an undercarriage leg following a low-speed runway excursion, while involving considerable work, is not considered an accident unless significant damage is found.
9. Occurrences that involve an emergency evacuation are not counted as an accident unless someone receives serious injuries or the aircraft has otherwise sustained significant damage.

*Note 1.- Regarding aircraft damage which adversely affects the structural strength, performance or flight characteristics, the aircraft may have landed safely, but cannot be safely dispatched on a further sector without repair.*

*Note 2.- If the aircraft can be safely dispatched after minor repairs and subsequently undergoes more extensive work to effect a permanent repair, then the occurrence would not be classified as an accident. Likewise, if the aircraft can be dispatched under the CDL with the affected component removed, missing or inoperative, the repair would not be considered as a major repair and consequently the occurrence would not be considered an accident.*

*Note 3.- The cost of repairs, or estimated loss, such as provided by insurance companies may provide an indication of the damage sustained but should not be used as the sole guide as to whether the damage is sufficient to count the occurrence as an accident. Likewise, an aircraft may be considered a "hull loss" because it is uneconomic to repair, without it having incurred sufficient damage to be classified as an accident.*

**South American AIG Regional Cooperation Mechanism (ARCM)**

# **AIG State Regulation**

## **Aviation accident and incident investigation**

**Second edition  
May 2017**



**AIG State Regulation**  
**Aircrafts accidents and incidents investigation**

<b>Amendments records</b>			
<b>Amendment No.</b>	<b>Date applicable</b>	<b>Date entered</b>	<b>Entered by:</b>
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**AIG State Regulation**  
**Aircrafts accidents and incidents investigation**  
**List of effective pages**

<b>List of effective pages</b>			
<b>Detail</b>	<b>Pages</b>	<b>Amendment</b>	<b>Dates</b>
<b>Foreword</b>	ix to xi	Original	June 2015
<b>Chapter 1</b> Definitions	1-14 to 1-16	02	May 2017
<b>Chapter 2</b> Applicability	2-18	Original	June 2015
<b>Chapter 3</b> General	3-19	02	May 2017
<b>Chapter 4</b> Notification	4-20 to 4-22	Original	June 2015
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## AIG STATE REGULATION

### FOREWORD

This Regulation has been designed to guarantee a high level of civil aviation safety and to spare no effort to reduce the number of accidents and incidents, thus enhancing public confidence in air transport.

The expeditious holding of investigations into civil aviation accidents and incidents improves safety and helps prevent accidents and incidents.

Information, analysis and release of the results of accidents and incidents relating to safety are important, principally to improve aviation safety.

It should be noted that the Convention on International Civil Aviation, signed in Chicago on December 7, 1944 (the Chicago Convention), that provides for the application of actions necessary to guarantee the safe operation of aircraft. Particular account should be taken of Annex 13 to the Chicago Convention and its subsequent amendments, which establish international standards and recommended practices for the Aviation accident and incident investigation, and also the definitions of the terms State of Registry, State of the Operator, State of Design or State of Manufacture and State of Occurrence used in said Convention.

In accordance with the international standards and recommended practices established in Annex 13 to the Chicago Convention, accidents and serious incidents investigations should be carried out under the responsibility of the State where the accident or serious incident happened or the State of Registry whenever it is impossible to establish definitively that the place where the accident or serious incident happened is located in the territory of a State. An ARCM member State can delegate to another State the task of carrying out the investigation or ask for its help. The accidents and incidents investigations in the **AIG regional cooperation mechanism (ARCM)** should be carried out analogously.

In order to increase the safety rates of civil aviation among ARCM member States of the SAM region, they must have a good knowledge of the existing investigation requirements and its applicability. Maintaining this capability will come down to acceptable risk, in a global context, provided that contributing factors are identified, which will allow the making of safety recommendations, necessary for preventing future accidents.

Although some member States face restrictions in their legal frameworks which impede the fulfilment of certain rules from Annex 13, it is important that the States try to seek, at the highest decision-making level, the importance of adopting the appropriate civil aviation safety actions, and if necessary, to modify the legal structures so as to provide investigators with the capacity and autonomy to carry out the investigations, according to what is highly advisable in any investigation process.

Consequently, it is important to consider that it is not the ARCM cooperation mechanism's intention to interfere neither with the States autonomy, nor with the management of their investigation processes. However, it is important that all processes described in these Regulations are observed during the investigation, so that there is a better performance in its application, and that the investigation cycle is completed in all its phases following the necessary and corresponding safety recommendations for the prevention of future accidents.

The main objective of these Regulations is to harmonize the AIG requirements within the ARCM member States and the observance of the standards and recommended practices deriving from Annex 13. This will improve ARCM States AIG effective implementation, and contribute to reducing the accidents and incidents rates in the SAM Region.

The scope of an investigation will depend on the lessons that can be derived from them to improve safety, especially considering the need of a wise use of the investigation resources available in the ARCM.

The investigation of accidents and incidents occurred in civil aviation is to be conducted by an independent authority in charge of the investigations, or under its control, to avoid any interest conflicts or any possible exterior interference in the determination of the causes of the events under investigation.

AIG Authorities play a key role in the aviation accident and incident investigation process. Their work is of utmost importance for the determination of an accident or incident causes. Therefore, it is essential that they carry out their investigations completely independently and that they have the financial, material and human resources necessary to conduct the investigation efficiently and effectively.

AIG national authorities' capabilities should be reinforced; cooperation among them is necessary to improve the efficiency of the investigation and prevention of civil aviation accidents and incidents in the SAM Region.

AIG Authorities' coordination role has to be recognized and reinforced in a South American context, so as to generate a real added value in safety, based on the existing cooperation between these authorities and the investigation resources available in the ARCM member States, which should be used in the most cost-effective way and in economies of scale.

Since assuring clear rights for aviation accidents and incidents investigations is essential, the member States, respecting its existing legislations on the competence of the authorities responsible for legal investigation and, where appropriate, in close cooperation with them, must ensure that the authorities in charge of the investigations are able to do their mission in the best of conditions, for the benefit of aviation safety. AIG Authorities must have, therefore, immediate and unrestricted access to the scene of the accident and be provided with all the necessary elements to fulfill the requirements of an investigation, without undermining the legal investigation's objectives.

An efficient investigation is possible only if important pieces of evidence are duly preserved.

One of the civil aviation safety management methods is based on the relations and lessons drawn from the accidents and incidents, which requires a strict application of the provisions on confidentiality to guarantee the future availability of valuable information sources. In this context, sensitive safety data should be adequately protected.

An accident raises a whole range of different public interests, such as the prevention of future accidents and the sound administration of justice. Those interests extend beyond the single interests of parties concerned and the specific occurrence. In order to guarantee the general public interest, a fair balance between the interests is necessary.

The civil aviation sector must also promote a non-punitive environment that facilitates the spontaneous notification of occurrences, thus taking forward the principle of *culture of equity*.

The information provided by a person within the framework of investigations should not be used against such person, in accordance with the constitutional principles and the national law.

ARCM member States will be able to limit the instances in which a decision of disclosure concerning the information obtained during an investigation without affecting the proper function of the judicial system.

It is important for accidents and incidents prevention that relevant information is

communicated as soon as possible, particularly including reports and recommendations concerning safety drawn from the investigations.

Recommendations concerning safety drawn from an accident or serious incident investigation, or of any other nature, such as studies concerning safety, should always be considered by the competent authority and, in the circumstances, be implemented to guarantee the correct civil aviation accidents and incidents prevention.

In order to improve the means that the investigators have to determine the accidents and incidents causes and to increase the recurrent incidents prevention capacity, investigation progress should be promoted, in relation to both the real-time positioning of aircraft and the possibility of access to the information from the flight recorder in its physical absence. Such progress would constitute an important advance regarding safety.

Experience has shown that on some occasions it is difficult to rapidly obtain the list of persons on board the aircraft, but it is also important to fix a deadline within which said lists could be requested to an operator. Furthermore, the data in those lists should be protected against unauthorized use and disclosure. Likewise, in order to minimize the risks to the investigators in charge of the investigations in the scene of the accident, it is necessary to have information related to dangerous goods on board the aircraft which has suffered an accident.

Assistance to the victims of aviation accidents and to their families should be adequately specified.

The way in which Member States and the airlines face an accident and its consequences is of crucial importance. In this regard, Member States should have emergency plans that, in particular, provide for emergency services at the airport, as well as assistance to the victims of civil aviation accidents and to their families. Airlines should also have a plan of assistance to the victims of civil aviation accidents and to their families. Particular attention is to be paid to the support to the victims, their families and associations, as well as the communication among them.

Since the objective of these Regulations is the establishment of common requisites in the field of investigation, at times, this objective could not be achieved efficiently by the ARCM member States without a true commitment in the area of aviation accidents and incidents investigation.

## Chapter 1

### Definitions

The terms and expressions shown below are used in the standards and recommended practices for aviation accidents and incidents investigation, they have the following meanings:

**Accident**- Any occurrence associated with the operation of an aircraft which, in the case of a manned aircraft, takes place between the time any person boards the aircraft with the intention of flight until such time as all such persons have disembarked, or in the case of an unmanned aircraft, takes place between the time the aircraft is ready to move with the purpose of flight until such time as it comes to rest at the end of the flight and the primary propulsion system is shut down, in which:

- a) a person is fatally or seriously injured as a result of:
  - being in the aircraft, or
  - direct contact with any part of the aircraft, including parts which have become detached from the aircraft, or
  - direct exposure to jet blast,
  - except when the injuries are from natural causes, self-inflicted or inflicted by other persons, or when the injuries are to stowaways hiding outside the areas normally available to the passengers and crew; or
- b) the aircraft sustains damage or structural failure which:
  - adversely affects the structural strength, performance or flight characteristics of the aircraft, and
  - would normally require major repair or replacement of the affected component,
  - except for engine failure or damage, when the damage is limited to a single engine (including its cowlings or accessories), to propellers, wing tips, antennas, probes, vanes, tires, brakes, wheels, fairings, panels, landing gear doors, windscreens, the aircraft skin (such as small dents or puncture holes), or for minor damages to main rotor blades, tail rotor blades, landing gear, and those resulting from hail or bird strike (including holes in the radome); or
- c) the aircraft is missing or is completely inaccessible.

**Accredited representative**- A person designated by a State, on the basis of his or her qualifications, for the purpose of participating in an investigation conducted by another State. Where the State has established an accident investigation authority, the designated accredited representative would normally be from that authority.

**Adviser**- A person appointed by a State, on the basis of his or her qualifications, for the purpose of assisting its accredited representative in an investigation.

**Accident investigation authority**- The authority designated by a State as responsible for aircraft accident and incident investigations within the context of this Annex.

**AIG Specialist / Expert**- The specialist or expert person in a specific area related to aviation accidents and incidents investigation, who is available for the allocation of specific action (e.g. development of AIG requirements and procedures), upon request of a member State.

*Aircraft*- 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.

*ARCM Executive Committee*- designates the Executive Committee established by virtue of Article 9 of ARCM organization and functions manual, consisting of the AIG Authorities of ARCM member States.

*ARCM Focal Points*- AIG specialists, appointed by AIG Authorities from ARCM member States, to maintain an agile communication link with the AIG Technical Committee and promote and coordinate ARCM activities within its Authority.

*ARCM Investigator*- The aviation accidents and incidents investigator available for the appointment of an accident or incident investigation, whenever a member State requires it.

*ARCM Investigator-in-charge*- A person charged, on the basis of his or her qualifications, with the responsibility for the organization, conduct and control of an investigation.

*ARCM Regulations*- AIG Regional Cooperation Mechanism (ARCM) Regulations, which describes the objectives, functions, organizational structure, and other provisions for the ARCM operation.

*Causes*- Actions, omissions, events, conditions, or a combination thereof, which led to the accident or incident. The identification of causes does not imply the assignment of fault or the determination of administrative, civil or criminal liability.

*Chicago Convention*- The Convention on International Civil Aviation signed in Chicago on 7 December 1944.

*Contributing factors*- Actions, omissions, events, conditions, or a combination thereof, which, if eliminated, avoided or absent, would have reduced the probability of the accident or incident occurring, or mitigated the severity of the consequences of the accident or incident. The identification of contributing factors does not imply the assignment of fault or the determination of administrative, civil or criminal liability.

*Flight recorder*- Any type of recorder installed in the aircraft for the purpose of complementing accident/incident investigation.

*GASP*- *The global ICAO plan for aviation safety*

*GASR*- *The route map for aviation safety on a worldwide scale, prepared by the safety strategy Group and approved by the ICAO Council on 15 June 2006.*

*Incident*- An occurrence, other than an accident, associated with the operation of an aircraft which affects or could affect the safety of operation.

*Investigation*- A process conducted for the purpose of accident prevention which includes the gathering and analysis of information, the drawing of conclusions, including the determination of causes and/or contributing factors and, when appropriate, the making of safety recommendations.

*Investigator-in-charge*- A person charged, on the basis of his or her qualifications, with the responsibility for the organization, conduct and control of an investigation.

Nothing in the above definition is intended to preclude the functions of an investigator-in-charge being assigned to a commission or other body.

*Maximum mass*- Maximum certificated take-off mass.

*Maximum weight (mass)*- Maximum certificated take-off weight (mass).

Member State.- An ARCM member state which is part of the Regional Cooperation Mechanism (ARCM) of South America.

Operator.- A person, organization or enterprise engaged in or offering to engage in an aircraft operation.

Preliminary Report.- The communication used for the prompt dissemination of data obtained during the early stages of the investigation.

President of the General Board.- President of the General Board conformed by the ARCM AIG Authorities, who shall be elected among its members for a one year term and may be re-elected for equal and successive terms.

Safety recommendation.- A proposal of the accident investigation authority, based on information derived from the investigation, made with the intention of preventing accidents or incidents and which in no case has the purpose of creating a presumption of blame or liability for an accident or incident. In addition to the safety recommendations arising from accident and incident investigations, safety recommendations may result from diverse sources, including safety studies.

Serious incident.- An incident involving circumstances indicating that there was a high probability of an accident and associated with the operation of an aircraft which, in the case of a manned aircraft, takes place between the time any person boards the aircraft with the intention of flight until such time as all such persons have disembarked, or in the case of an unmanned aircraft, takes place between the time the aircraft is ready to move with the purpose of flight until such time as it comes to rest at the end of the flight and the primary propulsion system is shut down.

*The difference between an accident and a serious incident lies only in the result.*

*Examples of serious incidents can be found in Attachment C.*

Serious injury.- An injury which is sustained by a person in an accident and which:

- a) requires hospitalization for more than 48 hours, commencing within seven days from the date the injury was received; or
- b) results in a fracture of any bone (except simple fractures of fingers, toes or nose); or
- c) involves lacerations which cause severe haemorrhage, nerve, muscle or tendon damage; or
- d) involves injury to any internal organ; or
- e) involves second or third degree burns, or any burns affecting more than 5 per cent of the body surface; or
- f) involves verified exposure to infectious substances or injurious radiation.

State of Design.- The State having jurisdiction over the organization responsible for the type design.

State of Manufacture.- The State having jurisdiction over the organization responsible for the final assembly of the aircraft.

State of Occurrence.- The State in the territory of which an accident or incident occurs.

State of the Operator.- The State in which the operator's principal place of business is located or, if there is no such place of business, the operator's permanent residence.

State of Registry.- The State on whose register the aircraft is entered.

*Note.- In the case of the registration of aircraft of an international operating agency on other than a national basis, the States constituting the agency are jointly and severally bound to assume the obligations which, under the Chicago Convention, attach to a State of Registry. See, in this regard, the Council Resolution of 14 December 1967 on Nationality and Registration of Aircraft Operated by*

*International Operating Agencies which can be found in Policy and Guidance Material on the Economic Regulation of International Air Transport (Doc 9587).*

State safety programme (SSP). An integrated set of regulations and activities aimed at improving safety.

## Chapter 2

### Applicability

2.1 Unless otherwise stated, the specifications in this Regulation apply to activities following accidents and incidents wherever they occurred.

2.2 In this Regulation the specifications concerning the State of the Operator apply only when an aircraft is leased, chartered or interchanged and when that State is not the State of Registry and if it discharges, in respect of this Regulation, in part or in whole, the functions and obligations of the State of Registry.

## Chapter 3

### General

#### Objective of the investigation

3.1 The sole objective of the investigation of an accident or incident shall be the prevention of accidents and incidents. It is not the purpose of this activity to apportion blame or liability.

#### Independence of Investigations

3.2 A State shall establish an accident investigation authority that is independent from State aviation authorities and other entities that could interfere with the conduct or objectivity of an investigation.

Note.— Guidance on the independence of an accident investigation authority is contained in the Manual of Aircraft Accident and Incident Investigation (Doc 9756), Part I — Organization and Planning and the Manual on Accident and Incident Investigation Policies and Procedures (Doc 9962).

#### Protection of evidence, custody and removal of aircraft

##### Responsibility of the State of occurrence

###### General

3.3 The AIG Authority as State of occurrence shall take all reasonable measures to protect the evidence and to maintain safe custody of the aircraft and its contents for such a period as may be necessary for the purposes of an investigation. Protection of evidence shall include the preservation, by photographic or other means, of any evidence which might be removed, effaced, lost or destroyed. Safe custody shall include protection against further damage, access by unauthorized persons, pilfering and deterioration.

##### Request from State of registry, State of the operator, State of design or State of manufacture

3.4 If a request is received from the State of registry, the State of the operator, the State of design or the State of manufacture that the aircraft, its contents, and any other evidence remain undisturbed pending inspection by an accredited representative of the requesting State, the AIG Authority shall take all necessary steps to comply with such request, so far as this is reasonably practicable and compatible with the proper conduct of the investigation; provided that the aircraft may be moved to the extent necessary to extricate persons, animals, mail and valuables, to prevent destruction by fire or other causes, or to eliminate any danger or obstruction to air navigation, to other transport or to the public, and provided that it does not result in undue delay in returning the aircraft to service where this is practicable.

##### Release from custody

3.5 Subject to the provisions of 3.2 and 3.3, the AIG Authority shall release custody of the aircraft, its contents or any parts thereof as soon as they are no longer required in the investigation, to any person or persons from the AIG Authority duly designated by the State of registry or the State of the operator, as applicable. For this purpose the AIG Authority shall facilitate access to the aircraft, its contents or any parts thereof, provided that, if the aircraft, its contents, or any parts thereof lie in an area within which the AIG Authority finds it impracticable to grant such access, it shall itself effect removal to a point where access can be given.

## Chapter 4

### Notification

#### Accidents or serious incidents in the national territory to aircraft of another contracting State

#### Responsibility of the AIG Authority

#### Forwarding

4.1 The AIG Authority, as the State of occurrence shall forward a notification of accident or serious incident, with a minimum of delay and by the most suitable and quickest means available, to:

- a) the State of registry;
- b) the State of the operator;
- c) the State of design
- d) the State of manufacture; and
- e) the International Civil Aviation Organization, when the aircraft involved is of a maximum mass of over 2 250 kg or is a turbojet-powered aeroplane, and to the ARCM, all events regardless of weight (mass) of the aircraft.

However, when the AIG Authority, as the State of occurrence, is not aware of a serious incident, the State of registry or the State of the operator, as appropriate, shall forward a notification of such an incident to the State of design, the State of manufacture and the State of occurrence.

#### Format and content

4.2 The notification shall be in plain language and contain as much of the following information as is readily available, but its dispatch shall not be delayed due to lack of complete information:

- a) for accidents the identification abbreviation ACCID, for serious incidents INCID;
- b) manufacturer, model, nationality and registration marks, and serial number of the aircraft;
- c) name of owner, operator and hirer, if any, of the aircraft;
- d) qualification of the pilot in command, and nationality of crew and passengers;
- e) date and time (local time or UTC) of the accident or serious incident;
- f) last point of departure and point of intended landing of the aircraft;
- g) position of the aircraft with reference to an easily defined geographical point and latitude and longitude;
- h) number of crew and passengers; on board, killed and seriously injured; others, killed and seriously injured;

- i) description of the accident or serious incident and the extent of damage to the aircraft so far as is known;
- j) an indication to what extent the investigation will be conducted or is proposed to be delegated by the State of Occurrence;
- k) physical characteristics of the accident or serious incident area, as well as an indication of access difficulties or special requirements to reach the site;
- l) identification of the originating authority and means to contact the investigator in charge and the accident AIG Authority of the State of occurrence at any time; and
- m) presence and description of dangerous goods on board the aircraft.

### **Language**

4.3 The notification shall be prepared in one of the working languages of ICAO, taking into account the language of the recipient(s), whenever it is possible to do so without causing undue delay.

### **Additional information**

4.4 As soon as it is possible to do so, the AIG Authority shall dispatch the details omitted from the notification as well as other known relevant information.

### **Responsibility of as State of registry, State of the operator, State of design and State of manufacture**

#### **Information - Participation**

4.5 Reserved

4.6 Upon receipt of the notification, The AIG Authority as the State of registry, the State of the operator, the State of design and the State of manufacture shall, as soon as possible, provide the State of occurrence with any relevant information available to them regarding the aircraft and flight crew involved in the accident or serious incident. Each State shall also inform the State of occurrence whether it intends to appoint an accredited representative and if such an accredited representative is appointed the name and contact details; as well as the expected date of arrival if the accredited representative will travel to the State of occurrence.

4.7 Upon receipt of the notification, as State of the Operator, the AIG Authority shall, with a minimum of delay and by the most suitable and quickest means available, provide the State of occurrence with details of dangerous goods on board the aircraft

**Accidents or serious incidents in the territory of the State of registry, in a non-contracting State or outside the territory of any State**

**Responsibility of as State of Registry**

**Forwarding**

4.8 When the State of registry institutes the investigation of an accident or serious incident, the AIG Authority shall forward a notification, in accordance with 4.2 and 4.3 above, with a minimum of delay and by the most suitable and quickest means available, to:

- a) the State of the operator;
- b) the State of design;
- c) the State of manufacture; and
- d) the International Civil Aviation Organization, when the aircraft involved is of a maximum mass of over 2 250 kg or is a turbojet-powered aeroplane, and to the ARCM all the occurrences regardless of the aircraft weight (mass).

**Responsibility of as State of the operator, State of design and State of manufacture**

**Information — Participation**

4.9 Reserved

4.10 Upon receipt of the notification, as State of the operator, State of design, and State of manufacture, the AIG Authority shall, upon request, provide the State of registry with any relevant information available to them regarding the flight crew and the aircraft involved in the accident or serious incident. The AIG Authority shall also inform the State of registry and occurrence whether it intends to appoint an accredited representative, and if such an accredited representative is appointed, the name and contact details; as well as the expected date of arrival if the accredited representative will be present at the investigation.

4.11 Upon receipt of the notification, as State of the operator, State of design, and State of manufacture, the AIG Authority shall, with a minimum of delay and by the most suitable and quickest means available, provide the State of registry with details of dangerous goods on board the aircraft.

## Chapter 5

### Investigation

#### Responsibility for instituting and conducting the investigation

##### Accidents or incidents in the national territory

###### State of occurrence

5.1 The AIG Authority shall institute an investigation into the circumstances of the accident and be responsible for the conduct of the investigation, but it may delegate the whole or any part of the conducting of such investigation to another State, in ARCM, or a Regional accident Investigation Organization (RAIO) by mutual arrangement and consent. In any event, the AIG Authority shall use every means to facilitate the investigation.

5.1.1 The AIG Authority shall institute an investigation into the circumstances of a serious incident and be responsible for the conduct of the investigation, but it may delegate the whole or any part of the conducting of such investigation to another State, in an ARCM, or a RAIO by mutual arrangement and consent. In any event, State of Occurrence shall use every means to facilitate the investigation.

5.1.2 The AIG Authority shall institute an investigation into the circumstances of a serious incident and shall be responsible for its conduction and for notifying ICAO when the aircraft has a maximum weight (mass) that exceeds 2 250 kg. Such a State may delegate the whole or any part of the conducting of such investigation to another State, in the ARCM, or a RAIO by mutual arrangement and consent. In any event the AIG Authority shall use every means to facilitate the investigation.

*Nota.- If an AIG Authority of a State member of the ARCM investigates serious incidents involving aircrafts of 2250 kg or less, up to 1 kg, this Authority may notify the information of these serious incidents to the ARCM.*

##### Accidents or Incidents in the territory of a non-contracting State

###### State of registry

5.2 Reserved

##### Accidents or incidents outside the territory of any State

###### State of registry

5.3 When the location of the accident or the serious incident cannot definitely be established as being in the territory of any State, the AIG Authority, as State of registry, shall institute and conduct any necessary investigation of the accident or serious incident. However, it may delegate the whole or any part of the investigation to another State by mutual arrangement and consent.

5.3.1 States nearest the scene of an accident in international waters shall provide such assistance as they are able and shall, likewise, respond to requests by the State of Registry.

5.3.2 Reserved

## Organization and conduct of the investigation

### Responsibility of the AIG Authority

*Note.- Nothing in the following provisions is intended to preclude the State conducting the investigation from calling upon the best technical expertise from any source.*

#### General

5.4 The AIG authority in charge of the investigation shall have independence in the conduct of the investigation and have unrestricted authority over its conduct, consistent with the provisions of this Regulation. The investigation shall normally include:

- a) the gathering, recording and analysis of all available relevant information on that accident or incident;
- b) the protection of certain accident and incident investigation records in accordance with 5.12;
- c) if appropriate, the issuance of safety recommendations;
- d) if possible, the determination of the causes, contributing factors and/or latent conditions; and
- d) the completion of the final report.

When possible, the scene of the accident shall be visited, the wreckage examined and statements taken from witnesses. The extent of the investigation and the procedure to be followed in carrying out such an investigation shall be determined by the AIG authority, depending on the lessons it expects to draw from the investigation for the improvement of safety.

5.4.1 Any investigation conducted in accordance with the provisions of this regulation shall be separate from any judicial or administrative proceedings to apportion blame or liability.

5.4.2 The AIG Authority shall develop documented policies and procedures detailing its accident duties. These shall include: organization and planning; investigation; and reporting.

~~5.4.3~~ The AIG Authority shall ensure that any investigations conducted under the provisions of this Regulation and Annex 13, have unrestricted access to all evidentiary material without delay-

5.4.4 A State should ensure cooperation between its accident investigation authority and judicial authorities so that an investigation is not impeded by administrative or judicial investigations or proceedings.

*Note.— Cooperation may be achieved by legislation, protocols, agreements or other arrangements, and may cover the following subjects: access to the site of the accident; preservation of and access to evidence; initial and ongoing debriefings of the status of each process; exchange of information; appropriate use of safety information; and resolution of conflicts.*

#### Investigator-in-charge — Designation

5.5 The AIG Authority shall designate the investigator-in-charge of the investigation and shall

initiate the investigation immediately.

### **Investigator-in-charge — Access and control**

5.6 The investigator-in-charge shall have unhampered access to the wreckage and all relevant material, including flight recorders and ATS records, and shall have unrestricted control over it to ensure that a detailed examination can be made without delay by authorized personnel participating in the investigation.

### **Flight recorders — Accidents and incidents**

5.7 Effective use shall be made of flight recorders in the investigation of an accident or an incident. The AIG Authority shall arrange for the read-out of the flight recorders without delay.

5.8 In the event that the AIG Authority does not have adequate facilities to read out the flight recorders, it shall use the facilities made available to it by other States, giving consideration to the following:

- a) the capabilities of the read-out facility;
- b) the timeliness of the read-out; and
- c) the location of the read-out facility.

### **Autopsy examinations**

5.9 The AIG Authority conducting the investigation into a fatal accident shall arrange for complete autopsy examination of fatally injured flight crew and, subject to the particular circumstances, of fatally injured passengers and cabin attendants, by a pathologist, preferably experienced in accident investigation. These examinations shall be expeditious and complete.

### **Medical examinations**

5.9.1 When appropriate, the AIG Authority conducting the investigation shall arrange for medical examination of the crew, passengers and involved aviation personnel, by a physician, preferably experienced in accident investigation. These examinations shall be expeditious.

### **Coordination — Judicial authorities**

5.10 The AIG Authority shall recognize the need for coordination between the investigator-in-charge and the judicial authorities. Particular attention shall be given to evidence which requires prompt recording and analysis for the investigation to be successful, such as the examination and identification of victims and read-outs of flight recorder recordings.

### **Informing aviation security authorities**

5.11 If, in the course of an investigation it becomes known, or it is suspected, that an act of unlawful interference was involved, the investigator-in-charge shall immediately initiate action to ensure that the aviation security authorities of the State(s) concerned are so informed.

### Protection of accident and incident investigation records

5.12 The AIG Authority shall not make the following records available for purposes other than accident or incident investigation, unless the competent authority designated by that State determines, in accordance with national laws and subject to Appendix 2 and 5.12.5, that their disclosure outweighs the likely adverse domestic and international impact such action may have on that or any future investigations:

a) cockpit voice recordings and airborne image recordings and any transcripts from such recordings;

b) records in the custody or control of the accident investigation authority being:

1) all statements taken from persons by the accident investigation authority in the course of their investigation;

2) all communications between persons having been involved in the operation of the aircraft;

3) medical or private information regarding persons involved in the accident or incident;

4) recordings and transcriptions transcripts of recordings from air traffic control units;

5) analysis of and opinions expressed in the analysis of about information, including flight recorder information, made by the accident investigation authority and accredited representatives in relation to the accident or incident.; and

6) the draft Final Report of an accident or incident investigation.

5.12.1 **5.12.1 Recommendation.**— The AIG authority should determine whether any other records obtained or generated by the accident investigation authority, as a part of an accident or incident investigation, need to be protected in the same way as the records listed in 5.12.

5.12.2 These records listed in 5.12 shall be included in the Final Report or its appendices only when pertinent to the analysis of the accident or incident. Parts of the records not relevant to the analysis shall not be disclosed.

*Note The records listed, in 5.12 include information relating to an accident or incident. The disclosure or use of such information, for purposes where the disclosure or use is not necessary in the interest of safety may mean that, in the future, the information will no longer be openly disclosed to investigators. Lack of access to such information would impede the investigation process and seriously affect aviation safety.*

5.12.3 The names of the persons involved in the accident or incident shall not be disclosed to the public by the accident investigation authority.

5.12.4 States shall ensure that requests for records in the custody or control of the accident investigation authority are directed to the original source of the information, where available.

5.12.4.1 **Recommendation.**— The accident investigation authority should retain, where possible, only copies of records obtained in the course of an investigation.

5.12.5 States shall take measures to ensure that audio content of cockpit voice recordings as well as image and audio content of airborne image recordings are not disclosed to the public.

5.12.6 States issuing or receiving a draft Final Report shall take measures to ensure that it is not

disclosed to the public.

*Note.— Appendix 2 contains additional provisions on the protection of accident and incident investigation records. These provisions appear separately for convenience but form part of the SARPs.*

### **Reopening of investigation**

5.13 If, after the investigation has been closed, new and significant evidence becomes available, the AIG Authority shall reopen it. However, when the State which conducted the investigation did not institute it, that State shall first obtain the consent of the State which instituted the investigation.

### **Responsibility of the State**

#### **Information — Accidents and incidents**

5.14 The AIG Authority shall, on request from the State conducting the investigation of an accident or an incident, provide that State with all the relevant information available to it.

**5.14.1 Recommendation.—** *The AIG Authority should cooperate to determine the limitations on disclosure or use that will apply to information before it is exchanged between them for the purposes of an accident or incident investigation.*

5.15 Any State, the facilities or services of which have been, or would normally have been, used by an aircraft prior to an accident or an incident, and which has information pertinent to the investigation, shall provide such information to the AIG Authority.

### **Responsibility of the State of registry and the State of the operator**

#### **Flight recorders — Accidents and serious incidents**

5.16 When an aircraft involved in an accident or a serious incident lands in a State other than the State of occurrence, the State of registry or the State of the operator shall, on request from the AIG Authority, furnish the latter State with the flight recorder records and, if necessary, the associated flight recorders.

### **Organizational information**

5.17 The State of registry and the State of the operator, on request from the AIG Authority, shall provide pertinent information on any organization whose activities may have directly or indirectly influenced the operation of the aircraft.

### **Participation in the investigation**

## **Participation of the State of registry, the State of the operator, the State of design and the State of manufacture**

### **Rights**

5.18 The AIG Authority shall entitle the State of registry, the State of the operator, the State of design and the State of manufacture to appoint an accredited representative to participate in the investigation.

5.19 The State of registry or the State of the operator shall appoint one or more advisers, proposed by the operator, to assist its accredited representative.

5.19.1 When neither the State of registry, nor the State of the operator appoints an accredited representative, the AIG Authority shall invite the operator to participate, subject to the procedures of the State conducting the investigation.

5.20 The State of design and the State of manufacture shall be entitled to appoint one or more advisers, proposed by the organizations responsible for the type design and the final assembly of the aircraft, to assist their accredited representatives.

5.21 When neither the State of design nor the State of manufacture appoint an accredited representative, the AIG Authority shall invite the organizations responsible for the type design and the final assembly of the aircraft to participate, subject to the procedures of the AIG Authority.

### **Obligations**

5.22 When the AIG Authority conducting an investigation of an accident to an aircraft of a maximum mass of over 2 250 kg specifically requests participation by the State of registry, the State of the operator, the State of design or the State of manufacture, the State(s) concerned shall each appoint an accredited representative.

## **Participation of other States**

### **Rights**

5.23 Any State which on request provides information, facilities or experts to the AIG Authority shall be entitled to appoint an accredited representative to participate in the investigation.

## **Entitlement of accredited representatives**

### **Advisers**

5.24 A State entitled to appoint an accredited representative shall also be entitled to appoint one or more advisers to assist the accredited representative in the investigation.

5.24.1 Advisers assisting accredited representatives shall be permitted, under the accredited representatives' supervision, to participate in the investigation to the extent necessary to enable the accredited representatives to make their participation effective.

### Participation

5.25 Participation in the investigation shall confer entitlement to participate in all aspects of the investigation, under the control of the investigator-in-charge, in particular to:

- a) visit the scene of the accident;
- b) examine the wreckage;
- c) obtain witness information and suggest areas of questioning;
- d) have full access to all relevant evidence as soon as possible;
- e) receive copies of all pertinent documents;
- f) participate in read-outs of recorded media;
- g) participate in off-scene investigative activities such as component examinations, technical briefings, tests and simulations;
- h) participate in investigation progress meetings including deliberations related to analysis, findings, causes, contributing factors and safety recommendations; and
- i) make submissions in respect of the various elements of the investigation.

However, participation of States other than the State of registry, the State of the operator, the State of design and the State of manufacture may be limited to those matters which entitled such States to participation under 5.23.

### Obligations

5.26 Accredited representatives and their advisers:

- a) shall provide the AIG Authority conducting the investigation with all relevant information available to them; and
- b) shall not divulge information on the progress and the findings of the investigation without the express consent of the AIG Authority conducting the investigation.

### Participation of States having suffered fatalities or serious injuries to its citizens

#### Rights and entitlement

5.27 A State which has a special interest in an accident by virtue of fatalities or serious injuries to its citizens shall be entitled to appoint an expert who shall be entitled to:

- a) visit the scene of the accident;
- b) have access to the relevant factual information which is approved for public release by the AIG Authority, and information on the progress of the investigation; and
- c) receive a copy of the Final Report.

This will not preclude the State from also assisting in the identification of victims and in meetings with survivors from that State.

5.28 The AIG Authority shall release, at least during the first year of the investigation, established factual information and indicate the progress of the investigation in a timely manner.

## Chapter 6

### Final Report

6.1 The format of the final report in the Manual on aircraft accidents and incidents investigation reporting shall be used by the AIG Authority. However, it may be adapted to the circumstances of the accident or incident.

#### Responsibility of any State

##### Release of information – Consent

6.2 The AIG Authority shall not circulate, publish or give access to a draft report or any part thereof, or any documents obtained during an investigation of an accident or incident, without the express consent of the authority which conducted the investigation, unless such reports or documents have already been published or released by that latter State.

#### Responsibility of the State conducting the investigation

##### Consultation

6.3 The AIG Authority conducting the investigation shall send a copy of the draft final report to the following States inviting their significant and substantiated comments on the report as soon as possible:

- a) the State that instituted the investigation;
- b) the State of registry;
- c) the State of the operator;
- d) the State of design;
- e) the State of manufacture;
- f) any State that participated in the investigation as per Chapter 5; and
- g) the ARCM.

If the AIG Authority receives comments within sixty days of the date of the transmittal letter, it shall either amend the draft final report to include the substance of the comments received or, if desired by the State that provided comments, append the comments to the final report. If the AIG Authority receives no comments within sixty days of the date of the first transmittal letter, it shall issue the final report in accordance with 6.4, unless an extension of that period has been agreed by the States concerned.

6.3.1 The AIG Authority shall send, through the State of the operator, a copy of the draft final report to the operator to enable the operator to submit comments on the draft final report

6.3.2 The AIG Authority shall send, through the State of design and the State of manufacture, a copy of the draft final report to the organizations responsible for the type design and the final assembly of the aircraft to enable them to submit comments on the draft final report.

### **Recipient States**

6.4 The final report of the investigation of an accident shall be sent with a minimum of delay by the AIG Authority to:

- a) the State that instituted the investigation;
- b) the State of registry;
- c) the State of the operator;
- d) the State of design;
- e) the State of manufacture;
- f) any State that participated in the investigation;
- g) any State having suffered fatalities or serious injuries to its citizens; and
- h) any State that provided relevant information, significant facilities and services or experts.

### **Release of the final report**

6.5 In the interest of accident prevention, the AIG Authority shall make the final report publicly available as soon as possible and, if possible, within twelve months.

6.6 If the report cannot be made publicly available within twelve months, the AIG Authority shall make an interim statement publicly available on each anniversary of the occurrence, detailing the progress of the investigation and any safety issues raised.

6.7 When the AIG Authority that has conducted an investigation into an accident or an incident involving an aircraft of a maximum mass of over 5 700 kg has released a final report, that authority shall send to the International Civil Aviation Organization a copy of the final report..

### **Safety recommendations**

6.8 At any stage of the investigation of an accident or incident, the accident or incident investigation authority of the State conducting the investigation shall recommend in a dated transmittal correspondence to the appropriate authorities, including those in other States, any preventive action that it considers necessary to be taken promptly to enhance aviation safety

6.9 The AIG Authority shall address, when appropriate, any safety recommendations arising out of its investigations in a dated transmittal correspondence to the accident investigation authorities of other State(s) concerned and, when ICAO documents are involved, to ICAO.

### **Responsibility of a State receiving or issuing safety recommendations**

#### **Action on safety recommendations**

6.10 The AIG Authority that receives safety recommendations shall inform the proposing State, within ninety days of the date of the transmittal correspondence, of the preventive action taken or under consideration, or the reasons why no action will be taken.

6.11 The AIG Authority issuing a safety recommendation shall implement procedures to record the responses to the safety recommendation issued.

6.12 When the AIG Authority receives a safety recommendation shall implement procedures to monitor the progress of the action taken in response to that safety recommendation.

## Chapter 7

### ADREP Reporting

#### Preliminary report

#### Responsibilities of the AIG Authority

##### Accidents to aircraft over 2 250 kg

7.1 When the aircraft involved in an accident is of a maximum mass of over 2 250 kg, the AIG Authority shall send the preliminary report to:

- a) the State of registry or the State of occurrence, as appropriate;
- b) the State of the operator;
- c) the State of design;
- d) the State of manufacture;
- e) any State that provided relevant information, significant facilities and services or experts;
- f) the International Civil Aviation Organization; and
- g) the ARCM.

##### Accidents to aircraft of 2 250 kg or less

7.2 When an aircraft, not covered by 7.1, is involved in an accident and when airworthiness or matters considered to be of interest to other States are involved, the AIG Authority shall forward the preliminary report to:

- a) the State of registry or the State of occurrence, as appropriate;
- b) the State of the operator;
- c) the State of design;
- d) the State of manufacture;
- e) any State that provided relevant information, significant facilities and services or experts;  
and
- f) the ARCM.

#### Language

7.3 The preliminary report shall be submitted to appropriate States and to the International Civil Aviation Organization in one of the working languages of ICAO.

## **Dispatch**

7.4 The preliminary report shall be sent by facsimile, e-mail, or airmail within thirty days of the date of the accident unless the accident/incident data report has been sent by that time. When matters directly affecting safety are involved, it shall be sent as soon as the information is available and by the most suitable and quickest means available.

### **Accident/Incident data report**

#### **Responsibilities of the AIG Authority**

##### **Accidents to aircraft over 2 250 kg**

7.5 When the aircraft involved in an accident is of a maximum mass of over 2 250 kg, the AIG Authority shall send, as soon as practicable after the investigation, the accident data report to the International Civil Aviation Organization and the ARCM.

### **Additional information**

7.6 Reserved

##### **Incidents to aircraft over 5 700 kg**

7.7 If the AIG Authority conducts an investigation into an incident to an aircraft of a maximum mass of over 5 700 kg, that authority shall send, as soon as is practicable after the investigation, the incident data report to the International Civil Aviation Organization and the ARCM.

### **Data reporting to the ARCM**

#### **Accidents to aircraft of 2 250 kg or less**

7.8 If the AIG Authority conducts an investigation into an accident to an aircraft of a maximum mass of over 2 250 kg or less, that authority shall send, as soon as is practicable after the investigation, the accident data report to the ARCM.

#### **Incidents to aircraft of 5 700 kg or less**

7.9 If the AIG Authority conducts an investigation into an incident to an aircraft of a maximum mass of over 5 700 kg, that authority shall send, as soon as is practicable after the investigation, the incident data report to the ARCM.

## Chapter 8

### Accident Prevention Measures

#### Database and preventive actions

8.1 The AIG Authority shall establish and maintain an accident and incident database to facilitate the effective analysis of information on actual or potential safety deficiencies and to determine any preventive actions required.

8.2 Reserved

8.3 In addition to safety recommendations arising from accident and incident investigations, safety recommendations may result from diverse sources, including safety studies. If safety recommendations are addressed to an organization in another State, they shall also be transmitted to that organization by the AIG Authority through that State's accident investigation authority.

## Chapter 9

### Training

9.1 The AIG Authority shall establish and keep valid a training programme where the type of training that must be provided for investigators is detailed. The training programme shall include basic training, practical on-the-job training (OJT), regular training, and specialized training, with indication of the duration, when appropriate. The training programme shall include basic and regular training in on-the-scene safety for investigators.

9.2 The AIG Authority shall establish a regular training plan where the type of training to be provided for the established period is detailed in order of priority. The type and frequency of the training shall be enough for the investigators to acquire and have a level of knowledge, skills, competence and qualifications in accordance with the rights and obligations assigned.

9.3 The AIG Authority shall establish and introduce a system to keep the training records of the investigators, including OJT.

## APPENDIX 1

### FORMAT OF THE FINAL REPORT

(See Chapter 6)

#### PURPOSE

The purpose of this format is to present the final report in a convenient and uniform manner.

Detailed guidance on completing each section of the final report is found in the *Manual of aircraft accident and incident investigation*.

#### FORMAT

**Title.** The final report begins with a title comprising:

name of the operator; manufacturer, model, nationality and registration marks of the aircraft; place and date of the accident or incident.

**Synopsis.** Following the title is a synopsis describing briefly all relevant information regarding:

notification of accident to national and foreign authorities; identification of the accident investigation authority and accredited representation; organization of the investigation; authority releasing the report and date of publication;

and concluding with a brief résumé of the circumstances leading to the accident.

**Body.** The body of the Final Report comprises the following main headings:

1. Factual information
2. Analysis
3. Conclusions
4. Safety recommendations

each heading consisting of a number of subheadings as outlined in the following:

**Appendices.** Include as appropriate.

*Note.- In preparing a Final Report, using this format, ensure that:*

- a) *all information relevant to an understanding of the factual information, analysis and conclusions is included under each appropriate heading;*
- b) *where information in respect of any of the items in 1.— Factual information is not available, or is irrelevant to the circumstances leading to the accident, a note to this effect is included under the appropriate subheadings.*

#### 1. FACTUAL INFORMATION

1.1 **History of the flight.** A brief narrative giving the following information:

- ✓ Flight number, type of operation, last point of departure, time of departure (local time or UTC), point of intended landing.

- ✓ Flight preparation, description of the flight and events leading to the accident, including reconstruction of the significant portion of the flight path, if appropriate.
- ✓ Location (latitude, longitude, elevation), time of the accident (local time or UTC), whether day or night.

1.2 **Injuries to persons.** Completion of the following, (in numbers):

<i>Injuries</i>	<i>Crew</i>	<i>Pasengers</i>	<i>Others</i>
Fatal			
Serious			
Minor/None			

*Note.- Fatal injuries include all deaths determined to be a direct result of injuries sustained in the accident. Serious injury is defined in Chapter 1 of the AIG Regulation of the State.*

1.3 **Damage to aircraft.** Brief statement of the damage sustained by aircraft in the accident (destroyed, substantially damaged, slightly damaged, no damage).

1.4 **Other damage.** Brief description of damage sustained by objects other than the aircraft.

1.5 **Personnel information:**

- a) Pertinent information concerning each of the flight crew members including: age, validity of licences, ratings, mandatory checks, flying experience (total and on type) and relevant information on duty time.
- b) Brief statement of qualifications and experience of other crew members.
- c) Pertinent information regarding other personnel, such as air traffic services, maintenance, etc., when relevant.

1.6 **Aircraft information:**

- a) Brief statement on airworthiness and maintenance of the aircraft (indication of deficiencies known prior to and during the flight to be included, if having any bearing on the accident).
- b) Brief statement on performance, if relevant, and whether the mass and centre of gravity were within the prescribed limits during the phase of operation related to the accident. (If not and if of any bearing on the accident give details.)
- c) Type of fuel used.

1.7 **Meteorological information:**

- a) Brief statement on the meteorological conditions appropriate to the circumstances including both forecast and actual conditions, and the availability of meteorological information to the crew.
- b) Natural light conditions at the time of the accident (sunlight, moonlight, twilight, etc.).

1.8 **Aids to navigation.** Pertinent information on navigation aids available, including landing aids such as ILS, MLS, NDB, PAR, VOR, visual ground aids, etc., and their effectiveness at the time.

1.9 **Communications.** Pertinent information on aeronautical mobile and fixed service communications and their effectiveness.

1.10 **Aerodrome information.** Pertinent information associated with the aerodrome, its facilities and condition, or with the take-off or landing area if other than an aerodrome.

1.11 **Flight recorders.** Location of the flight recorder installations in the aircraft, their condition on recovery and pertinent data available therefrom.

1.12 **Wreckage and impact information.** General information on the site of the accident and the distribution pattern of the wreckage; detected material failures or component malfunctions. Details concerning the location and state of the different pieces of the wreckage are not normally required unless it is necessary to indicate a break-up of the aircraft prior to impact. Diagrams, charts and photographs may be included in this section or attached in the Appendices.

1.13 **Medical and pathological information.** Brief description of the results of the investigation undertaken and pertinent data available therefrom..

*Note.— Medical information related to flight crew licences should be included in 1.5 — Personnel information.*

1.14 **Fire.** If fire occurred, information on the nature of the occurrence, and of the fire fighting equipment used and its effectiveness.

1.15 **Survival aspects.** Brief description of search, evacuation and rescue, location of crew and passengers in relation to injuries sustained, failure of structures such as seats and seat-belt attachments.

1.16 **Tests and research.** Brief statements regarding the results of tests and research.

1.17 **Organizational and management information.** Pertinent information concerning the organizations and their management involved in influencing the operation of the aircraft. The organizations include, for example, the operator, the air traffic services, airway, aerodrome and weather service agencies, and the regulatory authority. The information could include, but not be limited to, organizational structure and functions, resources, economic status, management policies and practices, and regulatory framework.

1.18 **Additional information.** Relevant information not already included in 1.1 to 1.17.

1.19 **Useful or effective investigation techniques.** When useful or effective investigation techniques have been used during the investigation, briefly indicate the reason for using these techniques and refer here to the main features as well as describing the results under the appropriate subheadings 1.1 to 1.18.

## 2. ANALYSIS

Analyse, as appropriate, only the information documented in 1. — Factual information and which is relevant to the determination of conclusions and causes and/or contributing factors.

### 3. CONCLUSIONS

List the findings, causes and/or contributing factors established in the investigation. The list of causes and/or contributing factors should include both the immediate and the deeper systemic causes and/or contributing factors.

*Note.- As stated in 6.1, the final report format presented in this Appendix 1 may be adapted to the circumstances of the accident or incident. Thus, the AIG Authority may use either “causes” or “contributing factors”, or both, in the Conclusions.*

### 4. SAFETY RECOMMENDATIONS

As appropriate, briefly state any recommendations made for the purpose of accident prevention and identify safety actions already implemented.

### APPENDICES

Include, as appropriate, any other pertinent information considered necessary for the understanding of the report.

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## APPENDIX 2. PROTECTION OF ACCIDENT AND INCIDENT INVESTIGATION RECORDS

### 1. INTRODUCTION

*Note 1.— The disclosure or use of records listed in Chapter 5, 5.12, in criminal, civil, administrative or disciplinary proceedings, or their public disclosure, can have adverse consequences for persons or organizations involved in accidents and incidents, likely causing them or others to be reluctant to cooperate with accident investigation authorities in the future. The determination on disclosure or use required by 5.12 is designed to take account of these matters.*

*Note 2.— In accordance with 5.12, the provisions specified in this Appendix are intended to:*

- a) assist States in developing national laws, regulations and policies to protect accident and incident investigation records appropriately; and*
- b) assist the competent authority in making the determination as required by 5.12.*

1. Throughout this Appendix:

- a) balancing test refers to the determination by the competent authority, in accordance with 5.12, of the impact the disclosure or use of accident and incident investigation records may have on current or future investigations; and*
- b) record(s) refers to those listed in 5.12.*

*Note.— Provisions on the use and protection of safety information and related sources other than accident and incident investigation records are included in Annex 19 — Safety Management.*

### 2. GENERAL

2.1 States shall accord the protections in 5.12 and this Appendix to the entire recording of the cockpit voice recorder and airborne image recorder, and any transcripts from such recordings. These protections shall apply from the time an accident or incident occurs and continue after the publication of the Final Report.

2.2 States shall accord the protections in 5.12 and this Appendix to the other records listed in 5.12 b). These protections shall apply from the time they come into the custody or control of the accident investigation authority and continue after the publication of the Final Report.

#### ***Non-disclosure of audio or image recordings to the public***

2.3 States shall take action to achieve the non-disclosure of audio content of cockpit voice recordings as well as image and audio content of airborne image recordings to the public, as per 5.12.5 of this Annex, such as:

- a) prevention of disclosure through the adoption of national laws, regulations and policies; or
- b) adoption of authoritative safeguards such as protective orders, closed proceedings or in-camera review; or

- c) prevention of disclosure of recordings, through technical means such as encrypting or overwriting, before returning the cockpit voice recorders or airborne image recorders to the owners.

*Note.— Ambient workplace recordings required by SARPs contained in the Annexes to the Chicago Convention, such as cockpit voice recordings and airborne image recordings, may be perceived as constituting an invasion of privacy for operational personnel if they are disclosed or used for purposes other than those for which the recordings were made.*

### 3. COMPETENT AUTHORITY

In accordance with 5.12, each State shall designate a competent authority or competent authorities appropriate to the task of administering the balancing test.

*Note.— Different competent authorities may be designated for different circumstances. For example, the competent authority designated for applying the balancing test in criminal or civil proceedings may be a judicial authority. Another competent authority may be designated for applying the balancing test in cases where the purpose of the request for disclosure is for public accessibility.*

### 4. ADMINISTRATION OF THE BALANCING TEST

4.1 Where the request is for a record to be disclosed or used in a criminal, civil, administrative or disciplinary proceeding, the competent authority shall be satisfied that a material fact in question in the proceedings cannot be determined without that record, before administering the balancing test.

*Note.— A material fact in question is a legal term used to refer to a fact that is significant or essential to the matter at hand; that one party alleges and that the other controverts; and is to be determined by the competent authority administering the balancing test.*

4.2 When administering the balancing test, the competent authority shall take into consideration factors such as:

- a) the purpose for which the record was created or generated;
- b) the requester's intended use of that record;
- c) whether the rights or interests of a person or organization will be adversely affected by the disclosure or use of that record;
- d) whether the person or organization to whom that record relates has consented to make that record available;
- e) whether suitable safeguards are in place to limit the further disclosure or use of that record;
- f) whether that record has been or can be de-identified, summarized or aggregated;
- g) whether there is an urgent need to access that record to prevent a serious risk to health or life;

- h) whether that record is of a sensitive or restrictive nature; and
- i) whether that record reasonably indicates that the accident or incident may have been caused by an act or omission considered, in accordance with national laws and regulations, to be gross negligence, wilful misconduct, or done with criminal intent.

*Note 1.— The administration of the balancing test can be done once for a certain category of records and the result incorporated into national laws and regulations.*

*Note 2.— The competent authority may need to administer a balancing test for determining whether to permit the disclosure of a record, and a separate balancing test for determining whether to permit the use of a record.*

*Note 3.— Guidance material on the balancing test can be found in the Manual on the Protection of Safety Information, Part I— Protection of Accident and Incident Investigation Records (Doc 10053).*

## 5. RECORDS OF THE DECISIONS

**Recommendation.**— *The competent authority should record the reasons for its determination when administering the balancing test. The reasons should be made available and referred to as necessary for subsequent decisions.*

*Note.— States may submit the decisions recorded to the International Civil Aviation Organization in one of the working languages of the Organization to be archived in a public database.*

## 6. FINAL REPORT

**Recommendation.**— *In order to limit the use of the Final Report for purposes other than the prevention of accidents and incidents, States should consider:*

- a) *instituting a separate investigation for those other purposes; or*
- b) *differentiating between the parts of the Final Report in order to allow the use of factual information contained therein while preventing use of analysis, conclusions and safety recommendations for apportioning blame or liability; or*
- c) *preventing the use of the Final Report as evidence in proceedings to apportion blame or liability.*

*Note.— In accordance with Chapter 6, 6.5, Final Reports are publicly available in the interest of accident prevention and are not subject to protection under 5.12 of this Annex. However, the use of portions of the Final Report, in particular the analysis, conclusions and safety recommendations, as evidence before national courts in view of assigning blame or determining liability is against the purposes for which the investigation was undertaken.*

## 7. ACCIDENT AND INCIDENT INVESTIGATION PERSONNEL

**Recommendation.**— *In the interest of safety and in accordance with Chapter 3, 3.1, of this Annex, States should consider that accident investigation personnel not be compellable to give an opinion on matters of blame or liability in civil, criminal, administrative or disciplinary proceedings.*

**ATTACHMENT A****RIGHTS AND OBLIGATIONS OF THE STATE  
OF THE OPERATOR IN RESPECT OF ACCIDENTS AND INCIDENTS  
INVOLVING LEASED, CHARTERED OR INTERCHANGED AIRCRAFT**

The standards and recommended practices of Annex 13 — *Aircraft accident and incident investigation* were developed when the State of registry and the State of the operator normally were the same. In recent years, however, international aircraft leasing and interchanging arrangements have developed so that in many instances the State of the operator is different from the State of registry.

Leasing or interchange arrangements sometimes include the provision of flight crews from the State of registry. However, more often, flight crews are provided by the State of the operator and the aircraft operated under national legislation of the State of the operator. Similarly, a variety of arrangements for airworthiness can emerge from these arrangements. Airworthiness responsibility may rest, wholly or partly, with the State of the operator or State of registry. Sometimes the operator, in conformity with an airworthiness control system specified by the State of registry, carries out maintenance and keeps records.

In the event of an accident or an incident, it is important that any State which has assumed responsibility for the safety of an aircraft has the right to participate in an investigation, at least in respect of that responsibility. It is also important that the State conducting the investigation should have speedy access to all documents and other information relevant to that investigation.

When the location of an accident or an incident cannot definitely be established as being in the territory of another State, the State of the operator, after consultation with the State of registry, should accept full or partial responsibility for the conduct of the investigation.

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## ATTACHMENT B NOTIFICATION AND REPORTING CHECKLIST

Note.— In this checklist, the following terms have the meaning indicated below:

- ✓ International occurrences: accidents and serious incidents occurring in the territory of a contracting State to aircraft registered in another contracting State.
- ✓ Domestic occurrences: accidents and serious incidents occurring in the territory of the State of registry.
- ✓ Other occurrences: accidents and serious incidents occurring in the territory of a non-contracting State, or outside the territory of any State.

### 1. NOTIFICATION OF ACCIDENTS AND SERIOUS INCIDENTS

From	For	Send to	State AIG Regulation reference
State of occurrence	International occurrences: All aircraft	State of registry State of the operator State of design State of manufacture the International Civil Aviation Organization, when the aircraft involved is of a maximum mass of over 2 250 kg or is a turbojet-powered aeroplane, and to the ARCM, all events regardless of weight (mass) of the aircraft. <b>Note.</b> - If an AIG Authority of a State member of the ARCM investigates serious incidents involving aircrafts of 2250 kg or less, up to 1 kg, this Authority may notify the information of these serious incidents to the ARCM.	4.1
State of registry	Domestic and other occurrences: All aircraft	State of the operator State of design State of manufacture the International Civil Aviation Organization, when the aircraft involved is of a maximum mass of over 2 250 kg or is a turbojet-powered aeroplane, and to the ARCM all the occurrences regardless of the aircraft weight (mass). <b>Note.</b> - If an AIG Authority of a State member of the ARCM investigates serious incidents involving aircrafts of 2250 kg or less, up to 1 kg, this Authority may notify the information of these serious incidents to the ARCM.	4.8

### 2. FINAL REPORT

#### Accidents and incidents wherever they occurred

From	Type of report	Concerning	Send to	Annex 13 reference
State conducting the investigation	FINAL REPORT	All aircraft	State instituting the investigation State of registry State of the operator State of design	6.4

State of manufacture  
State having interest  
because of fatalities  
State providing information,  
significant facilities and services or  
experts

Aircraft over 5 700 kg

ICAO

6.7

### 3. ADREP REPORT

#### Accidents and incidents wherever they occurred

<i>From</i>	<i>Type of report</i>	<i>Concerning</i>	<i>Send to</i>	<i>Annex 13 reference</i>
State conducting the investigation	PRELIMINARY REPORT	Accidents to aircraft over 2 250 kg	State of registry or State of occurrence State of the operator State of design State of manufacture State providing information, significant facilities and services or experts ICAO	7.1
		Accidents to aircraft of 2 250 kg or less if airworthiness or matters of interest are involved	Same as above, <i>except</i> ICAO	7.2
	ACCIDENT DATA REPORT	Accidents to aircraft over 2 250 kg	ICAO	7.5
	INCIDENT DATA REPORT	Incidents to aircraft over 5 700 kg	ICAO	7.7

### 4. ACCIDENT PREVENTION MEASURES

#### Safety matters of interest to other States

<i>From</i>	<i>Type of report</i>	<i>Concerning</i>	<i>Send to</i>	<i>Annex 13 reference</i>
States making safety recommendations	Safety recommendations	Recommendations made to another State	Accident investigation authority in that State	6.8 8.3
		ICAO documents	ICAO	6.9

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**ATTACHMENT C****LIST OF EXAMPLES OF SERIOUS INCIDENTS**

1. The term “serious incident” is defined in Chapter 1 as follows:

***Serious incident.*** An incident involving circumstances indicating that there was a high probability of an accident and associated with the operation of an aircraft which, in the case of a manned aircraft, takes place between the time any person boards the aircraft with the intention of flight until such time as all such persons have disembarked, or in the case of an unmanned aircraft, takes place between the time the aircraft is ready to move with the purpose of flight until such time as it comes to rest at the end of the flight and the primary propulsion system is shut down.

2. The incidents listed are typical examples of incidents that are likely to be serious incidents. The list is not exhaustive and only serves as guidance to the definition of serious incident.

- a) Near collisions requiring an avoidance manoeuvre to avoid a collision or an unsafe situation or when an avoidance action would have been appropriate.
- b) Collisions not classified as accidents.
- c) Controlled flight into terrain only marginally avoided.
- d) Aborted take-offs on a closed or engaged runway, on a taxiway<sup>1</sup> or unassigned runway.
- e) Take-offs from a closed or engaged runway, from a taxiway<sup>1</sup> or unassigned runway.
- f) Landings or attempted landings on a closed or engaged runway, on a taxiway<sup>1</sup> or unassigned runway.
- g) Gross failures to achieve predicted performance during take-off or initial climb.
- h) Fires and/or smoke in the cockpit, in the passenger compartment, in cargo compartments or engine fires, even though such fires were extinguished by the use of extinguishing agents.
- i) Events requiring the emergency use of oxygen by the flight crew.
- j) Aircraft structural failures or engine disintegrations, including uncontained turbine engine failures, not classified as an accident.
- k) Multiple malfunctions of one or more aircraft systems seriously affecting the operation of the aircraft.
- l) Flight crew incapacitation in flight.
- m) Fuel quantity level or distribution situations requiring the declaration of an emergency by the pilot, such as insufficient fuel, fuel exhaustion, fuel starvation, or inability to use all usable fuel on board.
- n) Runway incursions classified with severity A. The Manual on the prevention of runway incursions (Doc 9870) contains information on the severity classifications.

- o) Take-off or landing incidents. Incidents such as under-shooting, overrunning or running off the side of runways.
  - p) System failures, weather phenomena, operations outside the approved flight envelope or other occurrences which caused or could have caused difficulties controlling the aircraft.
  - q) Failures of more than one system in a redundancy system mandatory for flight guidance and navigation.
  - r) The unintentional or, as an emergency measure, the intentional release of a slung load or any other load carried external to the aircraft.
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**ATTACHMENT D****GUIDELINES FOR FLIGHT RECORDER  
READ-OUT AND ANALYSIS****Initial response**

1. The aftermath of a major accident is a demanding time for any State's investigation authority. One of the immediate items requiring a decision is where to have the flight recorders read out and analysed. It is essential that the flight recorders be read out as early as possible after an accident. Early identification of problem areas can affect the investigation at the accident site where evidence is sometimes transient. Early identification of problem areas may also result in urgent safety recommendations which may be necessary to prevent a similar occurrence.

2. Many States do not have their own facilities for the playback and analysis of flight recorder information (both voice and data) and consequently request assistance from other States. It is essential, therefore, that the accident investigation authority of the State conducting the investigation make timely arrangements to read out the flight recorders at a suitable read-out facility.

**Choice of facility**

3. The investigating State may request assistance from any State that, in its opinion, can best serve the investigation. The manufacturer's standard replay equipment and playback software, which are typically used by airlines and maintenance facilities, are not considered adequate for investigation purposes. Special recovery and analysis techniques are usually required if the recorders have been damaged.

4. Facilities for the read-out of flight recorders should have the following capabilities:
- a) the ability to disassemble and read out recorders that have sustained substantial damage;
  - b) the ability to play back the original recording/memory module without the need for the use of a manufacturer's copy device or the recorder housing that was involved in the accident or incident;
  - c) the ability to manually analyse the raw binary waveform from digital tape flight data recorders;
  - d) the ability to enhance and filter voice recordings digitally by means of suitable software; and
  - e) the capability to graphically analyse data, to derive additional parameters not explicitly recorded, to validate the data by cross-checking and other analytical methods to determine data accuracy and limitations.

**Participation by the State of manufacture (or design) and the State of the operator**

5. The State of manufacture (or design) has airworthiness responsibilities and the expertise normally required to read out and analyse flight recorder information. Since flight recorder information can often reveal airworthiness problems, the State of manufacture (or Design) should have a representative present when the flight recorder read-out and analysis are being conducted in a State other than the State of manufacture (or design).

6. The State of the operator has regulatory responsibilities regarding the flight operation and can provide insights into operational issues which may be specific to the operator. Since flight recorder information can reveal operational problems, the State of the operator should also have a representative present when the flight recorder read-out and analysis are being conducted..

**Recommended procedures**

7. The flight data recorder and the cockpit voice recorder should be read out by the same facility, because they contain complementary data which can help validate each recording and aid in determining timing and synchronization.

8. Flight recorders should not be opened or powered up and original recordings should not be copied (particularly not by high-speed copy devices) prior to the read-out because of the risk of damage to the recordings.

9. The facility at which the flight recorders are read out for another State should be given an opportunity to comment on the final report in order to ensure that the characteristics of the flight recorder analysis have been taken into account.

10. The facility at which the flight recorders are read out may require the expertise of the aircraft manufacturer and the operator in order to verify the calibration data and validate the recorded information.

11. The State conducting the investigation may leave the original recordings, or a copy of them, with the read-out facility until the investigation is completed, in order to facilitate the timely resolution of additional requests or clarifications, providing that the facility has adequate security procedures to safeguard the recordings.

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**ATTACHMENT E****GUIDANCE FOR THE DETERMINATION OF AIRCRAFT DAMAGE**

1. If an engine separates from an aircraft, the event is categorized as an accident even if damage is confined to the engine.
2. A loss of engine cowls (fan or core) or reverser components which does not result in further damage to the aircraft is not considered an accident.
3. Occurrences where compressor or turbine blades or other engine internal components are ejected through the engine tail pipe are not considered an accident.
4. A collapsed or missing radome is not considered an accident unless there is related substantial damage in other structures or systems.
5. Missing flap, slat and other lift augmenting devices, winglets, etc., that are permitted for dispatch under the configuration deviation list (CDL) are not considered to be an accident.
6. Retraction of a landing gear leg, or wheels-up landing, resulting in skin abrasion only. If the aircraft can be safely dispatched after minor repairs, or patching, and subsequently undergoes more extensive work to effect a permanent repair, then the occurrence would not be classified as an accident.
7. If the structural damage is such that the aircraft depressurizes, or cannot be pressurized, the occurrence is categorized as an accident.
8. The removal of components for inspection following an occurrence, such as the precautionary removal of an undercarriage leg following a low-speed runway excursion, while involving considerable work, is not considered an accident unless significant damage is found.
9. Occurrences that involve an emergency evacuation are not counted as an accident unless someone receives serious injuries or the aircraft has otherwise sustained significant damage.

*Note 1.- Regarding aircraft damage which adversely affects the structural strength, performance or flight characteristics, the aircraft may have landed safely, but cannot be safely dispatched on a further sector without repair.*

*Note 2.- If the aircraft can be safely dispatched after minor repairs and subsequently undergoes more extensive work to effect a permanent repair, then the occurrence would not be classified as an accident. Likewise, if the aircraft can be dispatched under the CDL with the affected component removed, missing or inoperative, the repair would not be considered as a major repair and consequently the occurrence would not be considered an accident.*

*Note 3.- The cost of repairs, or estimated loss, such as provided by insurance companies may provide an indication of the damage sustained but should not be used as the sole guide as to whether the damage is sufficient to count the occurrence as an accident. Likewise, an aircraft may be considered a "hull loss" because it is uneconomic to repair, without it having incurred sufficient damage to be classified as an accident.*