



RASG-EUR Accident Investigation and ECCAIRS user Workshop

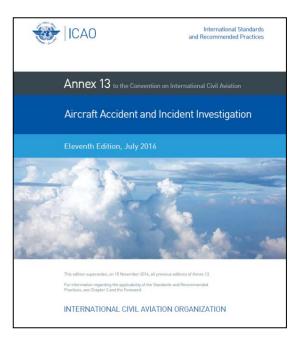
State Letters on amendments to Annex 13

ICAO EUR/NAT, Paris 8-10 April 2019





Current amendment 16 to Annex 13



- Provisions upgraded to Standards :
 - 1. Evidential material during investigations (5.4.3)
 - 2. Monitoring the progress of actions taken in response to safety recommendations (6.11 and 6.12)
- Applicable since 8 Nov. 2018





- SL2018/34 of 3 April 2018 arising from AIGP/3:
 - 1. Definition for "Accredited representative"
 - 2. Alignment of provisions on notification, and dissemination of Final Reports
 - 3. Timely investigations and release of Final Report
 - 4. Facilitation of the entry of investigators
 - 5. Rights and entitlement of an expert
 - 6. Consultation of draft safety recommendations
 - 7. List of examples of serious incidents
 - 8. Delegation of investigations
- Adopted by the ICAO Council in January 2019
- Annex 13, amendment 17 applicable on 5 Nov. 2020







- Definition of "Accredited Representative":
 - Standard 3.2 of Annex 13 requires States to establish an independent accident investigation authority.
 - Definition amended to be aligned with the principle that the accredited representative would normally be from the State's accident investigation authority

ANNEX 13 TO THE CONVENTION ON INTERNATIONAL CIVIL AVIATION

CHAPTER 1. DEFINITIONS

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, t The designated accredited representative would normally be from that the State's accident investigation authority.

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- Alignment of provisions on notification and dissemination of Final Reports
 - Annex 13, 4.1 requires that when an accident or serious incident occurs, a notification shall be forwarded to the States of Registry, Operator, Design and Manufacturer.
 - States receive in some cases a draft Final Report of an incident for consultation, as required in 6.3, but were unaware that an investigation into the incident had been instituted
 - Standard 4.1 to include the text "or an incident to be investigated within the context of this Annex"

Forwarding

4.1 The State of Occurrence shall forward a notification of an accident, or a serious incident, or an incident to be investigated within the context of this Annex, with a minimum of delay and by the most suitable and quickest means available, to:

. .

However, when the State of Occurrence is not aware of a serious incident, or an incident to be investigated, 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.

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Format and content



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 the lack of complete information:

for accidents the identifying abbreviation ACCID, for serious incidents SINCID, for incidents INCID;

date and time (local time or UTC) of the accident or serious incident;

description of the accident or serious incident and the extent of damage to the aircraft so far as is known;

physical characteristics of the accident or serious incident area, as well as an indication of access difficulties or special requirements to reach the site;

Note 1.— The 4-letter designator "YLYX" in association with an ICAO 4-letter location indicator forms the 8-letter addressee indicator for messages sent over the AFTN to authorities responsible for aircraft accident and serious—incident investigations. For messages sent over the public telecommunication service the addressee indicator cannot be used and a postal or telegraphic address must be substituted.



- Alignment of provisions on notification and dissemination of Final Reports
 - Standard 6.3 does not consider the classification of occurrence for the consultation of draft Final Reports, being applicable to both accidents and incidents
 - Standard 6.5 requires that Final Reports of accidents and incidents are made publicly available.
 - But, Standard 6.4 requires that Final Reports of accidents only be sent out.
 - The proposal aims to align 6.4 with other provisions by deleting "of an accident".

Recipient States

- 6.4 The Final Report of the investigation of an accident shall be sent with a minimum of delay by the State conducting the investigation to:
 - a) ...





- Timely investigation of accidents and serious incidents and release of the Final Reports
 - Recommendations are proposed to ensure that investigations called for in Annex 13 are duly instituted and conducted and that the safety information generated during investigations is made available for safety actions.
 - Such provisions would be applicable only when the State of Occurrence does not conduct an investigation, nor agrees with its delegation, as set forth in Annex 13

5.1.3 **Recommendation.**— If the State of Occurrence does not institute and conduct an investigation, and does not delegate the investigation to another State or a regional accident and incident investigation organization, as set out in 5.1 and 5.1.2, the State of Registry or, in the following order, the State of the Operator, the State of Design or the State of Manufacture is entitled to request in writing the State of Occurrence to delegate the conducting of such investigation. If the State of Occurrence gives express consent or does not reply to such a request within 30 days, the State making the request should institute and conduct the investigation with such information as is available.

. . .

Note 6.— The delegation of an investigation does not absolve the State of Occurrence from its obligation under this Annex.

Note 7.— Paragraph 5.1.3 does not necessarily give the State making the request the right to access the accident site, wreckage or any other evidence or information situated within the territory of the State of Occurrence.

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- Timely investigation of accidents and serious incidents and release of the Final Reports
 - Similar provisions for accidents or incidents outside the territory of any State.

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 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 or a regional accident and incident investigation organization by mutual arrangement and consent.

. . .

5.3.2 **Recommendation.**— If the State of Registry does not institute and conduct an investigation, and does not delegate the investigation to another State or a regional accident and incident investigation organization, as set out in 5.3, the State of the Operator or, in the following order, the State of Design, or the State of Manufacture is entitled to request in writing the State of Registry to delegate the conducting of such investigation. If the State of Registry gives express consent or does not reply to such a request within 30 days, the State making the request should institute and conduct the investigation with such information as is available.

Note.— Paragraph 5.3.2 does not absolve the State of Occurrence from its obligation under this Annex.





- Timely investigation of accidents and serious incidents and release of the Final Reports
 - Another proposal entitles States participating in the investigation to request consent to release a statement containing safety issues, if the State conducting the investigation does not publish the Final Report or an interim statement within a reasonable timeframe.

Release of the Final Report

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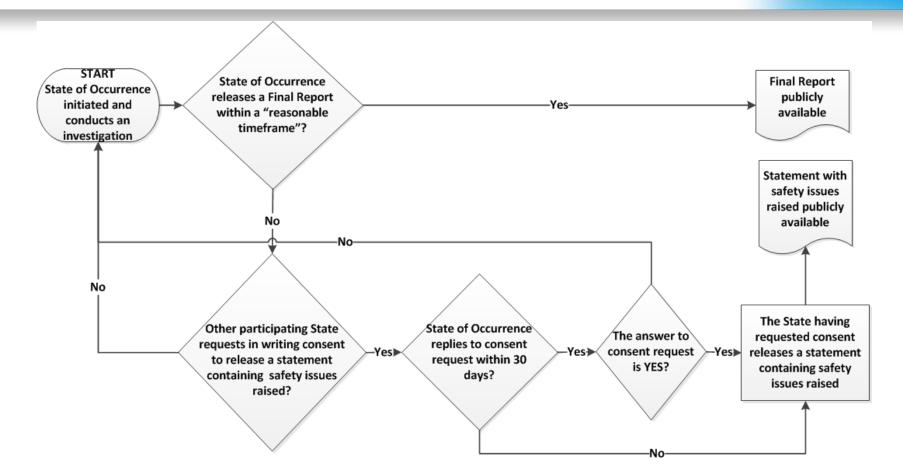
- 6.6 If the report cannot be made publicly available within twelve months, the State conducting the investigation shall make an interim statement publicly available on each anniversary of the occurrence, detailing the progress of the investigation and any safety issues raised.
- 6.6.1 **Recommendation.** If the State conducting the investigation does not make the Final Report or an interim statement publicly available within a reasonable timeframe, other States participating in the investigation are entitled to request in writing from the State conducting the investigation express consent to release a statement containing safety issues raised with such information as is available. If the State conducting the investigation gives express consent or does not reply to such a request within 30 days, the State making the request should release such a statement after coordinating with participating States.

Note.— Guidance on what may constitute a "reasonable timeframe" for a State to make a Final Report and/or an interim statement publicly available is contained in the Manual of Aircraft Accident and Incident Investigation (Doc 9756), Part IV—Reporting.

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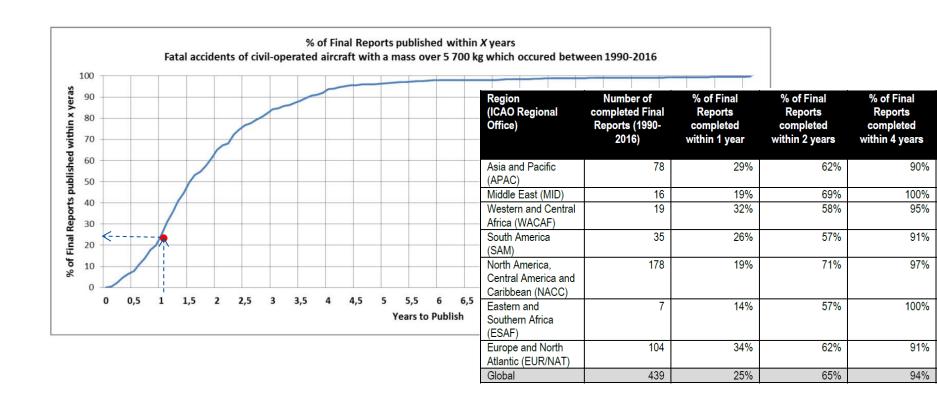








Timely investigations - "Reasonable timeframe" to publish a Final Report







- Facilitation of the entry of investigators
 - When accredited representatives, their advisers and equipment are required to travel
 to the State of Occurrence for participation in the on-site investigation, it sometimes
 takes a long time to obtain visas and establish required communications with the
 related authorities to expedite the process
 - Amendment to Note 2 below 5.24 to encourage AIAs to enter into agreements with the appropriate authorities to expedite the entry of investigators into the State of Occurrence.
 - 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.

...

Note 2.— Facilitation of the entry of the accredited representatives, their advisers and equipment is covered in Annex 9 — Facilitation. The carriage of an official or service passport may expedite the entry. Entry of investigation personnel and equipment may be expedited by the establishment of prior agreements between the accident investigation authority and immigration and customs authorities within the State.





- Rights and entitlement of an expert
 - The heading of paragraph 5.27 in Annex 13 relating to the rights and entitlement during investigations of States having suffered fatalities or serious injuries to their citizens is potentially misleading when read together with the heading of 5.18 and 5.23, in which States are entitled to appoint accredited representatives to the investigation;
 - Under 5.27 the State shall be entitled to nominate an expert, and not an accredited representative.
 - To avoid potential confusion of the rights and entitlements of an expert with those of an accredited representative, it is proposed to delete the word "participation" from the heading of paragraph 5.27.







PARTICIPATION I THE INVESTIGATION

Note.— Nothing in this Annex is intended to imply that the accredited representative and advisers of a State have to be always present in the State in which the investigation is conducted.

PARTICIPATION OF THE STATE OF REGISTRY,
HE STATE OF THE OF REATOR, THE STATE OF DESIGN AND
THE STATE OF MANUFACTURE

Rights

5.18 The State of Registry, the State of the Operator, the State of Design and the State of Manufacture shall each be entitled to appoint an accredited representative to participate in the investigation.

Note.— Nothing in this Standard is intended to preclude the State that designed or manufactured the powerplant or major components of the aircraft from requesting participation in the investigation of an accident.

- 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 Recommendation.— When neither the State of Registry, nor the State of the Operator appoint an accredited representative, the State conducting the investigation should 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 Recommendation.— When neither the State of Design nor the State of Mamifacture appoint an accredited representative, the State conducting the investigation should invite the organizations responsible for the type design and the final assembly of the aircraft to participate, subject to the procedures of the State conducting the investigation.

Obligations

5.2.2 When the State 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.

Note 1.— Nothing in 5.22 is intended to preclude the State conducting an investigation from requesting the State that designed or manufactured the powerplant or major components of the aircraft to appoint an accredited representative whenever the former State believes that a useful contribution can be made to the investigation or when such participation might result in increased safety.

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Note 2.— Nothing in 5.22 is intended to preclude the State conducting an investigation from requesting the State of Design and the State of Manufacture to give assistance in the investigation of accidents other than those in 5.22.

PARTICIPATION OF OTHER STATES

Rights

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

Note.— Any State that provides an operational base for field investigations, or is involved in search and rescue or which are supported in the search and the search of a code-share or alliance partner of the operator, may also be invited to appoint an accredited representative to participate in the investigation.

ENTITLEMENT OF ACCREDITED REPRESENTATIVES

Advisors

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.

Note 1.— Nothing in the above provisions is intended to preclude a State participating in an investigation from calling upon the best technical experts from any source and appointing such experts as advisers to its accredited representative.

Note 2.— Facilitation of the entry of the accredited representatives, their advisers and equipment is covered in Annex 9.— Facilitation. The carriage of an official or service passport may expedite the entry.

5.24.1 Advisers assisting accredited representatives shall be permitted, under the accredited representatives supervision, to participation 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-change, 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;

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- 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.

Note 1.— It is recognized that the form of participation would be subject to the procedures of the State in which the investigation, or part thereof, is being conducted.

Note 2.— The collection and recording of information need not be delayed to await the arrival of an accredited representative.

Note 3.—Nothing in this Standard precludes the State conducting the investigation from extending participation beyond the entitlement enumerated.

Note 4.— The pertinent documents referred to in subparagraph e) also include documents such as the reports on examinations of components or studies performed within the framework of the investigation.

Obligations

- 5.26 Accredited representatives and their advisers:
- a) shall provide the State conducting the investigation with all relevant information available to them; and
- shall not divulge information on the progress and the findings of the investigation without the express consent of the State conducting the investigation.

Note.—Nothing in this Standard procludes prompt release of facts when authorized by the State conducting the investigation, nor does this Standard proclude accredited representatives from reporting to their respective States in order to facilitate appropriate safety actions.



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

5-9 10/11/16

10/11/16





- Consultation of draft safety recommendations
 - At any stage of the investigation, the accident investigation authority shall recommend actions considered necessary to enhance safety.
 - To ensure that the goal of a safety recommendation is achieved, it is important that draft safety recommendations are coordinated with States participating in the investigation.
 - A Note to Standard 6.8 to encourage States to coordinate draft safety recommendations is proposed.

6.8 At any stage of the investigation of an accident or incident, the accident 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.

Note.— Nothing in this Standard is intended to preclude the State conducting the investigation from consulting States participating in the investigation on its draft safety recommendations, inviting their comments on the appropriateness and effectiveness of these recommendations.





- List of examples of serious incidents
 - Attachment C to Annex 13 contains a list of incidents that are likely to be serious incidents.
 - The classification of a serious incident is left to the discretion of States, which may result in some serious incidents not being investigated and valuable safety lessons going undocumented and unlearned.
 - Guidance for States to apply an event risk-based analysis when determining if an incident was a serious incident was deemed necessary.
 - It is proposed to include a simplified version of the Aviation Risk Management Solutions
 (ARMS) event risk classification (ERC) matrix, which was developed by the AIGP, in
 Attachment C. A simplified version was proposed because often times only limited
 information to classify an incident is available at the time of notification.
 - Amendments to the list of potential serious incidents are also proposed.





- 2. There may be a high probability of an accident if there are few or no safety defences remaining to prevent the incident from progressing to an accident. To determine this, an event risk-based analysis, that takes into account the most credible scenario had the incident escalated and the effectiveness of the remaining defences between the incident and the potential accident, can be performed as follows:
 - a) consider whether there is a credible scenario by which this incident could have escalated into an
 accident; and
 - b) assess the remaining defences between the incident and the potential accident as:
 - effective, if several defences remained and needed to coincidently fail; or
 - limited, if few or no defences remained, or when the accident was only avoided due to providence.

Consider both the number and robustness of the remaining defences between the incident and the potential accident. Ignore defences that already failed, and consider only those which worked and any subsequent defences still in place.

Note 1.— The most credible scenario refers to the realistic assessment of injury and/or damage

Note 2.— Defences include crew, their training and procedures, ATC, alerts (within and outside the aircraft), aircraft systems and redundancies, structural design of the aircraft and aerodrome infrastructure.

The combination of these two assessments helps in determining which incidents are serious incidents:

		b) Remaining defences the potential accident	b) Remaining defences between the incident and the potential accident	
		Effective	Limited	
a) Most credible	Accident	Incident	Serious Incident	
scenario	No accident	In	Incident	







23. The incidents listed are typical examples of incidents that are likely to be may be serious incidents. T-However, the list is not exhaustive and only serves as guidance to the definition of and, depending on the context, items on the list may not be classified as serious incidents if effective defences remained between the incident and the credible scenario.

Near collisions requiring an avoidance manoeuvre to avoid a collision or an unsafe situation or when an avoidance action would have been appropriate.

Collisions not classified as accidents.

Controlled flight into terrain only marginally avoided.

Aborted take-offs on a closed or engaged runway, on a taxiway¹ or unassigned runway.

Take-offs from a closed or engaged runway, from a taxiway¹ or unassigned runway.

Landings or attempted landings on a closed or engaged runway, on a taxiway¹ or, unassigned runway or unintended landing locations such as roadways.

Retraction of a landing gear leg or wheels-up landing not classified as an accident.

Dragging during landing of a wing tip, an engine pod or any other part of the aircraft, when not classified as an accident.

Gross failures to achieve predicted performance during take-off or initial climb.

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.

Events requiring the emergency use of oxygen by the flight crew.

Aircraft structural failures or engine disintegrations, including uncontained turbine engine failures, not classified as an accident.

Multiple malfunctions of one or more aircraft systems seriously affecting the operation of the aircraft.

Flight crew incapacitation in flight:

- a) for single pilot operations (including remote pilot);
- b) for multi-pilot operations for which flight safety was compromised because of a significant increase in workload for the remaining crew.

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.

Runway incursions classified with severity A. The Manual on the Prevention of Runway Incursions (Doc 9870) contains information on the severity classifications.

Take-off or landing incidents. Incidents such as under-shooting, overrunning or running off the side of runways.

System failures (including loss of power or thrust), weather phenomena, operations outside the approved flight envelope or other occurrences which caused or could have caused difficulties controlling the aircraft.

Failures of more than one system in a redundancy system mandatory for flight guidance and navigation.

The unintentional or, as an emergency measure, the intentional release of a slung load or any other load carried external to the aircraft.





- Delegation of investigations
 - It was identified that high-level guidance in Annex 13 was needed for the various concepts of delegation, which should be flexible so as to enable States to enter into agreements.
 - The scope of an investigation delegation agreement is at the discretion of the parties concerned and may be categorized as whole or partial delegation of the investigation.
 - To this effect, a new attachment to Annex 13 is proposed as guidance for MOUs and delegation agreements..





ATTACHMENT F. INVESTIGATION DELEGATION AGREEMENTS

In accordance with paragraph 5.1, the State of Occurrence is responsible for instituting and conducting an investigation, but it may delegate the whole or any part of the conducting of such investigation to another State or a regional accident and incident investigation organization (RAIO) by mutual arrangement and consent. Similarly, delegation of the conducting of an investigation can take place when a State is required to institute an investigation of accidents or serious incidents occurring in the territory of a non-Contracting State that does not intend to conduct an investigation in accordance with Annex 13, or when the location of the accident or serious incident cannot definitely be established as being in the territory of any State.

Entering into an investigation delegation agreement normally begins with a decision made by the State responsible for instituting and conducting the investigation. In general, such a State may consider delegating the conducting of the investigation to another State or RAIO, in particular for those situations when it might be beneficial or more practical for the selected State or RAIO to conduct the investigation,

or when the State responsible for instituting the investigation lacks the resources or capability to investigate the occurrence in accordance with Annex 13.

Depending on the parties involved in the investigation, the scope of the investigation to be conducted by another State or RAIO would determine whether a formal investigation delegation agreement is required, or if a mutual understanding would suffice. In general, delegation of the whole investigation requires a formal investigation delegation agreement. In the case of delegation of part of the investigation, a formal delegation agreement would be at the discretion of the two parties.

When the whole investigation is delegated to another State or an RAIO, such State or RAIO is expected to be responsible for the conduct of the investigation, including the issuance of the Final Report and the ADREP reporting. When a part of the investigation is delegated, the delegating State usually retains the responsibility for the conduct of the investigation, including the issuance of the Final Report and the ADREP reporting. In any event, the delegating State shall use every means to facilitate the investigation.

It is important to differentiate between the institution and the conduct of an investigation in terms of the triggering and terminating events of each function. *Instituting* the investigation begins from the time the accident investigation authority is informed about the accident or incident, and forwards the official notification of the occurrence to concerned States and to ICAO as required in paragraph 4.1. *Conducting* the investigation is the function of performing an investigation in accordance with Annex 13, and issuing reports including the Final Report.

It is important that the investigation delegation agreement achieves the purpose of the investigation and maintains conformity with the requirements of Annex 13. Therefore, the parties to the agreement should ensure that the responsibility of each party is clearly defined. The contents and details of the agreement depend on the scope of the delegation.

Note.— The Manual of Aircraft Accident and Incident Investigation, Part I — Organization and Planning (Doc 9756), Chapter 2, contains guidance material on the delegation of investigations and a model delegation agreement.





Proposal for amendment to Annex 13 arising from AIGP/4

- SL2019/12 of 14 March 2019
 - Safety Recommendation of Global Concern (SRGC); and
 - Effective use of ground-based recordings in the investigation of an accident or an incident
- Comments on the amendment proposals to <u>icaohq@icao.int</u> using the response form attached to the SL no later than 28 June 2019



comments. I unvite you to submart an electronic version in Word format to <u>insularization and</u>. The Air Navigation Commission has inside on to especifically indicate that comments received after the due may not be considered by the Commission and the Council. In this connection, should you anticipate a delay in the receive of vour receiv, cleaned the maximum of the the due to the received of the the day.

 For your information, the proposed amendments to Annex 13 are envisaged for seplicability on 5 November 2020. Any comments you may have thereon would be accreciated.





Thank you you for your attention Спасибо за внимание.