<table>
<thead>
<tr>
<th>TOPICS</th>
<th>AFFECTED</th>
<th>APPLICABILITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction of remote pilot licence and the provision for the regulation of RPAS licensing to support international flights operating under IFR</td>
<td>1</td>
<td>3 Nov 2022*</td>
</tr>
<tr>
<td>Amendment as a result of proposed amendments to Annex 1 relating to RPAS</td>
<td>2</td>
<td>8 Nov 2018 (2022*)</td>
</tr>
<tr>
<td>Consequential amendment concerning change of references related to the provision of aeronautical information service</td>
<td>3</td>
<td>8 Nov 2018</td>
</tr>
<tr>
<td>Introduction of space weather advisory information services; improvement of the provision of SIGMET information by meteorological watch offices (MWOS); information on the release of radioactive material into the atmosphere; SIGMET and AIRMET information; modifications of IWXXM representations of information; and aeronautical meteorological personnel qualification and competency, education and training</td>
<td>3</td>
<td>8 Nov 2018 (2019*) (2020*)</td>
</tr>
</tbody>
</table>

* Related topics contain embedded applicability dates
<table>
<thead>
<tr>
<th>TOPICS</th>
<th>AFFECTED</th>
<th>APPLICABILITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consequential amendment to address the revised definition and description of &quot;Procedure altitude/height&quot;</td>
<td>4</td>
<td>8 Nov 2018</td>
</tr>
<tr>
<td>Airborne image recordings, flight data recorder parameter lists and the simplification of flight recorder SARPs</td>
<td>6 (I, II, III)</td>
<td>1 Jan 2023*</td>
</tr>
<tr>
<td>Amendment as a result of the restructuring of PANS-OPS, Vol I</td>
<td>2, 6 (I, II, III)</td>
<td>8 Nov 2018</td>
</tr>
<tr>
<td>Approval and global recognition of AMOs (Phase I and II) and provisions linked to EAMR framework</td>
<td>1, 6 (I, II, III), 8</td>
<td>5 Nov 2020*</td>
</tr>
<tr>
<td>Guidance on RFFS and helicopter refueling</td>
<td>6 (I and III)</td>
<td>8 Nov 2018</td>
</tr>
<tr>
<td>Harmonization and alignment of fatigue management SARPs</td>
<td>6 (I and III)</td>
<td>8 Nov 2018</td>
</tr>
<tr>
<td>Security of flight crew compartment</td>
<td>6 (I)</td>
<td>8 Nov 2018</td>
</tr>
</tbody>
</table>

* Related topics contain embedded applicability dates
### Topics Affecting 2018 Annex Amendments

<table>
<thead>
<tr>
<th>TOPICS</th>
<th>AFFECTED</th>
<th>APPLICABILITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Halon replacement in civil aircraft cargo compartment fire suppression systems</td>
<td>8</td>
<td>28 Nov 2024*</td>
</tr>
<tr>
<td>Continuing airworthiness SARPs concerning: Suspension and revocation of Type Certificate; Security Sensitive Airworthiness Directives; transfer and suspension and revocation of a type certificate; and Eligibility, issuance and continued validity of a Certificate of Airworthiness</td>
<td>8</td>
<td>8 Nov 2018</td>
</tr>
<tr>
<td>Design Standards for light aircraft under 750 kg; applicability of Annex 8, Part IIIB to single-engine aeroplanes over 5 700 kg; stall warning Standards; and Standards for the applicability of weight limitations for all aircraft for cargo compartment protection.</td>
<td>8</td>
<td>[D] + 3 Years (28 Nov 2021 *)</td>
</tr>
<tr>
<td>Global navigation satellite system (GNSS) and instrument landing system (ILS)</td>
<td>10 (I)</td>
<td>8 Nov 2018</td>
</tr>
<tr>
<td>Ground-based augmentation system (GBAS), satellite-based augmentation system (SBAS) and the strategy for introduction and application of non-visual aids to approach landing</td>
<td>10 (I)</td>
<td>8 Nov 2018</td>
</tr>
<tr>
<td>Radiotelephony procedures</td>
<td>10 (II)</td>
<td>8 Nov 2018</td>
</tr>
</tbody>
</table>

*Related topics contain embedded applicability dates
<table>
<thead>
<tr>
<th>TOPICS</th>
<th>AFFECTED</th>
<th>APPLICABILITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surveillance and airborne collision avoidance systems (ACAS)</td>
<td>10 (IV)</td>
<td>8 Nov 2018</td>
</tr>
<tr>
<td>Access to evidential material during investigation and monitoring the progress of safety recommendations</td>
<td>13</td>
<td>8 Nov 2018</td>
</tr>
<tr>
<td>Modifications of aerodrome design specifications in Chapters 3 and 4</td>
<td>14 (I)</td>
<td>8 Nov 2018</td>
</tr>
<tr>
<td>Restructure of Annex 15 to facilitate incorporation of AIM requirements and changes to the technical content of Annex 15 to facilitate the transition from AIS to AIM environments</td>
<td>15, 4, 6 (I, II), 10 (I, II), 11, 14 (I, II)</td>
<td>8 Nov 2018 (2020*)</td>
</tr>
<tr>
<td>Space weather information</td>
<td>15</td>
<td>8 Nov 2018</td>
</tr>
</tbody>
</table>

* Related topics contain embedded applicability dates
Access to evidential material during investigations

- **Improvements:**
  - Increased efficiency and effectiveness of investigations.

- **Expected Benefits:**
  - Unrestricted and timely access by investigation authorities to the accident site, examination of the wreckage, and data from flight recorders.

- **Affected Documents**
  - Annex 13 (Amendment 16)
  - Manual on Accident and Incident Investigation Policies and Procedures (Doc 9962)

**Timelines**
- 8 November 2018
  Applicability of amendment(s)
Monitoring the progress of safety recommendations

**Improvements:**
- strengthening of procedures to monitor responses to safety recommendations stemming from investigations and safety studies.

**Expected Benefits:**
- enhancement of collection, analysis and sharing of safety risks.

**Affected Documents**
- Annex 13 (Amendment 16)
- Manual of Aircraft Accident and Incident Investigation, Part IV – Reporting (Doc 9756)

**Timelines**
- 8 November 2018
  Applicability of amendment(s)
Airborne image recordings and flight data recorder parameter lists

• **Improvements:**
  – Flight crew-machine interface (image) data and additional flight data recorder parameters available for investigations.

• **Expected Benefits:**
  – Enhanced understanding of how flight crew interface with the aircraft resulting in effective and efficient investigations.

• **Affected Documents**
  – Annex 6, Part I (Amendment 43)
  – Annex 6, Part II (Amendment 36)
  – Annex 6, Part III (Amendment 22)

---

**Timelines**

- **1 January 2023**
  Applicability of amendment(s)

*Related topics contain embedded applicability dates*
Simplification of flight recorder SARPs

• **Improvements:**
  – Better understanding and interpretation of flight recorder related provisions.

• **Expected Benefits:**
  – Facilitate the implementation of these provisions.

• **Affected Documents**
  – Annex 6, Part I (Amendment 43)
  – Annex 6, Part II (Amendment 36)
  – Annex 6, Part III (Amendment 22)

**Timelines**
• 1 January 2018
  Applicability of amendment(s)
Radiotelephony procedures

• **Improvements:**
  – Add clarity in the transmission of numbers by avoiding repetitions of zeros

• **Expected Benefits:**
  – Enhanced safety through improved transmissions.

• **Affected Documents**
  – Annex 10, Vol. II (Amendment 91)

**Timelines**

• 8 November 2018
  Applicability of amendment(s)
Surveillance and airborne collision avoidance systems (ACAS)

• **Improvements:**
  – Enhances provisions in light of system modifications and operational experience;
  – Introduces emerging technologies, such as extended hybrid surveillance functionality for ACAS

• **Expected Benefits:**
  – Ensure compatibility of surveillance systems and ACAS
  – Reduction of radio frequency pollution to ensure better performance of those systems
  – Interoperability of civil and military SSR systems in order to avoid safety impacts on those operations.

• **Affected Documents**
  – Annex 10, Vol. IV (Amendment 90)
  – Doc 9863, Doc 9871, Doc 9924 and Doc 9994

**Timelines**
- 8 November 2018
  Applicability of amendment(s)
Global navigation satellite system (GNSS) and instrument landing system (ILS)

• **Improvements:**
  – Introduction of GNSS performance monitoring and
  – complete revision of the guidance material on ILS critical and sensitive areas

• **Expected Benefits:**
  – enable States to take informed decisions with regard to approval of the use of new GNSS elements in their airspace
  – enhance the protection of ILS signals from blockage and interference caused by fixed objects or vehicles located within the ILS coverage volume

• **Affected Documents**
  – Annex 10, Vol I (Amendment 91)

---

**Timelines**

• 8 November 2018
  Applicability of amendment(s)
Ground-based augmentation system (GBAS), satellite-based augmentation system (SBAS) and the strategy for introduction and application of non-visual aids to approach and landing

- **Improvements:**
  - Enhanced GBAS performance
  - Clarification of SBAS provisions and extension of the range of Pseudo Random Noise codes allocated to SBAS
  - Update strategy for non-visual aids to approach and landing

- **Expected Benefits:**
  - Enable GBAS to support Cat II/III operations
  - Confirm SBAS integrity requirements and enable wider implementation of SBAS
  - Provide strategic guidance on introduction of GNSS

- **Affected Documents**
  - Annex 10, Vol I (Amendment 91)

---

**Timelines**

- 8 November 2018
  Applicability of amendment(s)
Modifications of aerodrome design specifications in Chapters 3 and 4

**Improvements and Expected Benefits:**
- Updated aerodrome design and guidance to optimize aircraft movements
  - Modified provisions for runway/taxiway/shoulder/strip widths and separation distances based on demonstrable and scientifically verified information to enhance aerodrome capacity and efficiency for newer generation of aircraft
  - Improved provisions enable aerodromes to operate recent aeroplane types with increased capacity, capability and connectivity. Envisaged 80% of aerodromes operating Codes D, E and F aeroplanes in 140 States would benefit

**Affected Documents**
- Annex 14 Vol I (Amendment 14)
- Doc 9981 PANS-Aerodromes;
  Doc 9157 Aerodrome Design Manual Parts 1 and 2

**Timelines**
- 8 November 2018
  Applicability of amendment(s)
Annex 3 Amendments

Introduction of space weather advisory information services; improvement of the provision of SIGMET information by meteorological watch offices (MWOS); information on the release of radioactive material into the atmosphere; SIGMET and AIRMET information; modifications of IWXXM representations of information; and aeronautical meteorological personnel qualification and competency, education and training

• **Improvements:**
  – Introduction of a new space weather information service as requested by Users and improved provision of meteorological (MET) information by 8 November 2018 for Amendment 78 to Annex 3, except for the provisions listed below:
    - 2019 for the provisions concerning the modifications of IWXXM representations and information on the release of radioactive material into the atmosphere;
    - 2020 for the provision concerning the IWXXM as a Standard.

• **Expected Benefits:**
  – Significant efficiencies expected through the operational use of new information.
  – Improved harmonization of the provision of en-route MET information.
  – Improved clarity in the provision of information about tropical cyclones.
  – Removal of ambiguity between operational messages and communications exercise messages.

• **Affected Documents**
  – Annex 3 (Amendment 78); Annex 15 (Amendment 40)
  – PANS-ABC, PANS-ATM

---

**Timelines**

• **8 November 2018**
  Applicability of amendment(s)
Modifications of IWXXM representations of information

- **Improvements:**
  - Extend the use of the *ICAO Meteorological Information Exchange Model* (IWXXM) to facilitate the exchange of meteorological observations and reports (METAR/SPECI), aerodrome forecasts (TAF), SIGMETs, AIRMETs, and volcanic ash and tropical cyclone advisory information, in a system-wide information management (SWIM)-compliant environment.

- **Expected Benefits:**
  - Significant efficiencies would be expected through the integration of meteorological information to the system-wide information management (SWIM) environment.
  - IWXXM transition staged, allowance for some States to defer full implementation.

- **Affected Documents**
  - Annex 3 (Amendment 78)

**Timelines**
- 8 November 2018
  Applicability of amendment(s)
Space weather information

**Improvements:**
- Provision of a new service concerning space weather advisory information.

**Expected Benefits:**
- Response to Users needs expressed by IATA by providing information to assist operators in assessing the risks associated with space weather events.
- Efficiency enhancements will reduce industry costs

**Affected Documents**
- Annex 3 (Amendment 78); Annex 15 (Amendment 40)
- PANS-ABC, PANS-ATM

**Timelines**
- 8 November 2018
  Applicability of amendment(s)
Guidance on RFFS for Operators

• **Improvements:**
  – Improved guidance for Operators on the selection of aerodromes for inclusion in the operational flight plan. Provides flexibility for considering RFFS protection levels as one element of a risk assessment as part of operator SMS

• **Expected Benefits:**
  – Safer and more flexible operation due to selection of the most suitable aerodromes, taking into consideration all relevant factors.

• **Affected Documents**
  – Annex 6, Part I (Amendment 43)

**Timelines**

• 8 November 2018
  Applicability of amendment(s)
Helicopter refueling

• **Improvements:**
  – Upgrades refueling provisions to Standard from recommendation
  – Permits refueling with passengers on board or rotors turning, with mandated and recommended safety measures based on industry best practice.

• **Expected Benefits:**
  – Increased safety and efficiency of helicopter operations by mandating safety procedures. Reduction of exposure to hazardous conditions for transiting passengers.

• **Affected Documents**
  – Annex 6, Part III (Amendment 22)

**Timelines**
• 8 November 2018
Applicability of amendment(s)
Amendment as a result of the restructuring of PANS-OPS, Vol I

• **Improvements:**
  – Corrected reference due to restructuring of PANS OPS Vol

• **Expected Benefits:**
  – Consistency of ICAO documentation

• **Affected Documents**
  – Annex 2 (Amendment 46)
  – Annex 6, Part I (Amendment 43)
  – Annex 6, Part II (Amendment 36)
  – Annex 6, Part III (Amendment 22)

**Timelines**

• 8 November 2018
  Applicability of amendment(s)
Approval and global recognition of AMOs and EAMR

• **Improvements:**
  – Implementation will support the option for the State of Registry to recognize an AMO approval issued by another Contracting State.
  – Implementation will allow flexibility for the use of digital and other paperless forms of maintenance records for States.

• **Expected Benefits:**
  – Reduces cost and facilitate the promotion of the mutual recognition of AMOs.
  – Facilitate interoperability of aircraft

• **Affected Documents**
  – Annex 1 (Amendment 175); Annex 6, Part I (Amendment 43), Annex 6, Part II (Amendment 36), Annex 6, Part III (Amendment 22); Annex 8 (Amendment 106)

**Timelines**

• **5 November 2020** (*)
  Applicability of amendment(s)
Continuing airworthiness SARPs

- **Improvements:**
  - Clear SARPs concerning: Suspension and revocation of Type Certificate; Security Sensitive Airworthiness Directives; transfer and suspension and revocation of a type certificate; and Eligibility, issuance and continued validity of a Certificate of Airworthiness.

- **Expected Benefits:**
  - clarifies the continuing airworthiness responsibilities of a State of Design and the States of Registry regarding the issuance of a certificate of airworthiness.

- **Affected Documents**
  - Annex 8 (Amendment 106)

**Timelines**
- 5 Nov 2018
  Applicability of amendment(s)
Design Standards

- **Improvements:**
  - Clear SARPs concerning: Design Standards for light aircraft under 750 kg, applicability of Annex 8, Part IIIB to single-engine aeroplanes over 5700 kg, stall warning and applicability of weight limitations for all aircraft for cargo compartment protection

- **Expected Benefits:**
  - The amendment offers an opportunity for efficient management of resources.
  - Benefits States that want to facilitate the international commercial operation of light sport aircraft weighing less than 750kg..

- **Affected Documents**
  - Annex 8 (Amendment 106)

---

**Timelines**

- **28 Nov 2021**
  Applicability of amendment(s)

* Related topics contain embedded applicability dates
Halon replacement

• **Improvements:**
  – Clear Standards for Halon replacement in civil aircraft cargo compartment fire suppression systems;

• **Expected Benefits:**
  – The implementation of these SARPs will ensure that there is a reduction in the use of ozone-depleting substances and will have a positive environmental impact

• **Affected Documents**
  – Annex 8 (Amendment 106)

**Timelines**

• 28 Nov 2024*
  Applicability of amendment(s)

* Related topics contain embedded applicability dates
Harmonization and alignment of fatigue management SARPs

• **Improvements:**
  – Enables FRMS regulations for international commercial helicopter operations

• **Expected Benefits:**
  – Offers an opportunity for increased operational flexibility under FRMS while maintaining or improving safety margins
  – Enhances understanding of operator responsibilities for fatigue management when complying with prescribed flight and duty limitations.

• **Affected Documents**
  – Annex 6, Part I (Amendment 43); Annex 6, Part III (Amendment 22)

**Timelines**

• 8 November 2018
  Applicability of amendment(s)
Security of flight crew compartment

• **Improvements:**
  – Increased threshold for the provision requiring a locked crew compartment door, in line with increasing MCTOM of aircraft used for business aviation

• **Expected Benefits:**
  – Increased MCTOM threshold correctly distinguishes between types of operation as per the original intent of the provision.

• **Affected Documents**
  – Annex 6, Part I (Amendment 43)

**Timelines**
• 8 November 2018
  Applicability of amendment(s)
Review and restructure of Annex 15

• **Improvements:**
  – Restructure of Annex 15 to facilitate the incorporation of Aeronautical Information management (AIM) requirements
  – Review of the technical content of Annex 15 to enable the transition to quality-assured and digital data-centric environments
  – Improvement of the SNOWTAM format (with an applicability date of 5 Nov 2020)

• **Expected Benefits:**
  – Harmonized approach to transition to AIM environments, through a global set of provisions and an enhanced terminology defining the AIM scope, functions and associated products and services.
  – Enhanced understanding of roles and responsibilities along the aeronautical data process
  – Better means are provided to States to increase quality at origination and to maximize data integrity along the aeronautical data process
  – Significant efficiencies expected in the process through the use of new digital aeronautical information products (“digital data sets”)

• **Affected Documents**
  – Annex 15 (Amendment 40)

**Timelines**

• **8 November 2018**
  Applicability of amendment(s)
Consequential amendment to address the revised definition and description of "Procedure altitude/height"

- **Improvements:**
  - The definition of procedure altitude/height is expanded outside the intermediate and final approach segment scope to account elements such as air traffic service requirements, airspace structure, environmental considerations

- **Expected Benefits:**
  - More consistent use of terminology concerning altitudes in instrument procedure design and across the ICAO documents
  - More standardized repeatable vertical profile in all phases of flight and therefore enhanced efficiency of flight

- **Affected Documents**
  - Annex 4 (Amendment 60)

**Timelines**

- 8 November 2018
  Applicability of amendment(s)
Consequential amendment concerning change of references related to the provision of aeronautical information service

- **Improvements:**
  - Change of references

- **Expected Benefits:**
  - Alignment of ICAO provisions

- **Affected Documents**
  - Annex 3 (Amendment 78)

**Timelines**
- 8 November 2018
  Applicability of amendment(s)
Introduction of remote pilot licence and the provision for the regulation of RPAS licensing to support international flights operating under IFR

- **Improvements:**
  - Creation of a regulatory structure for the issuance of remote pilot licence within the scope of international Instrument flight rules (IFR) operations

- **Expected Benefits:**
  - Guidance for States in order to implement their own regulations for licensing necessary to allow future operations
  - Standardized approach for RPAS licensing

- **Affected Documents**
  - Annex 1 (Amendment 175)

**Timelines**
- 3 November 2022
  Applicability of amendment(s)
Amendment as a result of proposed amendments to Annex 1 relating to RPAS

• **Improvements:**
  – Consequential update of Annex 2 appendix 4 is necessary to address the introduction of a regulatory framework for remote pilots within the scope of international instrument flight rules (IFR) operations

• **Expected Benefits:**
  – Consistency in ICAO regulatory framework

• **Affected Documents**
  – Annex 2 (Amendment 46)

---

**Timelines**

• 8 November 2018
  Applicability of amendment(s)
  – Embedded standards for 3 November 2022

*Related topics contain embedded applicability dates*