



ICAO

International Standards
and Recommended Practices

Annex 6 to the Convention on International Civil Aviation

Operation of Aircraft

Part III — International Operations — Helicopters
Eleventh Edition, July 2022



This edition supersedes, on 3 November 2022, all previous editions of Part III of Annex 6.

For information regarding the applicability of the Standards and Recommended Practices, see the Foreword.

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Part III — International Operations — Helicopters
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This edition incorporates all amendments adopted by the Council prior to 25 February 2020.
This edition supersedes, as of November 2022, all previous editions of Part III of Annex 6, Volume 1.

For information regarding the applicability of the Standards and Recommended Practices (SARPs), see the Foreword.

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AMENDMENTS

Amendments are announced in the supplements to the *Products and Services Catalogue*; the Catalogue and its supplements are available on the ICAO website at www.icao.int. The space below is provided to keep a record of such amendments.

RECORD OF AMENDMENTS AND CORRIGENDA

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ABBREVIATIONS AND SYMBOLS

(used in this Annex)

Abbreviations

ACAS	Airborne collision avoidance systems
ADRS	Aircraft data recording system
ADS-C	Automatic dependent surveillance — contract
AFCS	Automatic flight control system
AIR	Airborne image recorder
AIRS	Airborne image recording system
AOC	Air operator certificate
APCH	Approach
AR	Authorization required
ATC	Air traffic control
ATM	Air traffic management
ATN	Aeronautical telecommunication network
ATS	Air traffic services
CAA	Civil Aviation Authority
CARS	Cockpit audio recording system
CAT I	Category I
CAT II	Category II
CAT III	Category III
CFIT	Controlled flight into terrain
cm	Centimetre
COMAT	Operator material
CPDLC	Controller-pilot data link communications
CVR	Cockpit voice recorder
CVS	Combined vision system
DA	Decision altitude
DA/H	Decision altitude/height
DH	Decision height
DLR	Data link recorder
DLRS	Data link recording system
DME	Distance measuring equipment
EFB	Electronic flight bag
EFIS	Electronic flight instrument system
EGT	Exhaust gas temperature
EICAS	Engine indication and crew alerting system
ELT	Emergency locator transmitter
ELT(AD)	Automatic deployable ELT
ELT(AF)	Automatic fixed ELT
ELT(AP)	Automatic portable ELT
ELT(S)	Survival ELT
EPR	Engine pressure ratio

EUROCAE	European Organisation for Civil Aviation Equipment
EVS	Enhanced vision system
FANS	Future air navigation system
FATO	Final approach and take-off area
FDR	Flight data recorder
FM	Frequency modulation
ft	Foot
g	Normal acceleration
hPa	Hectopascal
HUD	Head-up display
IFR	Instrument flight rules
IGE	In ground effect
ILS	Instrument landing system
IMC	Instrument meteorological conditions
inHg	Inch of mercury
kg	Kilogram
km	Kilometre
kN	Kilonewton
kt	Knot
LDAH	Landing distance available
LDP	Landing decision point
LDRH	Landing distance required
LED	Light emitting diode
m	Metre
mb	Millibar
MDA	Minimum descent altitude
MDA/H	Minimum descent altitude/height
MDH	Minimum descent height
MEL	Minimum equipment list
MHz	Megahertz
MLS	Microwave landing system
MMEL	Master minimum equipment list
MOPS	Minimum operational performance specification
N ₁	Low pressure compressor speed (two-stage compressor); fan speed (three-stage compressor)
NM	Nautical mile
NVIS	Night vision imaging systems
OCA	Obstacle clearance altitude
OCA/H	Obstacle clearance altitude/height
OCH	Obstacle clearance height
OEI	One-engine-inoperative
OGE	Out of ground effect

PANS	Procedures for Air Navigation Services
PBC	Performance-based communication
PBN	Performance-based navigation
PBS	Performance-based surveillance
PNR	Point of no return
psi	Pound per square inch
R	Rotor radius
RCP	Required communication performance
RNAV	Area navigation
RNP	Required navigation performance
RSP	Required surveillance performance
RTCA	Radio Technical Commission for Aeronautics
RVR	Runway visual range
SI	International System of Units
SOP	Standard operating procedure
SVS	Synthetic vision system
T ₄	Engine exhaust gas temperature
TDP	Take-off decision point
TIT	Turbine inlet temperature
TLOF	Touchdown and lift-off area
TODAH	Take-off distance available
TODRH	Take-off distance required
UTC	Coordinated Universal Time
VFR	Visual flight rules
VMC	Visual meteorological conditions
VNAV	Vertical navigation
V _{TOSS}	Take-off safety speed
V _y	Best rate of climb speed

Symbols

°C	Degrees Celsius
%	Per cent

PUBLICATIONS

(referred to in this Annex)

ICAO Publications

Convention and Related Acts

Convention on International Civil Aviation (Doc 7300)

Protocol Relating to an Amendment to the Convention on International Civil Aviation (Article 83 bis) (Doc 9318)

Annexes to the Convention on International Civil Aviation

Annex 1 — Personnel Licensing

Annex 2 — Rules of the Air

Annex 3 — Meteorological Service for International Air Navigation

Annex 4 — Aeronautical Charts

Annex 5 — Units of Measurement to be Used in Air and Ground Operations

Annex 6 — Operation of Aircraft

Part I — International Commercial Air Transport — Aeroplanes

Part II — International General Aviation — Aeroplanes

Annex 8 — Airworthiness of Aircraft

Annex 9 — Facilitation

Annex 10 — Aeronautical Telecommunications

Volume II — Communication Procedures including those with PANS status

Volume III — Communication Systems (Part I — Digital Data Communication Systems; Part II — Voice Communication Systems)

Volume IV — Surveillance and Collision Avoidance Systems

Annex 11 — Air Traffic Services

Annex 12 — Search and Rescue

Annex 13 — Aircraft Accident and Incident Investigation

Annex 14 — Aerodromes

Volume I — Aerodrome Design and Operations

Volume II — Heliports

Annex 15 — *Aeronautical Information Services*

Annex 16 — *Environmental Protection*
Volume I — *Aircraft Noise*

Annex 18 — *The Safe Transport of Dangerous Goods by Air*

Annex 19 — *Safety Management*

Procedures for Air Navigation Services

ATM — Air Traffic Management (Doc 4444)

OPS — Aircraft Operations (Doc 8168)
Volume I — *Flight Procedures*
Volume II — *Construction of Visual and Instrument Flight Procedures*

TRG — Training (Doc 9868)

Regional Supplementary Procedures (Doc 7030)

Manuals¹

Aeronautical Surveillance Manual (Doc 9924)

Airport Services Manual (Doc 9137)
Part 1 — *Rescue and Fire Fighting*
Part 8 — *Airport Operational Services*

Airworthiness Manual (Doc 9760)

Cabin Crew Safety Training Manual (Doc 10002)

Emergency Response Guidance for Aircraft Incidents Involving Dangerous Goods (Doc 9481)

Flight Planning and Fuel Management (FPFM) Manual (Doc 9976)

Helicopter Code of Performance Development Manual (Doc 10110)

Human Factors Training Manual (Doc 9683)

Manual for the Oversight of Fatigue Management Approaches (Doc 9966)

Manual of Aircraft Ground De-icing/Anti-icing Operations (Doc 9640)

Manual of All-Weather Operations (Doc 9365)

1. The manuals referenced will be updated as necessary to harmonize the terminology with that used in the new Annex 19.

Manual of Criteria for the Qualification of Flight Simulation Training Devices (Doc 9625)
Volume II — Helicopters

Manual of Evidence-based Training (Doc 9995)

Manual of Procedures for Operations Inspection, Certification and Continued Surveillance (Doc 8335)

Manual of Procedures for Establishment and Management of a State's Personnel Licensing System (Doc 9379)

Manual on Electronic Flight Bags (EFBs) (Doc 10020)

Manual on Flight Data Analysis Programmes (FDAP) (Doc 10000)

Manual on the Implementation of Article 83 bis of the Convention on International Civil Aviation (Doc 10059)

Performance-based Communication and Surveillance (PBCS) Manual (Doc 9869) (previously titled the *Manual on Required Communication Performance (RCP)*)

Performance-based Navigation (PBN) Manual (Doc 9613)

Policy and Guidance Material on the Economic Regulation of International Air Transport (Doc 9587)

Preparation of an Operations Manual (Doc 9376)

Safety Management Manual (Doc 9859)

Technical Instructions for the Safe Transport of Dangerous Goods by Air (Doc 9284)

Training Manual (Doc 7192)
Part D-3 — *Flight Operations Officers/Flight Dispatchers*

Other Publications

European Organisation for Civil Aviation Equipment (EUROCAE) Documents ED-55, ED-56A, ED-112, ED-112A and ED-155

ANNEX 6 — PART III

INTERNATIONAL OPERATIONS — HELICOPTERS

FOREWORD

Historical background

Standards and Recommended Practices for the Operation of Aircraft were first adopted by the Council, pursuant to the provisions of Article 37 of the Convention on International Civil Aviation (Chicago 1944), on 10 December 1948 for International Air Transport and on 2 December 1968 for International General Aviation. The documents containing these Standards and Recommended Practices are now designated as Annex 6, Parts I and II, respectively, to the Convention. In general, Parts I and II address aeroplane operations; neither part is specifically applicable to helicopter operations.

Therefore, Part III was introduced as a means of including provisions for helicopter operations. Initially, provisions related to flight data recorders and cockpit voice recorders for helicopters were developed by the Air Navigation Commission following Recommendation 10/1 of the Accident Prevention and Investigation Meeting AIG (1979) and adopted by the Council on 14 March 1986. They became effective on 27 July 1986 and applicable on 20 November 1986. Subsequently, proposals for comprehensive Standards and Recommended Practices covering other aspects of helicopter operations were developed with the assistance of the Helicopter Operations Panel; these provisions, incorporated in Amendment 1, were adopted by the Council on 21 March 1990. The amendment became effective on 30 July 1990 and applicable on 15 November 1990.

Table A shows the origin of subsequent amendments together with a list of the principal subjects involved and the dates on which the Annex and the amendments were adopted by the Council, when they became effective and when they became applicable.

Applicability

The Standards and Recommended Practices included in Annex 6 — *Operation of Aircraft*, Parts I and II cover the operation of all aeroplanes in international civil aviation, except where specifically excluded. Similarly, the Standards and Recommended Practices in Annex 6, Part III cover the operation of all helicopters in international civil aviation, general aviation as well as commercial air transport operations.

Action by Contracting States

Notification of differences. The attention of Contracting States is drawn to the obligation imposed by Article 38 of the Convention by which Contracting States are required to notify the Organization of any differences between their national regulations and practices and the International Standards contained in this Annex and any amendments thereto. Contracting States are invited to extend such notification to any differences from the Recommended Practices contained in this Annex, and any amendments thereto, when the notification of such differences is important for the safety of air navigation. Further, Contracting States are invited to keep the Organization currently informed of any differences which may subsequently occur

or of the withdrawal of any differences previously notified. A specific request for notification of differences will be sent to Contracting States immediately after the adoption of each Amendment to this Annex.

Attention of States is also drawn to the provision of Annex 15 related to the publication of differences between their national regulations and practices and the related ICAO Standards and Recommended Practices through the Aeronautical Information Service, in addition to the obligation of States under Article 38 of the Convention.

Promulgation of information. The establishment and withdrawal of, and changes to, facilities, services and procedures affecting aircraft operations provided in accordance with the Standards and Recommended Practices specified in this Annex should be notified and take effect in accordance with the provisions of Annex 15.

Status of Annex components

An Annex is made up of the following component parts, not all of which, however, are necessarily found in every Annex; they have the status indicated.

1. — *Material comprising the Annex proper*

- a) *Standards and Recommended Practices* adopted by the Council under the provisions of the Convention. They are defined as follows:

Standard: Any specification for physical characteristics, configuration, matériel, performance, personnel or procedure, the uniform application of which is recognized as necessary for the safety or regularity of international air navigation and to which Contracting States will conform in accordance with the Convention; in the event of impossibility of compliance, notification to the Council is compulsory under Article 38 of the convention.

Recommended Practice: Any specification for physical characteristics, configuration, matériel, performance, personnel or procedure, the uniform application of which is recognized as desirable in the interest of safety, regularity or efficiency of international air navigation, and to which Contracting States will endeavour to conform in accordance with the Convention.

- b) *Appendices* comprising material grouped separately for convenience but forming part of the Standards and Recommended Practices adopted by the Council.
- c) *Definitions* of terms used in the Standards and Recommended Practices which are not self-explanatory in that they do not have accepted dictionary meanings. A definition does not have an independent status but is an essential part of each Standard and Recommended Practice in which the term is used, since a change in the meaning of the term would affect the specification.
- d) *Tables and Figures* which add to or illustrate a Standard or Recommended Practice and which are referred to therein, form part of the associated Standard or Recommended Practice and have the same status.

It is to be noted that some Standards in this Annex may incorporate, by reference, other specifications having the status of Recommended Practices. In such case, the text of the Recommended Practice becomes part of the Standard.

2. — *Material approved by the Council for publication in association with the Standards and Recommended Practices*

- a) *Forewords* comprising historical and explanatory material based on the action of the Council and including an explanation of the obligations of States with regard to the application of the Standards and Recommended Practices ensuing from the Convention and the Resolution of Adoption;

- b) *Introductions* comprising explanatory material introduced at the beginning of parts, chapters or sections of the Annex to assist in the understanding of the application of the text;
- c) *Notes* included in the text, where appropriate, to give factual information or references bearing on the Standards or Recommended Practices in question but not constituting part of the Standards or Recommended Practices;
- d) *Attachments* comprising material supplementary to the Standards and Recommended Practices or included as a guide to their application.

Selection of language

This Annex has been adopted in six languages — English, Arabic, Chinese, French, Russian and Spanish. Each Contracting State is requested to select one of those texts for the purpose of national implementation and for other effects provided for in the Convention, either through direct use or through translation into its own national language, and to notify the Organization accordingly.

Editorial practices

The following practice has been adhered to in order to indicate at a glance the status of each statement: *Standards* have been printed in light face roman; *Recommended Practices* have been printed in light face italics, the status being indicated by the prefix **Recommendation**; *Notes* have been printed in light face italics, the status being indicated by the prefix *Note*.

The following editorial practice has been followed in the writing of specifications: for Standards the operative verb “shall” is used, and for Recommended Practices the operative verb “should” is used.

The units of measurement used in this document are in accordance with the International System of Units (SI) as specified in Annex 5 to the Convention on International Civil Aviation. Where Annex 5 permits the use of non-SI alternative units, these are shown in parentheses following the basic units. Where two sets of units are quoted, it must not be assumed that the pairs of values are equal and interchangeable. It may, however, be inferred that an equivalent level of safety is achieved when either set of units is used exclusively.

Any reference to a portion of this document, which is identified by a number and/or title, includes all subdivisions of that portion.

In order to maintain a comprehensive edition of this Annex, the latest amendments have been consolidated in a new edition of the Annex. In so doing, provisions with particular applicability dates have been adjusted editorially, as appropriate.

Table A. Amendments to Annex 6, Part III

<i>Amendment</i>	<i>Source</i>	<i>Subject(s)</i>	<i>Adopted Effective Applicable</i>
1st Edition	Accident Prevention and Investigation Divisional Meeting AIG (1979)	Provisions for flight recorders in helicopters.	14 March 1986 27 July 1986 20 November 1986
1 (2nd Edition)	Fourth meeting of the Helicopter Operations Panel. Amendments consequential to 1990 amendments to Annex 6, Parts I and II. Air Navigation Commission — directed studies	a) Introduction of provisions pertaining to helicopter operations, similar in scope to those contained in Annex 6, Parts I and II, for aeroplanes. These provisions, together with the flight recorder provisions previously introduced in the First Edition of Annex 6, Part III, complete the initial development of Standards and Recommended Practices for helicopter operations; b) introduction of provisions pertaining to the air operator certificate, minimum equipment lists, the operations manual, and some new definitions. These provisions serve to preserve the parallelism among the three parts of Annex 6; c) introduction of guidance material concerning recording on FDRs of operational flight information for those helicopters equipped with electronic displays.	21 March 1990 30 July 1990 15 November 1990
2	Fifth meeting of the Operations Panel, Eighth meeting of the Review of the General Concept of Separation Panel, Accident Investigation Divisional Meeting (AIG/1992), Air Navigation Commission studies	a) Revision of definitions of heliport operating minima, decision altitude/height, minimum descent altitude/height and introduction of definition of obstacle clearance altitude/height; b) introduction of new definitions for emergency locator transmitters (ELTs), required navigation performance (RNP) and RNP type; c) introduction of a requirement concerning the use of engraving metal foil flight data recorders; d) introduction of carriage requirements for emergency locator transmitters (ELTs) to replace provisions regarding survival radio equipment and emergency location beacon; e) introduction of a requirement that the navigation equipment carried shall enable the aircraft to proceed in accordance with RNP types prescribed for the intended route(s) or areas(s).	21 March 1994 25 July 1994 10 November 1994
3 (3rd Edition)	Air Navigation Commission studies, Fourteenth meeting of the Dangerous Goods Panel, editorial amendment, text alignment with Annex 6, Part I and/or Part II, consequential amendment	a) Introduction of new and revised definitions; b) new provisions concerning accident prevention and flight safety programmes; c) revision of the provisions concerning operating facilities, in-flight simulation of emergency situations, minimum flight altitudes, flight time, flight duty periods and rest periods for crew members, flight preparation, oxygen supply, flight crew members at duty stations, duties of flight operations officers and new provisions for carry-on baggage; d) revision of provisions concerning mass limitations and medical supplies; e) new provisions related to oxygen equipment, revision of the provisions for helicopters operated in accordance with the visual flight rules (VFR) and the instrument flight rules (IFR);	10 March 1995 24 July 1995 9 November 1995

<i>Amendment</i>	<i>Source</i>	<i>Subject(s)</i>	<i>Adopted Effective Applicable</i>
		<ul style="list-style-type: none"> f) new requirements for the flight crew training programme concerning knowledge and skills related to human performance and limitations; g) revision of the denomination of flight operations officers to align with Annex 1; h) revision of the contents of the operations manual; new provisions concerning heliport operating minima, oxygen supply, flight and duty time limitations, procedures and checklists used by flight crew, specifications for the operational flight plan, the flight crew training programme, the cabin attendant duties training programme, security instruction and guidance, accident prevention and flight safety programme, departure contingency procedures and instructions for mass and balance control; i) new provisions on flight time, flight duty periods and rest periods for cabin attendants and revision of the provisions concerning training; j) revision of the provisions concerning first-aid medical supplies; and k) new provisions concerning the minimum equipment list (MEL). 	
4	Fourth meeting of the Secondary Surveillance Radar Improvements and Collision Avoidance Systems Panel (SICASP/4)	Requirement for helicopters to be equipped with pressure-altitude reporting transponders.	19 February 1996 15 July 1996 7 November 1996
5 (4th Edition)	First meeting of the Flight Recorder Panel, ICAO and Industry CFIT Task Force, Air Navigation Commission studies, Amendment 162 to Annex 1, Amendment 38 to Annex 11, editorial amendment	<ul style="list-style-type: none"> a) Introduction of new and revised definitions for aircraft operating manual, configuration deviation list, Human Factors principles, human performance, master minimum equipment list, psychoactive substances and required navigation performance; b) revision of the notes concerning lease and interchange; c) introduction of a note concerning the use of psychoactive substances; d) new and revised requirements concerning flight recorders; e) new and revised provisions concerning the content of an operations manual relocated in an appendix; f) new provisions concerning the responsibility of States with regard to supervision of operations subject to an air operator certificate, acceptance of an operations manual and establishment of a system for certification and continued surveillance of the operator; g) new provisions related to the de/anti-icing of aircraft on the ground, aeroplane performance operating limitations, mass limitations, sensitive pressure altimeters and recent experience of the co-pilot; h) revised provisions concerning pressure-altitude reporting transponders; and i) new provisions concerning Human Factors. 	20 March 1998 20 July 1998 5 November 1998

<i>Amendment</i>	<i>Source</i>	<i>Subject(s)</i>	<i>Adopted Effective Applicable</i>
6	Second meeting of the Flight Recorder Panel, 32nd Session of the Assembly, Air Navigation Commission studies	a) Change of terminology from “cabin attendant” to “cabin crew”; b) revised definitions; and c) new provisions concerning the mandatory carriage of ELTs operating on 406 MHz and 121.5 MHz, pressure-altitude reporting transponders and the introduction of an implementation date for the recording of digital communications.	15 March 1999 19 July 1999 4 November 1999
7	Air Navigation Commission studies	a) Revised definitions and introduction of the definition for instrument approach and landing operations; and b) introduction of requirements for the provision of RVR information and criteria for instrument approach operations, revision of the duties of the pilot-in-command.	15 March 2000 17 July 2000 2 November 2000
8 (5th Edition)	Second meeting of the Flight Recorder Panel, Third meeting of the Global Navigation Satellite System Panel, Fifth meeting of the Continuing Airworthiness Panel, Air Navigation Commission studies	a) Update the provisions concerning flight recorders, including the recording of digital communications; FDR requirements for new aircraft; revised parameter listings; introduction of two-hour-duration CVRs; b) amendment of the classification of instrument approach and landing operations; c) new provisions pertaining to approach with vertical guidance (APV) operations; d) new definitions and update of provisions pertaining to maintenance-related requirements; and e) translation in the English language for documents attesting noise certification.	12 March 2001 16 July 2001 1 November 2001
9	Separation and Airspace Safety Panel and Air Navigation Commission studies	a) New provisions concerning language proficiency requirements; b) new definition and provision concerning an operator’s flight safety documents system; c) new definition and provisions concerning the safety aspects of ground handling arrangements; and d) authorization by the State of Operator or State of Registry for en-route operations in RNP airspace.	13 March 2003 14 July 2003 27 November 2003
10	Sixth meeting of the Committee on Aviation Environmental Protection	New provisions concerning references to noise certification.	9 March 2005 11 July 2005 24 November 2005
11	Second meeting of the Flight Crew Licensing and Training Panel, Fourteenth meeting of the Obstacle Clearance Panel, a proposal by the United States, Council request, 35th Session of the Assembly, and the Eleventh Air Navigation Conference	a) Pilot recent experience and proficiency check requirements, cross-crew qualification and cross-crediting of experience, evaluation of competency, threat and error management, and the biannual pilot proficiency check; b) pilot awareness of operational requirements determined by procedure design; c) qualifications for flight operations officers/flight dispatchers and the critical elements of a State regulatory system; d) the carriage of a copy of the air operator certificate in aircraft; and e) safety management provisions and references to new guidance material on the concept of acceptable level of safety.	14 March 2006 17 July 2006 23 November 2006

<i>Amendment</i>	<i>Source</i>	<i>Subject(s)</i>	<i>Adopted Effective Applicable</i>
12 (6th Edition)	Air Navigation Commission study, First meeting of the Operational Data Link Panel (OPLINKP/1), and Secretariat study assisted by the Helicopter Tilt-Rotor Study Group	a) Amendments to Standards to facilitate implementation of the available technology in relation to the use of automatic dependant surveillance — contract (ADS-C) and to the introduction of required communication performance (RCP) in the provision of air traffic services (ATS); b) a closer alignment of the provisions of Annex 6, Part III, with recognized regulatory practices; c) a change to the definitions of performance classes; d) a change to permit appropriate consideration for achieving a safe forced landing in the event of an engine failure for operations in performance Classes 2 and 3; e) the addition of new provisions relating to commercial operations under instrument meteorological conditions; f) a new definition of the term “operation”; g) the introduction of the concept of “offshore operations”; and h) mandatory carriage requirements for emergency locator transmitters (ELTs) as of 1 July 2008).	14 March 2007 16 July 2007 22 November 2007 1 July 2008
13	Secretariat; Secretariat with the assistance of the Required Navigation Performance and Special Operational Requirements (RNPSOR) Study Group	a) Amendments to definitions and Standards and Recommended Practices to strengthen the oversight and requirements of foreign operators and to harmonize the air operator certificate in content and, as of 1 January 2010, in layout; and b) amendments to definitions and Standards to align required navigation performance (RNP) and area navigation (RNAV) terminology with the performance-based navigation concept.	3 March 2008 20 July 2008 20 November 2008 1 January 2010
14-A	Seventh meeting of the Operations Panel (OPSP/7); Secretariat with the assistance of the Medical Provisions Study Group (MPSG)	a) Amendment to the definition of “approach and landing operations using instrument approach procedures” to show a reduced RVR requirement for CAT II and CAT IIIA and B; b) clarification of training requirements for cabin crews in the awareness of dangerous goods; c) harmonization of the provisions on the use of a simulator for the maintenance of recent experience for a helicopter pilot-in-command and co-pilot with the provisions in Annex 6, Part I; and d) amendment introducing changes to Annex 6 in order to better reflect the contemporary needs regarding on-board medical supplies.	2 March 2009 20 July 2009 19 November 2009
14-B	Secretariat	Amendment concerning the development of harmonized provisions relating to safety management by introducing a framework for the implementation and maintenance of a State safety programme as of 18 November 2010.	2 March 2009 20 July 2009 18 November 2010

<i>Amendment</i>	<i>Source</i>	<i>Subject(s)</i>	<i>Adopted Effective Applicable</i>
15 (7th Edition)	Ninth meeting of the Operations Panel Working Group of the Whole (OPSP/WG/WHL/9); twelfth meeting of the Airworthiness Panel Working Group of the Whole (AIRP/WG/WHL/12); Secretariat, with the assistance of the second meeting of the Flight Recorder Panel Working Group of the Whole (FLIRECP/WG/WHL/2)	a) New provisions for head-up displays (HUD)/enhanced vision systems (EVS); b) amendment to provisions to provide consistency in propulsion terminology; and c) new and updated provisions regarding flight recorders.	26 February 2010 12 July 2010 18 November 2010
16	Secretariat, in order to implement the Council mandate, pursuant to Assembly Resolution A37-9	The use of a halon replacement agent in lavatory fire extinguishers on or after 31 December 2011 and 31 December 2016 for hand-held fire extinguishers.	13 June 2011 30 October 2011 15 December 2011
17	Secretariat, with the assistance of the third meeting of the Flight Recorder Panel Working Group of the Whole (FLIRECP/WG/WHL/3)	Amendment concerning carriage requirements for flight recorders.	7 March 2012 16 July 2012 15 November 2012
18-A	Twelfth meeting of the Operations Panel Working Group of the Whole (OPSP/WG/WHL/12); Special Meeting of the Safety Management Panel (SMP/SM/1)	Amendment concerning: a) timepiece requirements and approach ban; b) the transfer of safety management provisions to Annex 19.	25 February 2013 15 July 2013 14 November 2013
18-B	Secretariat supported by the Approach Classification Task Force (ACTF) in coordination with the Aerodromes Panel (AP), the Instrument Flight Procedure Panel (IFPP), the Navigation Systems Panel (NSP) and the Operations Panel (OPSP)	Amendment concerning provisions related to instrument approach operations and procedures as a result of the new approach classification.	25 February 2013 15 July 2013 13 November 2014

<i>Amendment</i>	<i>Source</i>	<i>Subject(s)</i>	<i>Adopted Effective Applicable</i>
19	Seventh, eighth, ninth, tenth and eleventh meetings of the Instrument Flight Procedures Panel Working Group of the Whole (IFPP/WG-WHL/7, 8, 9, 10 and 11); fifteenth meeting of the Operations Panel Working Group of the Whole (OPSP/WG/WHL/15); fifth meeting of the Flight Recorder Panel Working Group of the Whole (FLIRECP/WG/WHL/5)	Amendment concerning: <ul style="list-style-type: none"> a) procedure design criteria and charting requirements to support PBN as well as helicopter PinS approach and departure operations; b) harmonization of provisions concerning EFBs, HUDs and vision systems, and fuel use; c) flight recorder requirements to: reference updated EUROCAE Minimum Operational Performance Specifications (MOPS); align underwater location device (ULD) requirements with Annex 6, Part I; and include less stringent inspection requirements for flight recorder systems. 	3 March 2014 14 July 2014 13 November 2014
20-A (Eighth Edition)	First meeting of the Flight Operations Panel (FTOPSP/1); Secretariat, with the assistance of the seventh meeting of the Flight Recorder Panel (FLIRECP/7); second meeting of the Operational Data Link Panel (OPLINKP/2)	Amendment concerning: <ul style="list-style-type: none"> a) harmonization and alignment of terms and language, updated performance-based navigation (PBN) provisions, and enhanced vision systems (EVS); b) airborne image recording system (AIRS); and c) performance-based communication and surveillance (PBCS). 	2 March 2016 11 July 2016 10 November 2016
20-B	Group of Experts on Protection of Accident and Incident Records (GEPAIR), stemming from the work of the Safety Information Protection Task Force (SIP TF); Secretariat, as a result of the amendment to Annex 19 proposed by the first meeting of the Safety Management Panel (SMP/1) and the Safety Information Protection Task Force (SIP TF)	Amendment concerning: <ul style="list-style-type: none"> a) protection of flight recorder recordings in normal operations; and b) protection of safety data, safety information and related sources. 	2 March 2016 11 July 2016 7 November 2019
21	39th Session of the Assembly	Amendment concerning the applicability date for halon agent replacement in portable fire extinguishers.	25 November 2016 2 February 2017 27 April 2017

<i>Amendment</i>	<i>Source</i>	<i>Subject(s)</i>	<i>Adopted Effective Applicable</i>
22 (Ninth edition)	Third meeting of the Flight Operations Panel (FLTOPSP/3); ninth meeting of the Flight Recorder Specific Working Group (FLIRECSWG/9); third and fourth meeting of the Airworthiness Panel (AIRP/3 and AIRP/4); Helicopter Fatigue Management Task Force (Heli FM TF) and recommendation by FLTOPSP/3; and thirteenth meeting of the Instrument Flight Procedure Panel (IFPP/13)	<ul style="list-style-type: none"> a) Helicopter refuelling provisions b) flight recorder requirements to include: CVR and AIR erase function; additional FDR parameters to be recorded; and simplification of flight recorder provisions c) approval and global recognition of approved maintenance organizations (AMOs) (Phases I and II) and the introduction of the electronic aircraft maintenance records (EAMR) framework d) harmonization and alignment of fatigue management SARPs e) amendments as a result of the restructuring of the Procedures for Air Navigation Services — Aircraft Operations, Volume I — Flight Procedures (Doc 8168) 	<ul style="list-style-type: none"> 7 March 2018 16 July 2018 8 November 2018
23 (Tenth edition)	Fourth meeting of the Flight Operations Panel (FLTOPSP/4); and the tenth and eleventh meetings of the Flight Recorder Specific Working Group (FLIRECSWG/10 and FLIRECSWG/11).	<ul style="list-style-type: none"> a) All-weather operations, harmonization of terms for authorizations, acceptance and approvals (AAA), Article 83 <i>bis</i>, and the development of a helicopter code of performance with exposure; b) image and data link data to be recorded on FDR/CVR, reliable power source for lightweight flight recorders, additional parameters for ADRS, bit error rate recording inspections and DLR and DLRS recording inspections; and c) recording of data link communications messages. 	<ul style="list-style-type: none"> 6 March 2020 20 July 2020 5 November 2020
24 (Eleventh edition)	Fifth and sixth meetings of the Flight Operations Panel (FLTOPSP/5 and 6); and the twelfth meeting of the Flight Recorder Specific Working Group (FLIRECSWG/12).	<ul style="list-style-type: none"> a) the availability of flight recorder maintenance documentation and the recalibration intervals of flight data recorder (FDR) sensors; and b) offshore alternates, operational credit, dangerous goods for helicopters and guidance. 	<ul style="list-style-type: none"> 7 March 2022 18 July 2022 3 November 2022

ANNEX 6 — PART III

SECTION I

GENERAL

INTERNATIONAL STANDARDS AND RECOMMENDED PRACTICES

CHAPTER 1. DEFINITIONS

When the following terms are used in the Standards and Recommended Practices for international operations with helicopters, they have the following meanings:

Advanced aircraft. An aircraft with equipment in addition to that required for a basic aircraft for a given take-off, approach or landing operation.

Aerial work. An aircraft operation in which an aircraft is used for specialized services such as agriculture, construction, photography, surveying, observation and patrol, search and rescue, aerial advertisement, etc.

Aerodrome. A defined area on land or water (including any buildings, installations and equipment) intended to be used either wholly or in part for the arrival, departure and surface movement of aircraft.

Agreement summary. When an aircraft is operating under an Article 83 *bis* agreement between the State of Registry and another State, the agreement summary is a document transmitted with the Article 83 *bis* Agreement registered with the ICAO Council that identifies succinctly and clearly which functions and duties are transferred by the State of Registry to that other State.

Note.— The other State in the above definition refers to either the State of the Operator for commercial air transport operations or, for general aviation operations, to the State of the principal location of a general aviation operator.

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.

Aircraft operating manual. A manual, acceptable to the State of the Operator, containing normal, abnormal and emergency procedures, checklists, limitations, performance information, details of the aircraft systems and other material relevant to the operation of the aircraft.

Note.— The aircraft operating manual is part of the operations manual.

Air operator certificate (AOC). A certificate authorizing an operator to carry out specified commercial air transport operations.

Air traffic service (ATS). A generic term meaning variously, flight information service, alerting service, air traffic advisory service, air traffic control service (area control service, approach control service or aerodrome control service).

Airworthy. The status of an aircraft, engine, propeller or part when it conforms to its approved design and is in a condition for safe operation.

Alternate heliport. A heliport to which a helicopter may proceed when it becomes either impossible or inadvisable to proceed to or to land at the heliport of intended landing where the necessary services and facilities are available, where aircraft performance requirements can be met and which is operational at the expected time of use. Alternate heliports include the following:

Take-off alternate. An alternate heliport at which a helicopter would be able to land should this become necessary shortly after take-off and it is not possible to use the heliport of departure.

En-route alternate. An alternate heliport at which a helicopter would be able to land in the event that a diversion becomes necessary while en-route.

Destination alternate. An alternate heliport at which a helicopter would be able to land should it become either impossible or inadvisable to land at the heliport of intended landing.

Note.— The heliport from which a flight departs may be an en-route or a destination alternate heliport for that flight.

Approach and landing phase — helicopters. That part of the flight from 300 m (1 000 ft) above the elevation of the FATO, if the flight is planned to exceed this height, or from the commencement of the descent in the other cases, to landing or to the balked landing point.

Appropriate airworthiness requirements. The comprehensive and detailed airworthiness codes established, adopted or accepted by a Contracting State for the class of aircraft, engine or propeller under consideration.

Area navigation (RNAV). A method of navigation which permits aircraft operation on any desired flight path within the coverage of ground- or space-based navigation aids or within the limits of the capability of self-contained aids, or a combination of these.

Note.— Area navigation includes performance-based navigation as well as other operations that do not meet the definition of performance-based navigation.

Basic aircraft. An aircraft which has the minimum equipment required to perform the intended take-off, approach or landing operation.

Cabin crew member. A crew member who performs, in the interest of safety of passengers, duties assigned by the operator or the pilot-in-command of the aircraft, but who shall not act as a flight crew member.

COMAT. Operator material carried on an operator's aircraft for the operator's own purposes.

Combined vision system (CVS). A system to display images from a combination of an enhanced vision system (EVS) and a synthetic vision system (SVS).

Commercial air transport operation. An aircraft operation involving the transport of passengers, cargo or mail for remuneration or hire.

Configuration deviation list (CDL). A list established by the organization responsible for the type design with the approval of the State of Design which identifies any external parts of an aircraft type which may be missing at the commencement of a flight, and which contains, where necessary, any information on associated operating limitations and performance correction.

Congested area. In relation to a city, town or settlement, any area which is substantially used for residential, commercial or recreational purposes.

Congested hostile environment. A hostile environment within a congested area.

Continuing airworthiness. The set of processes by which an aircraft, engine, rotor or part complies with the applicable airworthiness requirements and remains in a condition for safe operation throughout its operating life.

Continuing airworthiness records. Records which are related to the continuing airworthiness status of an aircraft, engine, rotor or associated part.

Continuous descent final approach (CDFA). A technique, consistent with stabilized approach procedures, for flying the final approach segment (FAS) of an instrument non-precision approach (NPA) procedure as a continuous descent, without level-off, from an altitude/height at or above the final approach fix altitude/height to a point approximately 15 m (50 ft) above the landing runway threshold or the point where the flare manoeuvre begins for the type of aircraft flown; for the FAS of an NPA procedure followed by a circling approach, the CDFA technique applies until circling approach minima (circling OCA/H) or visual flight manoeuvre altitude/height are reached.

Crew member. A person assigned by an operator to duty on an aircraft during a flight duty period.

Dangerous goods. Articles or substances which are capable of posing a risk to health, safety, property or the environment and which are shown in the list of dangerous goods in the Technical Instructions or which are classified according to those Instructions.

Note.— Dangerous goods are classified in Annex 18, Chapter 3.

Decision altitude (DA) or decision height (DH). A specified altitude or height in a three-dimensional (3D) instrument approach operation at which a missed approach must be initiated if the required visual reference to continue the approach has not been established.

Note 1.— Decision altitude (DA) is referenced to mean sea level and decision height (DH) is referenced to the threshold elevation.

Note 2.— The required visual reference means that section of the visual aids or of the approach area which should have been in view for sufficient time for the pilot to have made an assessment of the aircraft position and rate of change of position, in relation to the desired flight path. In Category III operations with a decision height the required visual reference is that specified for the particular procedure and operation.

Note 3.— For convenience where both expressions are used they may be written in the form “decision altitude/height” and abbreviated “DA/H”.

Defined point after take-off (DPATO). The point, within the take-off and initial climb phase, before which the helicopter’s ability to continue the flight safely, with one engine inoperative, is not assured and a forced landing may be required.

Note.— Defined points apply to helicopters operating in performance Class 2 only.

Defined point before landing (DPBL). The point, within the approach and landing phase, after which the helicopter’s ability to continue the flight safely, with one engine inoperative, is not assured and a forced landing may be required.

Note.— Defined points apply to helicopters operating in performance Class 2 only.

Duty. Any task that flight or cabin crew members are required by the operator to perform, including flight duty, administrative work, training, positioning and standby when it is likely to induce fatigue.

Duty period. A period which starts when a flight- or cabin-crew member is required by an operator to report for or to commence a duty and ends when that person is free from all duties.

Electronic flight bag (EFB). An electronic information system, comprised of equipment and applications for flight crew, which allows for the storing, updating, displaying and processing of EFB functions to support flight operations or duties.

Elevated heliport. A heliport located on a raised structure on land.

Emergency locator transmitter (ELT). A generic term describing equipment which broadcast distinctive signals on designated frequencies and, depending on application, may be automatically activated by impact or be manually activated. An ELT may be any of the following:

Automatic fixed ELT (ELT(AF)). An automatically activated ELT which is permanently attached to an aircraft.

Automatic portable ELT (ELT(AP)). An automatically activated ELT which is rigidly attached to an aircraft but readily removable from the aircraft.

Automatic deployable ELT (ELT(AD)). An ELT which is rigidly attached to an aircraft and which is automatically deployed and activated by impact, and, in some cases, also by hydrostatic sensors. Manual deployment is also provided.

Survival ELT (ELT(S)). An ELT which is removable from an aircraft, stowed so as to facilitate its ready use in an emergency, and manually activated by survivors.

Engine. A unit used or intended to be used for aircraft propulsion. It consists of at least those components and equipment necessary for functioning and control, but excludes the propeller/rotors (if applicable).

Enhanced vision system (EVS). A system to display electronic real-time images of the external scene achieved through the use of image sensors.

Note.— EVS does not include night vision imaging systems (NVIS).

En-route phase. That part of the flight from the end of the take-off and initial climb phase to the commencement of the approach and landing phase.

Note.— Where adequate obstacle clearance cannot be guaranteed visually, flights must be planned to ensure that obstacles can be cleared by an appropriate margin. In the event of failure of the critical engine, operators may need to adopt alternative procedures.

Fatigue. A physiological state of reduced mental or physical performance capability resulting from sleep loss, extended wakefulness, circadian phase, and/or workload (mental and/or physical activity) that can impair a person's alertness and ability to perform safety-related operational duties.

Fatigue Risk Management System (FRMS). A data-driven means of continuously monitoring and managing fatigue-related safety risks, based upon scientific principles and knowledge as well as operational experience that aims to ensure relevant personnel are performing at adequate levels of alertness.

Final approach and take-off area (FATO). A defined area over which the final phase of the approach manoeuvre to hover or landing is completed and from which the take-off manoeuvre is commenced. Where the FATO is to be used by helicopters operating in performance Class 1, the defined area includes the rejected take-off area available.

Final approach segment (FAS). That segment of an instrument approach procedure in which alignment and descent for landing are accomplished.

Flight crew member. A licensed crew member charged with duties essential to the operation of an aircraft during a flight duty period.

Flight duty period. A period which commences when a flight or cabin crew member is required to report for duty that includes a flight or a series of flights and which finishes when the aircraft finally comes to rest and the engines are shut down at the end of the last flight on which he/she is a crew member.

Flight manual. A manual, associated with the certificate of airworthiness, containing limitations within which the aircraft is to be considered airworthy, and instructions and information necessary to the flight crew members for the safe operation of the aircraft.

Flight operations officer/flight dispatcher. A person designated by the operator to engage in the control and supervision of flight operations, whether licensed or not, suitably qualified in accordance with Annex 1, who supports, briefs and/or assists the pilot-in-command in the safe conduct of the flight.

Flight plan. Specified information provided to air traffic services units, relative to an intended flight or portion of a flight of an aircraft.

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

Automatic deployable flight recorder (ADFR). A combination flight recorder installed on the aircraft which is capable of automatically deploying from the aircraft.

Flight safety documents system. A set of interrelated documentation established by the operator, compiling and organizing information necessary for flight and ground operations, and comprising, as a minimum, the operations manual and the operator's maintenance control manual.

Flight simulation training device. Any one of the following three types of apparatus in which flight conditions are simulated on the ground:

A flight simulator, which provides an accurate representation of the flight deck of a particular aircraft type to the extent that the mechanical, electrical, electronic, etc. aircraft systems control functions, the normal environment of flight crew members, and the performance and flight characteristics of that type of aircraft are realistically simulated;

A flight procedures trainer, which provides a realistic flight deck environment, and which simulates instrument responses, simple control functions of mechanical, electrical, electronic, etc. aircraft systems, and the performance and flight characteristics of aircraft of a particular class;

A basic instrument flight trainer, which is equipped with appropriate instruments, and which simulates the flight deck environment of an aircraft in flight in instrument flight conditions.

Flight time — helicopters. The total time from the moment a helicopter's rotor blades start turning until the moment the helicopter finally comes to rest at the end of the flight, and the rotor blades are stopped.

General aviation operation. An aircraft operation other than a commercial air transport operation or an aerial work operation.

Ground handling. Services necessary for an aircraft's arrival at, and departure from, an airport, other than air traffic services.

Head-up display (HUD). A display system that presents flight information into the pilot's forward external field of view.

Helicopter. A heavier-than-air aircraft supported in flight chiefly by the reactions of the air on one or more power-driven rotors on substantially vertical axes.

Note.— Some States use the term "rotorcraft" as an alternative to "helicopter".

Helideck. A heliport located on a floating or fixed offshore structure.

Heliport. An aerodrome or a defined area on a structure intended to be used wholly or in part for the arrival, departure and surface movement of helicopters.

Note 1.— Throughout this Part, when the term “heliport” is used, it is intended that the term also applies to aerodromes primarily meant for the use of aeroplanes.

Note 2.— Helicopters may be operated to and from areas other than heliports.

Heliport operating minima. The limits of usability of a heliport for:

- a) take-off, expressed in terms of runway visual range and/or visibility and, if necessary, cloud conditions;
- b) landing in 2D instrument approach operations, expressed in terms of visibility and/or runway visual range, minimum descent altitude/height (MDA/H) and, if necessary, cloud conditions; and
- c) landing in 3D instrument approach operations, expressed in terms of visibility and/or runway visual range and decision altitude/height (DA/H) as appropriate to the type and/or category of the operation.

Hostile environment. An environment in which:

- a) a safe forced landing cannot be accomplished because the surface and surrounding environment are inadequate; or
- b) the helicopter occupants cannot be adequately protected from the elements; or
- c) search and rescue response/capability is not provided consistent with anticipated exposure; or
- d) there is an unacceptable risk of endangering persons or property on the ground.

Human Factors principles. Principles which apply to aeronautical design, certification, training, operations and maintenance and which seek safe interface between the human and other system components by proper consideration to human performance.

Human performance. Human capabilities and limitations which have an impact on the safety, security and efficiency of aeronautical operations.

Instrument approach operations. An approach and landing using instruments for navigation guidance based on an instrument approach procedure. There are two methods for executing instrument approach operations:

- a) a two-dimensional (2D) instrument approach operation, using lateral navigation guidance only; and
- b) a three-dimensional (3D) instrument approach operation, using both lateral and vertical navigation guidance.

Note.— Lateral and vertical navigation guidance refers to the guidance provided either by:

- a) a ground-based radio navigation aid; or
- b) computer-generated navigation data from ground-based, space-based, self-contained navigation aids or a combination of these.

Instrument approach procedure (IAP). A series of predetermined manoeuvres by reference to flight instruments with specified protection from obstacles from the initial approach fix, or where applicable, from the beginning of a defined arrival route to a point from which a landing can be completed and thereafter, if a landing is not completed, to a position at which holding or en-route obstacle clearance criteria apply. Instrument approach procedures are classified as follows:

Non-precision approach (NPA) procedure. An instrument approach procedure designed for 2D instrument approach operations Type A.

Note.— Non-precision approach procedures may be flown using a continuous descent final approach (CDFA) technique. CDFAs with advisory VNAV guidance calculated by on-board equipment are considered 3D instrument approach operations. CDFAs with manual calculation of the required rate of descent are considered 2D instrument approach operations. For more information on CDFAs, refer to PANS-OPS (Doc 8168), Volume I, Part II, Section 5.

Approach procedure with vertical guidance (APV). A performance-based navigation (PBN) instrument approach procedure designed for 3D instrument approach operations Type A.

Precision approach (PA) procedure. An instrument approach procedure based on navigation systems (ILS, MLS, GLS and SBAS CAT I) designed for 3D instrument approach operations Type A or B.

Note.— Refer to Section II, Chapter 2, 2.2.8.3 for instrument approach operation types.

Instrument meteorological conditions (IMC). Meteorological conditions expressed in terms of visibility, distance from cloud, and ceiling*, less than the minima specified for visual meteorological conditions.

Note.— The specified minima for visual meteorological conditions are contained in Chapter 4 of Annex 2.

Integrated survival suit. A survival suit which meets the combined requirements of the survival suit and life jacket.

Landing decision point (LDP). The point used in determining landing performance from which, an engine failure occurring at this point, the landing may be safely continued or a balked landing initiated.

Note.— LDP applies only to helicopters operating in performance Class 1.

Low-visibility operations (LVO). Approach operations in RVRs less than 550 m and/or with a DH less than 60 m (200 ft) or take-off operations in RVRs less than 400 m.

Maintenance. The performance of tasks on an aircraft, engine, propeller or associated part required to ensure the continuing airworthiness of an aircraft, engine, propeller or associated part including any one or combination of overhaul, inspection, replacement, defect rectification, and the embodiment of a modification or repair.

Maintenance organization's procedures manual. A document endorsed by the head of the maintenance organization which details the maintenance organization's structure and management responsibilities, scope of work, description of facilities, maintenance procedures and quality assurance or inspection systems.

Maintenance programme. A document which describes the specific scheduled maintenance tasks and their frequency of completion and related procedures, such as a reliability programme, necessary for the safe operation of those aircraft to which it applies.

* As defined in Annex 2.

Maintenance release. A document which contains a certification confirming that the maintenance work to which it relates has been completed in a satisfactory manner in accordance with appropriate airworthiness requirements.

Master minimum equipment list (MMEL). A list established for a particular aircraft type by the organization responsible for the type design with the approval of the State of Design containing items, one or more of which is permitted to be unserviceable at the commencement of a flight. The MMEL may be associated with special operating conditions, limitations or procedures.

Maximum mass. Maximum certificated take-off mass.

Minimum descent altitude (MDA) or minimum descent height (MDH). A specified altitude or height in a 2D instrument approach operation or circling approach operation below which descent must not be made without the required visual reference.

Note 1.— Minimum descent altitude (MDA) is referenced to mean sea level and minimum descent height (MDH) is referenced to the aerodrome elevation or to the threshold elevation if that is more than 2 m (7 ft) below the aerodrome elevation. A minimum descent height for a circling approach is referenced to the aerodrome elevation.

Note 2.— The required visual reference means that section of the visual aids or of the approach area which should have been in view for sufficient time for the pilot to have made an assessment of the aircraft position and rate of change of position, in relation to the desired flight path. In the case of a circling approach the required visual reference is the runway environment.

Note 3.— For convenience when both expressions are used they may be written in the form “minimum descent altitude/height” and abbreviated “MDA/H”.

Minimum equipment list (MEL). A list which provides for the operation of aircraft, subject to specified conditions, with particular equipment inoperative, prepared by an operator in conformity with, or more restrictive than, the MMEL established for the aircraft type.

Modification. A change to the type design of an aircraft, engine or propeller.

Note.— A modification may also include the embodiment of the modification which is a maintenance task subject to a maintenance release. Further guidance on aircraft maintenance, modification and repair is contained in the Airworthiness Manual (Doc 9760).

Navigation specification. A set of aircraft and flight crew requirements needed to support performance-based navigation operations within a defined airspace. There are two kinds of navigation specifications:

Required navigation performance (RNP) specification. A navigation specification based on area navigation that includes the requirement for performance monitoring and alerting, designated by the prefix RNP, e.g. RNP 4, RNP APCH.

Area navigation (RNAV) specification. A navigation specification based on area navigation that does not include the requirement for performance monitoring and alerting, designated by the prefix RNAV, e.g. RNAV 5, RNAV 1.

Note 1.— The Performance-based Navigation (PBN) Manual (Doc 9613), Volume II, contains detailed guidance on navigation specifications.

Note 2.— The term RNP, previously defined as “a statement of the navigation performance necessary for operation within a defined airspace”, has been removed from this Annex as the concept of RNP has been overtaken by the concept of PBN. The term RNP in this Annex is now solely used in the context of navigation specifications that require performance monitoring and alerting, e.g. RNP 4 refers to the aircraft and operating requirements, including a 4 NM lateral performance with on-board performance monitoring and alerting that are detailed in Doc 9613.

Night. The hours between the end of evening civil twilight and the beginning of morning civil twilight or such other period between sunset and sunrise, as may be prescribed by the appropriate authority.

Note.— Civil twilight ends in the evening when the centre of the sun's disc is 6 degrees below the horizon and begins in the morning when the centre of the sun's disc is 6 degrees below the horizon.

Non-congested hostile environment. A hostile environment outside a congested area.

Non-hostile environment. An environment in which:

- a) a safe forced landing can be accomplished because the surface and surrounding environment are adequate;
- b) the helicopter occupants can be adequately protected from the elements;
- c) search and rescue response/capability is provided consistent with anticipated exposure; and
- d) the assessed risk of endangering persons or property on the ground is acceptable.

Note.— Those parts of a congested area satisfying the above requirements are considered non-hostile.

Obstacle clearance altitude (OCA) or obstacle clearance height (OCH). The lowest altitude or the lowest height above the elevation of the relevant runway threshold or the aerodrome elevation as applicable, used in establishing compliance with appropriate obstacle clearance criteria.

Note 1.— Obstacle clearance altitude is referenced to mean sea level and obstacle clearance height is referenced to the threshold elevation or in the case of non-precision approach procedures to the aerodrome elevation or the threshold elevation if that is more than 2 m (7 ft) below the aerodrome elevation. An obstacle clearance height for a circling approach procedure is referenced to the aerodrome elevation.

Note 2.— For convenience when both expressions are used they may be written in the form “obstacle clearance altitude/height” and abbreviated “OCA/H”.

Offshore operations. Operations which routinely have a substantial proportion of the flight conducted over sea areas to or from offshore locations. Such operations include, but are not limited to, support of offshore oil, gas and mineral exploitation and sea-pilot transfer.

Operation. An activity or group of activities which are subject to the same or similar hazards and which require a set of equipment to be specified, or the achievement and maintenance of a set of pilot competencies, to eliminate or mitigate the risk of such hazards.

Note.— Such activities could include, but would not be limited to, offshore operations, heli-hoist operations or emergency medical service.

Operational control. The exercise of authority over the initiation, continuation, diversion or termination of a flight in the interest of the safety of the aircraft and the regularity and efficiency of the flight.

Operational credit. A credit authorized for operations with an advanced aircraft enabling a lower aerodrome operating minimum than would normally be authorized for a basic aircraft, based upon the performance of advanced aircraft systems utilizing the available external infrastructure.

Operational flight plan. The operator's plan for the safe conduct of the flight based on considerations of helicopter performance, other operating limitations and relevant expected conditions on the route to be followed and at the heliports concerned.

Operations in performance Class 1. Operations with performance such that, in the event of a critical engine failure, performance is available to enable the helicopter to safely continue the flight to an appropriate landing area, unless the failure occurs prior to reaching the take-off decision point (TDP) or after passing the landing decision point (LDP), in which cases the helicopter must be able to land within the rejected take-off or landing area.

Operations in performance Class 2. Operations with performance such that, in the event of critical engine failure, performance is available to enable the helicopter to safely continue the flight to an appropriate landing area, except when the failure occurs early during the take-off manoeuvre or late in the landing manoeuvre, in which cases a forced landing may be required.

Operations in performance Class 3. Operations with performance such that, in the event of an engine failure at any time during the flight, a forced landing will be required.

Operations manual. A manual containing procedures, instructions and guidance for use by operational personnel in the execution of their duties.

Operations specifications. The authorizations including specific approvals, conditions and limitations associated with the air operator certificate and subject to the conditions in the operations manual.

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

Operator's maintenance control manual. A document which describes the operator's procedures necessary to ensure that all scheduled and unscheduled maintenance is performed on the operator's aircraft on time and in a controlled and satisfactory manner.

Performance-based aerodrome operating minimum (PBAOM). A lower aerodrome operating minimum, for a given take-off, approach or landing operation, than is available when using a basic aircraft.

Note 1.— The PBAOM is derived by considering the combined capabilities of the aircraft and available ground facilities. Additional guidance material on PBAOM may be found in the Manual of All-Weather Operations (Doc 9365).

Note 2.— PBAOM may be based on operational credits.

Note 3.— PBAOM are not limited to PBN operations.

Performance-based communication (PBC). Communication based on performance specifications applied to the provision of air traffic services.

Note.— An RCP specification includes communication performance requirements that are allocated to system components in terms of the communication to be provided and associated transaction time, continuity, availability, integrity, safety and functionality needed for the proposed operation in the context of a particular airspace concept.

Performance-based navigation (PBN). Area navigation based on performance requirements for aircraft operating along an ATS route, on an instrument approach procedure or in a designated airspace.

Note.— Performance requirements are expressed in navigation specifications (RNAV specification, RNP specification) in terms of accuracy, integrity, continuity, availability and functionality needed for the proposed operation in the context of a particular airspace concept.

Performance-based surveillance (PBS). Surveillance based on performance specifications applied to the provision of air traffic services.

Note.— An RSP specification includes surveillance performance requirements that are allocated to system components in terms of the surveillance to be provided and associated data delivery time, continuity, availability, integrity, accuracy of the surveillance data, safety and functionality needed for the proposed operation in the context of a particular airspace concept.

Pilot-in-command. The pilot designated by the operator, or in the case of general aviation, the owner, as being in command and charged with the safe conduct of a flight.

Point of no return. The last possible geographic point at which an aircraft can proceed to the destination aerodrome as well as to an available en-route alternate aerodrome for a given flight.

Psychoactive substances. Alcohol, opioids, cannabinoids, sedatives and hypnotics, cocaine, other psychostimulants, hallucinogens, and volatile solvents, whereas coffee and tobacco are excluded.

Repair. The restoration of an aircraft, engine or associated part to an airworthy condition in accordance with the appropriate airworthiness requirements after it has been damaged or subjected to wear.

Required communication performance (RCP) specification. A set of requirements for air traffic service provision and associated ground equipment, aircraft capability, and operations needed to support performance-based communication.

Required surveillance performance (RSP) specification. A set of requirements for air traffic service provision and associated ground equipment, aircraft capability, and operations needed to support performance-based surveillance.

Rest period. A continuous and defined period of time, subsequent to and/or prior to duty, during which flight or cabin crew members are free of all duties.

Runway visual range (RVR). The range over which the pilot of an aircraft on the centre line of a runway can see the runway surface markings or the lights delineating the runway or identifying its centre line.

Safe forced landing. Unavoidable landing or ditching with a reasonable expectancy of no injuries to persons in the aircraft or on the surface.

Safety management system (SMS). A systematic approach to managing safety, including the necessary organizational structures, accountability, responsibilities, policies and procedures.

Series of flights. Series of flights are consecutive flights that:

- a) begin and end within a period of 24 hours; and
- b) are all conducted by the same pilot-in-command.

Specific approval. A specific approval is an approval which is documented in the operations specifications for commercial air transport operations or in the list of specific approvals for non-commercial operations.

Note.— The terms authorization, specific approval, approval and acceptance are further described in Attachment D.

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 of the Aerodrome. The State in whose territory the aerodrome is located.

Note.— State of the Aerodrome includes heliports and landing locations.

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 the principal location of a general aviation operator. The State in which the operator of a general aviation aircraft has its principal place of business or, if there is no such place of business, its permanent residence.

Note.— Guidance concerning the options for the principal location of a general aviation operator is contained in the Manual on the Implementation of Article 83 bis of the Convention on International Civil Aviation (Doc 10059).

Synthetic vision system (SVS). A system to display data-derived synthetic images of the external scene from the perspective of the flight deck.

Take-off and initial climb phase. That part of the flight from the start of take-off to 300 m (1 000 ft) above the elevation of the FATO, if the flight is planned to exceed this height, or to the end of the climb in the other cases.

Take-off decision point (TDP). The point used in determining take-off performance from which, an engine failure occurring at this point, either a rejected take-off may be made or a take-off safely continued.

Note.— TDP applies only to helicopters operating in performance Class 1.

Visual meteorological conditions (VMC). Meteorological conditions expressed in terms of visibility, distance from cloud, and ceiling,* equal to or better than specified minima.

Note.— The specified minima are contained in Chapter 4 of Annex 2.

V_{ross}. The minimum speed at which climb shall be achieved with the critical engine inoperative, the remaining engines operating within approved operating limits.

Note.— The speed referred to above may be measured by instrument indications or achieved by a procedure specified in the flight manual.

* As defined in Annex 2.

CHAPTER 2. APPLICABILITY

The Standards and Recommended Practices contained in Annex 6, Part III shall be applicable to all helicopters engaged in international commercial air transport operations or in international general aviation operations, except that these Standards and Recommended Practices are not applicable to helicopters engaged in aerial work.

Note 1.— Standards and Recommended Practices applicable to the operation of aeroplanes by operators authorized to conduct international commercial air transport operations are to be found in Annex 6, Part I.

Note 2.— Standards and Recommended Practices applicable to international general aviation operations with aeroplanes are to be found in Annex 6, Part II.

ANNEX 6 — PART III

SECTION II

INTERNATIONAL COMMERCIAL AIR TRANSPORT

CHAPTER 1. GENERAL

Note 1.— Although the Convention on International Civil Aviation allocates to the State of Registry certain functions which that State is entitled to discharge, or obligated to discharge, as the case may be, the Assembly recognized, in Resolution A23-13 that the State of Registry may be unable to fulfil its responsibilities adequately in instances where aircraft are leased, chartered or interchanged — in particular without crew — by the operator of another State and that the Convention may not adequately specify the rights and obligations of the State of the operator in such instances until such time as Article 83 bis of the Convention enters into force. Accordingly, the Council urged that if, in the above-mentioned instances, the State of Registry finds itself unable to discharge adequately the functions allocated to it by the Convention, it delegate to the State of the Operator, subject to acceptance by the latter State, those functions of the State of Registry that can more adequately be discharged by the State of the Operator. It was understood that pending entry into force of Article 83 bis of the Convention the foregoing action would only be a matter of practical convenience and would not affect either the provisions of the Chicago Convention prescribing the duties of the State of Registry or any third State. However, as Article 83 bis of the Convention entered into force on 20 June 1997, such transfer agreements will have effect in respect of Contracting States which have ratified the related Protocol (Doc 9318) upon fulfilment of the conditions established in Article 83 bis.

Note 2.— In the case of international operations effected jointly with helicopters, not all of which are registered in the same Contracting State, nothing in this Part of the Annex prevents the States concerned from entering into an agreement for the joint exercise of the functions placed upon the State of Registry by the provisions of the relevant Annexes.

1.1 COMPLIANCE WITH LAWS, REGULATIONS AND PROCEDURES

1.1.1 The operator shall ensure that all employees when abroad know that they must comply with the laws, regulations and procedures of those States in which their operations are conducted.

1.1.2 The operator shall ensure that all pilots are familiar with the laws, regulations and procedures, pertinent to the performance of their duties, prescribed for the areas to be traversed, the heliports to be used and the air navigation facilities relating thereto. The operator shall ensure that other members of the flight crew are familiar with such of these regulations and procedures as are pertinent to the performance of their respective duties in the operation of the helicopter.

Note.— Information for pilots and flight operations personnel on flight procedure parameters and operational procedures is contained in PANS-OPS (Doc 8168), Volume I. Criteria for the construction of visual and instrument flight procedures are contained in PANS-OPS (Doc 8168), Volume II. Obstacle clearance criteria and procedures used in certain States may differ from PANS-OPS, and knowledge of these differences is important for safety reasons.

1.1.3 The operator or a designated representative shall have responsibility for operational control.

Note.— The rights and obligations of a State in respect to the operation of helicopters registered in that State are not affected by this provision.

1.1.4 Responsibility for operational control shall be delegated only to the pilot-in-command and to a flight operations officer/flight dispatcher if the operator's approved method of control and supervision of flight operations requires the use of flight operations officer/flight dispatcher personnel.

Note.— Guidance on the operational control organization and the role of the flight operations officer/flight dispatcher is contained in the Manual of Procedures for Operations Inspection, Certification and Continued Surveillance (Doc 8335). Detailed guidance on the authorization, duties and responsibilities of the flight operations officer/flight dispatcher is contained in the manual Preparation of an Operations Manual (Doc 9376). The requirements for age, skill, knowledge and experience for licensed flight operations officers/flight dispatchers are contained in Annex 1.

1.1.5 If an emergency situation which endangers the safety of the helicopter or persons becomes known first to the flight operations officer/flight dispatcher, action by that person in accordance with 2.6.1 shall include, where necessary, notification to the appropriate authorities of the nature of the situation without delay, and requests for assistance if required.

1.1.6 If an emergency situation which endangers the safety of the helicopter or persons necessitates the taking of action which involves a violation of local regulations or procedures, the pilot-in-command shall notify the appropriate local authority without delay. If required by the State in which the incident occurs, the pilot-in-command shall submit a report on any such violation to the appropriate authority of such State; in that event, the pilot-in-command shall also submit a copy of it to the State of the Operator. Such reports shall be submitted as soon as possible and normally within ten days.

1.1.7 Operators shall ensure that pilots-in-command have available on board the helicopter all the essential information concerning the search and rescue services in the area over which the helicopter will be flown.

Note.— This information may be made available to the pilot by means of the operations manual or such other means as is considered appropriate.

1.1.8 Operators shall ensure that flight crew members demonstrate the ability to speak and understand the language used for radiotelephony communications as specified in Annex 1.

1.2 COMPLIANCE BY A FOREIGN OPERATOR WITH LAWS, REGULATIONS AND PROCEDURES OF A STATE

1.2.1 When a State identifies a case of non-compliance or suspected non-compliance by a foreign operator with laws, regulations and procedures applicable within that State's territory, or a similar serious safety issue with that operator, that State shall immediately notify the operator and, if the issue warrants it, the State of the Operator. Where the State of the Operator and the State of Registry are different, such notification shall also be made to the State of Registry, if the issue falls within the responsibilities of that State and warrants a notification.

1.2.2 In the case of notification to States as specified in 1.2.1, if the issue and its resolution warrant it, the State in which the operation is conducted shall engage in consultations with the State of the Operator and the State of Registry, as applicable, concerning the safety standards maintained by the operator.

Note.— The Manual of Procedures for Operations Inspection, Certification and Continued Surveillance (Doc 8335) provides guidance on the surveillance of operations by foreign operators. The manual also contains guidance on the consultations and related activities, as specified in 1.2.2, including the ICAO model clause on aviation safety, which, if included in a bilateral or multilateral agreement, provides for consultations among States, when safety issues are identified by any of the parties to a bilateral or multilateral agreement on air services.

1.3 SAFETY MANAGEMENT

Note.— Annex 19 includes safety management provisions for air operators. Further guidance is contained in the Safety Management Manual (Doc 9859).

1.3.1 **Recommendation.**— The operator of a helicopter of a certified take-off mass in excess of 7 000 kg, or having a passenger seating configuration of more than 9, and fitted with a flight data recorder should establish and maintain a flight data analysis programme as part of its safety management system.

Note.— The operator may contract the operation of a flight data analysis programme to another party while retaining overall responsibility for the maintenance of such a programme.

1.3.2 A flight data analysis programme shall contain adequate safeguards to protect the source(s) of the data in accordance with Appendix 3 to Annex 19.

Note.— Guidance on the establishment of flight data analysis programmes is included in the Manual on Flight Data Analysis Programmes (FDAP) (Doc 10000).

1.3.3 States shall not allow the use of recordings or transcripts of CVR, CARS, Class A AIR and Class A AIRS for purposes other than the investigation of an accident or incident as per Annex 13, except where the recordings or transcripts are:

- a) related to a safety-related event identified in the context of a safety management system; are restricted to the relevant portions of a de-identified transcript of the recording; and are subject to the protections accorded by Annex 19;
- b) sought for use in criminal proceedings not related to an event involving an accident or incident investigation and are subject to the protections accorded by Annex 19; or
- c) used for inspections of flight recorder systems as provided in Section 6 of Appendix 4.

Note.— Provisions on the protection of safety data, safety information and related sources are contained in Appendix 3 to Annex 19. When an investigation under Annex 13 is instituted, investigation records are subject to the protections accorded by Annex 13.

1.3.4 States shall not allow the use of recordings or transcripts of FDR, ADRS, Class B and C AIR, and Class B and C AIRS for purposes other than the investigation of an accident or incident as per Annex 13, except where the recordings or transcripts are subject to the protections accorded by Annex 19 and are:

- a) used by the operator for airworthiness or maintenance purposes;
- b) used by the operator in the operation of a flight data analysis programme as provided in Section II of this Annex;
- c) sought for use in proceedings not related to an event involving an accident or incident investigation;
- d) de-identified; or
- e) disclosed under secure procedures.

Note.— Provisions on the protection of safety data, safety information and related sources are contained in Appendix 3 to Annex 19.

1.3.5 The operator shall establish a flight safety documents system, for the use and guidance of operational personnel, as part of its safety management system.

Note.— Guidance on the development and organization of a flight safety documents system is provided in Attachment D.