



# Outlook on ICAO Provisions: Annex and PANS

2016

## Annex 1 - Personnel Licensing

### Description of Amendments

Amendment to increase the emphasis on health promotion, and upgrading of a Recommendation to a Standard of a provision on basic safety management principles in the medical assessment process

SARPS to embed PBN into traditional operations.

Update provisions related to language proficiency requirements based on feasibility study concerning data link operations

## Annex 2 - Rules of the Air

### Description of Amendments

Updated Standards on Communication Failure

Amended definitions as a consequential to the new approach classification

Requirements on speed variation in en-route airspace

## Annex 3 - Meteorological Service for International Air Navigation

### Description of Amendments

Provisions for new global reporting format

Requirements for digital information

Improved resolution of WAFS forecast information; availability of volcanic ash and tropical cyclone advisory information, AIRMET and special air reports in digital form; rationalisation of SIGMET, AIRMET and special air reports (uplink)

Requirements for the provision of METAR/SPECI, TAF and SIGMET in digital form.

## Annex 4 - Aeronautical Charts

### Description of Amendments

Harmonization of Charting Criteria, Databases of Criteria, and Avionics Systems with IFP Design

Provisions on the publication of SATVOICE service

## Annex 6 - Operation of Aircraft, Part I - International Comercial Air Transport - Aeroplanes

Description of Amendments
SARPs to support low visibility operations.
SARPs for operations beyond 60 mins from an aerodrome and EDTO.
SARPS to embed PBN into traditional operations.
New SARPs for EFB equipment and functions.
New Chapter 14 with provisions for Operators approved and not approved to transport DG.
Usable fuel required for Flight Commencement
Aircraft performance SARPs for legacy aeroplanes
New approach classification SARPs
Standards on the use of PBN on Conventional routes
Amend SARPs to differentiate those NAVSPECS that require operational approval and those that do not.
Provisions for performance-based communication and surveillance
Provisions for operations beyond 60 minutes to an aerodrome and extended diversion times.
Cargo compartment fire suppression systems consideration for Flight Planning
Harmonisation of applicability, terms and language
Next Steps for Continuous Descent Final Approach Operations (CDFA) Provisions
Consequential amendments
SARPs for extended duration CVRs
SARPs to determine the accident site within a limited area (to expedite flight recorder recovery)

## Annex 6 - Operation of Aircraft, Part II - International General Aviation - Aeroplanes

Description of Amendments
SARPs to support low visibility operations.
SARPs for operations beyond 60 mins.
SARPS to embed PBN into traditional operations.
New SARPs for EFB equipment and functions.
Amended fuel use provisions for GA
Aircraft performance SARPs for legacy aeroplanes
New approach classification SARPs ground facilities
Amend SARPs to differentiate those NAVSPECS that require operational approval and those that do not.
Amendment proposals for non EDTO operators based on cargo compartment fire suppression systems diversion requirement
Cargo compartment fire suppression systems consideration for Flight Planning
Harmonisation of applicability, terms and language
Correct typo and applicability errors within Annex Part II
Fuel Management Provisions
Amend to align GA FM SARPs with FM SARPs
Next Steps for Continuous Descent Final Approach Operations (CDFA) Provisions
Consequential amendments
SARPs for extended duration CVRs
Provisions for performance-based communication and surveillance

## Annex 6 - Operation of Aircraft, Part III - International Operations - Helicopters

Description of Amendments
SARPs to support low visibility operations.
SARPS to embed PBN into traditional operations.
New SARPs for EFB equipment and functions.
Amended fuel use provisions for helicopters
New approach classification SARPs ground facilities
Amend SARPs to differentiate those NAVSPECS that require operational approval and those that do not.
Harmonisation of applicability, terms and language
Fuel Management Provisions
Next Steps for Continuous Descent Final Approach Operations (CDFA) Provisions
Consequential amendments
Provisions for performance-based communication and surveillance

## Annex 8 - Airworthiness of Aircraft

### Description of Amendments

Aircraft Performance SARPS for global reporting format

Propose amendment to Annex 8

## Annex 9 - Facilitation

### Description of Amendments

Provisions for better facilitation

Consider developing of SARPs regarding the establishment by States of legislation, regulations and/or policies to support victims of civil aviation accidents and their families.

## Annex 10 - Aeronautical Telecommunications, Volume I - Radio Navigation Aids

### Description of Amendments

Standards on SBAS Cat I

Amended definitions as a consequential to the new approach classification

Harmonization of relevant ICAO and RTCA provisions for SBAS

Reflect best practice in provision of ILS distance - to -treshold information (NP)

Update GLONASS SARPs to reflect the evolution of the system (NP)

## Annex 10 - Aeronautical Telecommunications, Volume II - Communication Procedures including those with PANS status

### Description of Amendments

Updated Standards on Communication Failure Procedures

Definitions of pre-formatted and standardized free text messages.

Provisions on the use of SATVOICE

Provisions on data link initiation capability

improved procedures and message set for CPDLC and ADS-C

## Annex 10 - Aeronautical Telecommunications, Volume III - Communication Systems

### Description of Amendments

Extension of SELCAL Pool

Amendments to accommodate Airport Surface Datalink

Provisions on the use of SATVOICE

## Annex 11 - Air Traffic Services

### Description of Amendments

Re-introduce FRT suffixes for ATS routes into Annex 11

Provisions for performance-based communication and surveillance

Develop fatigue management SARPs for ATCs

Provisions on Responsibility of States regarding implementation of Flight Procedures

Harmonization of Charting Criteria, Databases of Criteria, and Avionics Systems with IFP Design

## Annex 13 - Aircraft Accident and Incident Investigation

### Description of Amendments

Annex 13 / Enhanced provisions for the legal protection of Information gleaned from accident and incident investigations including para 5.12 and attachment E, as well as protection of flight recorder recordings in routine operations (Annex 6).

Provisions for functional independence of accident investigation authorities

Provide proposal relating to AIG-related meetings to improve investigations and share lessons and best practices.

## Annex 14 - Aerodromes, Volume I — Aerodrome Design and Operations

### Description of Amendments

Introducing LED std.

Provisions for ARIWS, obstacles marking.

Provisions in Annex 14 to link with PANS Aerodromes.

Introduction of risk-based approach to facilitate operations of new types/derivatives of aircraft.

Provisions to harmonize the PAPI with ILS, Provisions to properly move a VASI to prevent an obstacle to penetrate obstacle protection surface.

Provisions for FOD prevention including agreed definition and taxonomy, new technologies for FOD detection devices

Harmonization of runway surface condition assessment and reporting including global reporting format

Amended definitions as a consequential to the new approach classification

Clarification of existing SARPs for visual aids, clearance distances,...

Definition of arresting system and operational issues, including undershoots and access by emergency services

## Annex 14 - Aerodromes, Volume II — Heliports

### Description of Amendments

Clarification of definitions

Performance-based provisions for the response to an emergency

## Annex 15 - Aeronautical Information Services

### Description of Amendments

Provisions for new global reporting format

Exchange Models

Consequential provisions for RESA and arresting system

Harmonization of Charting Criteria, Databases of Criteria, and Avionics Systems with IFP Design

Provisions on the publication of SATVOICE service and RCP/RSP

## Annex 17 - Security

### Description of Amendments

Provisions for better integration of aviation security

## Annex 18 - The Safe Transport of Dangerous Goods by Air

### Description of Amendments

New Standards for State approval of operator DG training programmes.

Requirements for State inspection systems for dangerous goods plus new and amended definitions

Requirements for SMS, dangerous goods in the mail and dangerous goods training

## Annex 19 - Safety Management

### Description of Amendments

Enhanced provisions for the legal protection of Information generated from Safety Management activities

Extension of the SMS applicability to Engine and Propeller Design Organizations and Manufacturers

Integrated SSP framework; Pre-requisites for SSP Implementation; Delegation of SSP functions; Further development of risk-based oversight; Safety management of States' own activities; Concept of safety culture;

Criteria for common SMS acceptance; consistent use of "responsibility" and "accountability"; mechanisms to improve the SMS performance of service providers

Enhanced provisions for the collection analysis and exchange of Safety data and Safety information including the protection of the data throughout the process

Address safety management activities pertaining to functions and services related to, or in direct support of the safe operation of aircraft

## PANS-ABC - Procedures for Air Navigation Services — ICAO Abbreviations and Codes

### Description of Amendments

Provisions on PBCS and SATVOICE

## PANS-ATM - Procedures for Air Navigation Services — Air Traffic Management

Description of Amendments
Revised phraseology addressing the fuel state of an aircraft
Procedures and phraseologies for SID/STAR
Procedures and phraseologies for transmittal of runway surface condition
Amended definitions as a consequential to the new approach classification
improved procedures and message set for CPDLC and ADS-C
Enhanced separation minima addressing: - 45 ' RNAV arrival and departure separation - PBN based Lateral
New CPDLC messages. Procedures and criteria for application for ITP
GBAS Landing System (GLS) approaches to parallel runway operations
Procedures for performance-based communication and surveillance, and SATVOICE
Refined route spacing, separation minima and procedures for all PBN navigation specifications.
ADS-C Climb/Descent Procedures (CDP).
RLongSM 5 minutes longitudinal separation between ADS-C aircraft on same identical tracks.
23 NM lateral separation to support ½ degree oceanic flex tracks.
GNSS/RNP 2 Lateral separation on intersecting and non-intersecting tracks.
Amendment to add flight crew /de-icing crew phraseology in Chapter 12.
Aircraft emergency descent procedures provisions
Limits of a vector. Review the intent of specifying a limit of a vector and suitability of current PANS
Develop new phraseology for advising of TORA/TODA for intersection departures
Develop aircraft emergency descent procedures provisions
Procedures for harmonized use and exchange of RVSM monitoring data among RMAs
PANS-ATM (Doc 4444) / Enhanced separation minima addressing: - VOR/GNSS lateral separation. PANS-ATM (Doc 4444) / Enhanced separation minima addressing: - VOR/GNSS lateral separation. - 5 nm RNP 1 terminal separation & Circular 324

# PANS-OPS - Procedures for Air Navigation Services — Aircraft Operations, Volume I — Flight Procedures

## Description of Amendments

Amended definitions as a consequential to the new approach classification

PANS-OPS Procedures connecting PBN with XLS final approach and APV  
Procedure criteria for PinS route visual segment  
missed approach  
Visual procedures utilizing PBN

Procedure design criteria on LP/Baro-VNAV.

PANS-OPS Vol. I re-write

Cargo compartment fire suppression systems consideration for Flight Planning

Next Steps for Continuous Descent Final Approach Operations (CDFA) Provisions

Re-structuring and rewrite of PANS-OPS vol. I

Provisions on IFP for Helicopter PBN operations

Provisions on new ACAS logic. Revised altitude levelling laws and auto-coupling.



## PANS-OPS - Procedures for Air Navigation Services — Aircraft Operations, Volume II — Construction of Visual and Instrument Flight Procedures

Description of Amendments
New Baro-VNAV design criteria PBN charting information box and identification consistency.
Procedure design criteria on SBAS Cat I
Amended definitions as a consequential to the new approach classification
New procedure design requirements to support RNP2 and Advanced RNP. New charting requirements including PBN information box and magnetic bearings on PBN routes
PANS-OPS Procedures connecting PBN with XLS final approach and APV Procedure criteria for PinS route visual segment missed approach Visual procedures utilizing PBN
Charting of PBN routes including accuracy value
Procedure design criteria on LP/Baro-VNAV.
Procedure design criteria for GLS parallel approaches Procedures for Air Navigation Services — Aircraft Operations (OPS) (Doc 8168)
Procedure design criteria for reduced divergence departures
Next Steps for Continuous Descent Final Approach Operations (CDFA) Provisions
Provisions on IFP for Helicopter PBN operations
Harmonization of Charting Criteria, Databases of Criteria, and Avionics Systems with IFP Design
Determine if AMA data in the current form is required
Determine necessary changes to existing guidance regarding publishing single direction airways
Determine necessary changes to existing guidance regarding the renaming of waypoints in the case of relocation
Clarification of the “Path Descriptor” rules for procedure design
Finalization of turn protection and turn area obstacle assessment
Review of figures in PANS-OPS Vol II to ensure better clarity
Use of CF Leg and first leg type of departure procedures
Temperature Correction Formula in PANS-OPS Vol II. Development of off-set Baro-VNAV criteria.
GBAS with GP inoperative
Depiction of accuracy requirements for en route segments
Revision of SBAS Lines of Minima

## PANS-TRG - Procedures for Air Navigation Services — Training

Description of Amendments
Develop new provisions for competency-based training of ATCOs
Develop new provisions for competency-based training of ATSEPs
Revise provisions to include clarifications to competency-related terms
Provisions for new CBT procedures for ATC

## PANS-AERO - Procedures for Air Navigation Services — Aerodromes

### Description of Amendments

Procedures to assess aerodrome/aeroplane compatibility to improve efficiency of surface.

Associated procedures for RESA

# 2018

## Annex 1 - Personnel Licensing

### Description of Amendments

Provisions for Remote pilot licence for:

- Remote Pilot
- Remote student pilot
- RPAS instructor

Provisions for Medical assessment

Provisions for Licence for flight crew members others than for pilots

Provisions for Licence and ratings for personnel other than flight crew members

Provisions for Credit for remote pilot licence obtained in military service and manned aviation

## Annex 2 - Rules of the Air

### Description of Amendments

New rules related to flight planning

Appendix 4 to reflect the impact of new provisions being added to Annex 1.

## Annex 3 - Meteorological Service for International Air Navigation

### Description of Amendments

Provisions for the establishment of air traffic management requirements for aeronautical meteorological service capabilities to support ATM operations Block 1.

Proposals for inclusion in Amendment 78 to Annex 3 to meet operational requirements in line with the GANP and to integrate WAFS information into the SWIM environment.

Proposals for inclusion in Amendment 78 to Annex 3 to meet operational requirements in line with the GANP and to integrate the information on the release of radioactive material into the atmosphere into the SWIM.

Proposals for inclusion in Amendment 78 to Annex 3 to establish a regional advisory system to meet operational requirements in line with the GANP and to integrate the information on the provision of hazardous weather into the SWIM environment.

Initial proposals for inclusion in Amendment 78 to Annex 3 to meet operational requirements in line with the GANP and to integrate space weather information into the SWIM.

Proposals to update Annex 3 to meet current and evolving operational requirements in line with the GANP and to integrate IAWW information into the SWIM.

Standards for IWXXM compliant METAR, SPECI, TAF and SIGMET exchange

Restructured document to contain functional and performance requirements

## Annex 4 - Aeronautical Charts

### Description of Amendments

Final amendment on the transition from AIS to AIM

Develop provisions to enhance information depiction on SID/STAR charts

## Annex 6 - Operation of Aircraft, Part I - International Commercial Air Transport - Aeroplanes

### Description of Amendments

SARPS to support harmonisation and recognition of AMO approvals.

SARPS to address lighting systems considerations for low visibility operations.

Technology for runway safety (on-board equipment) provisions

Standards on RTA for commercial operations

Introduction of light-weight recorders

Guidance on Assessment of the level of RFFS (Attachment J)

Use of terms such as authorization approval and acceptance provisions (Or guidance material as recommended by Panel. See element of the Manual of Procedures for Operations Inspection, Certification and Continued Surveillance (Doc 8335))

Development of future flight Recorder Provisions removing unnecessary complexity and prescription

Proposed amendment on flight deck activities SOP

Specify requirement for operational capabilities document

Amend definitions and approach operation provisions regarding Category IIIA, IIIB, IIIC operations

Basic vs advanced aircraft definitions/descriptions in Attachment I

Revise Aerodrome operating minima SARPS with "Operational Credit" concept

Revise Vision System SARPS equipment requirements/recommendations

Develop provisions for electronic aircraft maintenance records

## Annex 6 - Operation of Aircraft, Part II - International General Aviation - Aeroplanes

Description of Amendments
SARPS to support harmonisation and recognition of AMO approvals.
Technology for runway safety (on- board equipment) provisions
Standards on the use of PBN on Conventional routes
Standards on RTA for GA operations
Introduction of light-weight recorders
Use of terms such as authorization approval and acceptance provisions
Development of future flight Recorder Provisions removing unnecessary complexity and prescription
SARPS to address lighting systems considerations for low visibility operations.
Proposed amendment on flight deck activities SOP
Dangerous goods Provisions
Provisions and guidance on Assessment of the level of RFFS at aerodromes for GA operations
SARPs to determine the accident site within a limited area (to expedite flight recorder recovery)
Amend definitions and approach operation provisions regarding Category IIIA, IIIB, IIIC operations.
Basic vs advanced aircraft definitions/descriptions in Attachment 2.B
Revise Aerodrome operating minima SARPS with "Operational Credit" concept
Revise Vision System SARPS equipment requirements/recommendations
Develop provisions for electronic aircraft maintenance records

## Annex 6 - Operation of Aircraft, Part III - International Operations - Helicopters

Description of Amendments
SARPS to support harmonisation and recognition of AMO approvals.
Standards on the use of PBN on Conventional routes
Standards on RTA for Helicopter operations
Use of terms such as authorization approval and acceptance provisions
Development of future flight Recorder Provisions removing unnecessary complexity and prescription
SARPS to address lighting systems considerations for low visibility operations.
Proposed amendment on flight deck activities SOP
SARPs for extended duration CVRs
SARPs to determine the accident site within a limited area (to expedite flight recorder recovery)
Develop provisions that will clarify the roles and responsibilities of the State of the Operator, State of shipment and operator with the relevant requirements of Annex 18
Clarify provisions regarding aerial work, external loads and sling loads.
Amend definitions and approach operation provisions regarding Category IIIA, IIIB, IIIC operations.
Basic vs advanced aircraft definitions/descriptions in Attachment I
Revise Aerodrome operating minima SARPS with "Operational Credit" concept
Revise Vision System SARPS equipment requirements/recommendations
Develop provisions for electronic aircraft maintenance records

## Annex 8 - Airworthiness of Aircraft

Description of Amendments
SARPS on the State of Design responsibilities when a type certificate or approval is revoked. (Or guidance material as recommended by Panel. See element AIR Manual DOC 9760 within this element SANRI-2-2016-5).
Design Standard and Certification of light aeroplanes under 750Kg.
SARPS on the Certificate of Airworthiness validity when a Type Certificate is revoked.
Develop provisions for the State of Design to notify other Contracting States in cases of transfer of the Type Certificate to a different holder. (Or guidance material as recommended by Panel. See element AIR Manual in REC-A-AIR-2016)
Develop guidance material on the "probability descriptor" (Or guidance material as recommended by Panel. See element AIR Manual in REC-A-AIR-2016)
Establish the applicability of Annex 8, Part IIIB to single engine aeroplane over 5700 kg single engine aeroplane over 5700 kg (Or guidance material as recommended by Panel. See element AIR Manual in REC-A-AIR-2016)
Address changes to the stall warning requirements in Annex 8, Part IVB (Or guidance material as recommended by Panel. See element AIR Manual in REC-A-AIR-2016)
Establish the applicability of weight limitation for all aircraft for cargo compartment protection. (Or guidance material as recommended by Panel. See element AIR Manual in REC-A-AIR-2016)
Develop provisions for the transmission State of Design and handling by State of Registry of Security Sensitive Airworthiness Information if this action is determined to correct an unsafe condition and comply with the applicable airworthiness requirements (Or guidance material as recommended by Panel. See element AIR Manual in REC-A-AIRP-2018)

## Annex 10 - Aeronautical Telecommunications, Volume I - Radio Navigation Aids

### Description of Amendments

Standards to cover GBAS use as a landing aid under Cat II/III

Standards to support SBAS support via multiple constellations and frequencies

Standards to support GNSS multi-constellation dual frequency

Standards to support GBAS support via multiple constellations and frequencies

Develop provisions for ARAIM

Amend definitions and approach operation provisions regarding Category IIIA, IIIB, IIIC operations to make them consistent the Annex 6

## Annex 10 - Aeronautical Telecommunications, Volume III - Communication Systems

### Description of Amendments

Provisions on the future communication infrastructure

## Annex 10 - Aeronautical Telecommunications, Volume IV — Surveillance Radar and Collision Avoidance Systems

### Description of Amendments

Provisions on the situational awareness on the airport surface for ground vehicles.

Develop provisions to mitigate the effects of erroneous information on ATC displays due to interference affecting 1030/1090 MHz based surveillance systems

Update Annex 10 Volume IV relating to surveillance and collision avoidance systems in light of operational experience

## Annex 11 - Air Traffic Services

### Description of Amendments

New services associated to extended flight plan

Provisions on remotely operated ATS

Provisions for the establishment of air traffic management requirements for the use/integration of aeronautical meteorological information in ATM operations decision support processes.

## Annex 13 - Aircraft Accident and Incident Investigation

### Description of Amendments

Consider upgrading recommended practice 5.4.3 to a Standard to allow unrestricted access to all evidence material during an investigation

Consider upgrading recommended practice 6.11 and 6.12 to a Standard and clarify link with Annex 19 provisions on State Safety Assurance

Review interaction between Annex 12 and Annex 13 to clarify provisions when aircraft remains missing at the end of the search and rescue phase and the search continues to locate the aircraft for investigation purposes.

Review provisions in Annex 13 with relation to the delegation of an investigation; issuance of Final Reports and interim statements

## Annex 14 - Aerodromes, Volume I — Aerodrome Design and Operations

Description of Amendments
Provisions on airport planning requirements.
Taxiway naming conventions and RGL and Visual Aids for A-SMGCS
Criteria on pavement overloading, revised ACN/PCN pavement reporting system, provisions concerning effects of magnetic anomalies.
Performance-based provisions for the response to an emergency
Review of Obstacle Limitation Surfaces
Consequential from Second Edition of PANS-AERO.
Restructuring of Annex 14 Vol I
RFFS Provisions for GA
Maintenance of SARPs.
Overall review of visual aids
Consequential change of definition between Cat II and Cat II (350 m RVR to 300 m RVR)
Amend definitions and approach operation provisions regarding Category IIIA, IIIB, IIIC operations to make them consistent the Annex 6

## Annex 14 - Aerodromes, Volume II — Heliports

Description of Amendments
Provisions for the applicability of A14 VII, certification of heliports and implementation of safety management
Provisions relative to new OLS
Airway width at visual heliports, instrument approaches and departures, review of light section
Modifications of existing markings for the interest of safety
RFFS Provisions for GA
Maintenance of SARPs
Updated version to reflect onshore-offshore distinction
Review of FATO surface provisions

## Annex 15 - Aeronautical Information Services

Description of Amendments
Final Amendment (39) supporting transition from AIS to AIM
GRF in new Annex 15
Portrayal of altitudes on terminal charting
Continued review of harmonization in the area of information promulgation and publication
Provisions to harmonize NOTAM/SIGMET in relation to VA activity that can be used by flight crew
Requirements for publication of flight planning services provided, formats accepted, and associated procedures

## Annex 19 - Safety Management

### Description of Amendments

Enhanced coordination of Emergency Response Planning at the State level

## PANS-ATM - Procedures for Air Navigation Services — Air Traffic Management

### Description of Amendments

Provisions to support airport CDM and ATFM.

Provisions for wake turbulence separation Chapter 5 + 8 - RECAT Phase 1 - 6 categories.

New separation criteria for departure procedures based on PBN capabilities

Provisions on improved Wake Turbulence Criteria

Improved PBN separation minima based on improved data to increase capacity and efficiency through reduced separation standards and obstacle clearance requirements.

ATM procedures for RTA.

Separation minima on FRT

Separation minima and procedures for RNP 1, 2 advanced RNP.

Procedures for flight and flow information for pre-departure

Procedures on implementation of ATFM

Separation minima for RNP parallel approaches

Advanced RNP

PBN based Lateral Separation Minima To Special Use Airspace (SUA)

Clarification of procedures when being vectored for final approach

Maintenance of PANS-ATM to align with the latest development of technologies and procedures as well as to correct editorial errors.

Procedures on remotely operated ATS

Voice phraseologies associated with runway safety programme

Update description of Block 18 PBN codes to include current specifications and optional functionality, as well as standard phraseology related to PBN

Define flight planning and ATM requirements to permit safe use of FRT's

Inclusion of ATM procedures for visually guided approaches

Amend definitions and approach operation provisions regarding Category IIIA, IIIB, IIIC operations to make them consistent the Annex 6

Procedures for the use/integration of aeronautical meteorological information in ATM operations decision support processes.



## PANS-OPS - Procedures for Air Navigation Services — Aircraft Operations, Volume I — Flight Procedures

### Description of Amendments

Procedures and symbology on charts for low visibility operations

Procedures for using the runway surface condition assesment information

Amended procedures for low visibility operations

Update to flight procedures to allow multiple GNSS constellations

Procedures for the use of PBN on Conventional routes. EN-ROUTE

Pilot requirements on FRT

Visual procedures utilizing PBN

Flight procedure requirements for pilots

Harmonization of low visibility/surface movement guidance provisions

Technology for runway safety (on- board equipment) provisions

Procedures for runway safety (visual aids)

Procedures for the use of PBN on Conventional routes. APP

Develop provisions for the application of approach procedures utilizing SBAS with barometric vertical navigation for the guidance of flight operations personnel and flight crew.

Development of provisions for the application of Terminal Procedures supported by GBAS as guidance for flight operations personnel and flight crew.

Develop GBAS Cat. II/III Criteria for the guidance of flight operations personnel and flight crew.

Requirements for the pilots to fly the visually guided procedures

Amend definitions and approach operation provisions regarding Category IIIA, IIIB, IIIC operations to make them consistent the Annex 6

## PANS-OPS - Procedures for Air Navigation Services — Aircraft Operations, Volume II — Construction of Visual and Instrument Flight Procedures

### Description of Amendments

Charting requirements for RNP AR departure and OEI
Procedure design criteria for GBAS Cat II/III
Visual procedures utilizing PBN
Update to flight procedures to allow multiple GNSS constellations
Procedure design criteria for PBN parallel operations
Improved PBN design criteria based on improved data to increase capacity and efficiency through reduced separation standards and obstacle clearance requirements.
Charting requirements RNP AR Departures and OEI Procedures
Instrument flight procedures for FRT
Procedure design criteria for PBN parallel approaches Procedures for Air Navigation Services — Aircraft Operations (OPS) (Doc 8168)
Procedures for runway safety (visual aids)
Addition of Step Down Fix publication requirements
Portrayal of altitudes on terminal charting
Continued review of harmonization in the area of information promulgation and publication
Development of RNAV arrival and Departure Charts for "data detail requirements" and amend chart manual
Clarification of navigation specifications and accuracy requirements for ATS Routes
Clarification of PANS-OPS Vol II criteria regarding minimum intermediate segment length
Harmonization of criteria regarding MSA/TAA and capture regions for Y or T Bar procedure construction
Improvement of of VSS design criteria (NPA-PA-APV) based on operational experience
Development of criteria for MOC reduction for turning departures
ILS/MLS/GBAS/ OCA/H promulgation for NLA
Amendment to PANS-OPS VOL II – GBAS Criteria
ICAO Location Indicator scheme enhancements
Use of GBAS positioning for terminal operations
Adaptation of procedure design magnetic variation terminology
Significant point publication and depiction requirements
Develop design criteria for the application of approach procedures utilizing SBAS with barometric vertical navigation
Design criteria for visually guided approaches
Develop provisions to enhance information depiction on SID/STAR charts

## PANS-TRG - Procedures for Air Navigation Services — Training

### Description of Amendments

SARPS to embed PBN into traditional operations.

## PANS-AERO - Procedures for Air Navigation Services — Aerodromes

### Description of Amendments

Procedures, processes and actions for ground handling.

Procedures for CDM/A-CDM.

Updated guidance for pavement management system.

Procedures for responds to an emergency

Procedures for FOD control

Procedures for Bird Strike hazard

Procedures for runway surface condition assessment and friction reporting

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# 2020

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## Annex 1 - Personnel Licensing

### Description of Amendments

Sector-specific emergency response planning and coordination provisions

## Annex 2 - Rules of the Air

### Description of Amendments

Mitigation strategies related to annexes with the existing material Add the mitigation means applicable to RPAS which are missing

ATM contingency procedures for loss of C2 link

## Annex 3 - Meteorological Service for International Air Navigation

### Description of Amendments

Amendment on the requirements of the use of improved operational information access for MET

mitigation strategies related to annexes with the existing material Add the mitigation means applicable to RPAS which are missing

## Annex 4 - Aeronautical Charts

### Description of Amendments

Amendments related to air navigation security

## Annex 6 - Operation of Aircraft, Part I - International Commercial Air Transport - Aeroplanes

### Description of Amendments

Sector-specific emergency response planning and coordination provisions

Develop fatigue management SARPs for AMEs

SARPS for image recording of cockpit area

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## Annex 6 - Operation of Aircraft, Part II - International General Aviation - Aeroplanes

### Description of Amendments

Sector-specific emergency response planning and coordination provisions

SARPS for image recording of cockpit area

ROC Development:

Requirements for issuance of RPAS operator certificate (ROC), Develop provisions (SARPS and guidance) for the ROC

## Annex 6 - Operation of Aircraft, Part III - International Operations - Helicopters

### Description of Amendments

Introduction of light-weight recorders

Sector-specific emergency response planning and coordination provisions

Fatigue Management Provisions

SARPS for image recording of cockpit area

## Annex 6 - Operation of Aircraft, Part IV - International Remotely Piloted Aircraft System

### Description of Amendments

Provisions for the carriage of flight recorders in RPASs

Provisions for continuing airworthiness including C2 link

airworthiness and operations requirements for C2 link RCP

Mitigation strategies related to annexes with the existing material Add the mitigation means applicable to RPAS which are missing

ROC Development:

Requirements for safety management on RPAS operators and operations and coordinate with appropriate ICAO expert groups the development of provisions

ROC Development:

Develop a template for the ROC and provisions for operations specifications

C2 Communications service provider:

Provisions for C2 link RCP and approval/acceptance of C2 link service providers

C2 Communications service provider:

Requirements for oversight of C2 link service providers including, but not limited to technical, airworthiness and operational elements - develop the operational provisions

Operational Requirements:

Define requirements for handovers between RPS, develop provisions

Operational Requirements:

Initial requirements for IFR RPAS operations in controlled airspace / aerodromes, develop provisions

## Annex 7 - Aircraft Nationality and Registration Marks

### Description of Amendments

Classification(s) of RPA, RPS for the purpose of developing the applicable airworthiness standards

## Annex 8 - Airworthiness of Aircraft

### Description of Amendments

Sector-specific emergency response planning and coordination provisions

Classification(s) of RPA, RPS for the purpose of developing the applicable airworthiness standards

Provisions for type certification

Provisions for continuing airworthiness

Airworthiness and operations requirements for C2 link RCP

Develop a process to allow communication service providers (CSPs) to support the C2 link  
This could include approval / acceptance of, and ongoing oversight of C2 link service providers

Mitigation strategies related to annexes with the existing material Add the mitigation means applicable to RPAS which are missing

## Annex 10 - Aeronautical Telecommunications, Volume I - Radio Navigation Aids

### Description of Amendments

Amendments related to air navigation security

Airworthiness and operations requirements for C2 link RCP

Update Annex to include use of DME for RNP 1

## Annex 10 - Aeronautical Telecommunications, Volume II - Communication Procedures including those with PANS status

### Description of Amendments

Amendments related to air navigation security

C2 link systems requirements based on RCP  
Specifically including link mode control, hand over procedures, C2 status monitoring and lost C2 link procedure

ATM contingency procedures for loss of C2 link

## Annex 10 - Aeronautical Telecommunications, Volume III - Communication Systems

### Description of Amendments

Amendments related to air navigation security

Amendment with updates on Addressing and Naming conventions and their Management and security

Provisions to support SWIM

Provisions on next generation ELTs

Define requirements for the security of the C2 link

## Annex 10 - Aeronautical Telecommunications, Volume IV — Surveillance Radar and Collision Avoidance Systems

### Description of Amendments

Amendments related to air navigation security

Develop technical provisions for RPA Detect and Avoid Capabilities

Mitigation strategies related to annexes with the existing material Add the mitigation means applicable to RPAS which are missing

## Annex 10 - Aeronautical Telecommunications, Volume V — Aeronautical Radio Frequency Spectrum Utilization

### Description of Amendments

Inclusion of provisions on the use of 5Ghz band

New provisions to support future aeronautical communications

Address radio frequency interference issues for aviation and the need for action by States, ICAO and international organizations

Provisions on next generation ELTs

C2 link spectrum requirements

Taking into account the expected QoS, RCP from WPI No. XX

Mitigation strategies related to annexes with the existing material Add the mitigation means applicable to RPAS which are missing

Mitigation strategies related to annexes with the existing material Add the mitigation means applicable to RPAS which are missing

## Annex 11 - Air Traffic Services

### Description of Amendments

Amendment on the requirements on the use of improved operational information access for ATM

Sector-specific emergency response planning and coordination provisions

Provisions on making use of SWIM

Amendment on the requirements on the use of improved operational information access for AIM

Mitigation strategies related to annexes with the existing material Add the mitigation means applicable to RPAS which are missing

## Annex 13 - Aircraft Accident and Incident Investigation

### Description of Amendments

Review the provisions for the investigation of serious incidents in Annex 13

Sector-specific emergency response planning and coordination provisions

Review existing SARPs and guidance material to determine whether a specific Standard is required to promote the expeditious testing for problematic use of substances by flight crew members following an aviation accident

Provisions for the investigation of accidents and incidents involving RPAS

Guidance on mutual cooperation and delegation of investigations in an Attachment to Annex 13

## Annex 14 - Aerodromes, Volume I — Aerodrome Design and Operations

### Description of Amendments

Provisions and global standardization of safe and efficient ground handling.

Amend Annex 14 vol I to allow certification to take into consideration the infrastructure provided, associated procedures and other measures that combine to provide safe surface movement

Sector-specific emergency response planning and coordination provisions

Acceptance of arresting system

Mitigation strategies related to annexes with the existing material Add the mitigation means applicable to RPAS which are missing

## Annex 14 - Aerodromes, Volume II — Heliports

### Description of Amendments

Sector-specific emergency response planning and coordination provisions

## Annex 15 - Aeronautical Information Services

### Description of Amendments

Amendments related to air navigation security

Provisions on the use and support of SWIM

## Annex 17 - Security

### Description of Amendments

Amendments related to air navigation security

Sector-specific emergency response planning and coordination provisions

## Annex 18 - The Safe Transport of Dangerous Goods by Air

### Description of Amendments

Sector-specific emergency response planning and coordination provisions

Amendment

## Annex 19 - Safety Management

### Description of Amendments

Provisions to facilitate the interaction between SMS and SSP

Mitigation strategies related to annexes with the existing material Add the mitigation means applicable to RPAS which are missing

ROC Development:

Requirements for safety management on RPAS operators and operations and coordinate with appropriate ICAO expert groups the development of provisions

C2 Communications service provider:

Provisions for C2 link RCP and approval/acceptance of C2 link service providers

C2 Communications service provider:

Requirements for oversight of C2 link service providers including, but not limited to technical, airworthiness and operational elements - develop the operational provisions

## PANS-ATM - Procedures for Air Navigation Services — Air Traffic Management

### Description of Amendments

Amendment on the requirements on the use of improved operational information access for ATM

Mitigation strategies related to annexes with the existing material Add the mitigation means applicable to RPAS which are missing

ATM contingency procedures for loss of C2 link

Route spacing standards for AR Departures

Ensure FF-ICE captures PBN requirements correctly

Develop improved route spacing standards for aircraft using RF leg functionality

## PANS-OPS - Procedures for Air Navigation Services — Aircraft Operations, Volume I — Flight Procedures

### Description of Amendments

Changes to accommodate RPA

## PANS-OPS - Procedures for Air Navigation Services — Aircraft Operations, Volume II — Construction of Visual and Instrument Flight Procedures

### Description of Amendments

Revise criteria/instructions for procedure design using RF legs. Requirement for flyby flyover waypoints if RF is mandated in specifications

## PANS-TRG - Procedures for Air Navigation Services — Training

### Description of Amendments

Training Provisions for Remote Pilots

## PANS-AERO - Procedures for Air Navigation Services — Aerodromes

### Description of Amendments

Efficient day-to-day procedures (Second Edition) on ground handling.



## Annex 3 - Meteorological Service for International Air Navigation

## Description of Amendments

Provisions for the establishment of air traffic management requirements for aeronautical meteorological service capabilities to support ATM operations Block 2.

## Annex 6 - Operation of Aircraft, Part II - International General Aviation - Aeroplanes

## Description of Amendments

Fatigue Management Provisions

## Annex 10 - Aeronautical Telecommunications, Volume IV — Surveillance Radar and Collision Avoidance Systems

## Description of Amendments

Amend Annex 10 Volume IV to ensure performance of surveillance and collision avoidance systems in light of operational experience and emerging technologies

Develop provisions on ACAS-X

Develop provisions for ACAS-Xu

## PANS-ATM - Procedures for Air Navigation Services — Air Traffic Management

## Description of Amendments

Phraseology and message set for interval management

Operational procedure for interval management

Operational procedure for interval management

## PANS-OPS - Procedures for Air Navigation Services — Aircraft Operations, Volume I — Flight Procedures

## Description of Amendments

Flight crew procedure to use on board IM equipment

## PANS-OPS - Procedures for Air Navigation Services — Aircraft Operations, Volume I — Flight Procedures

## Description of Amendments

Identify the needs for additional requirements to accommodate indications and alerts to pilots for surface operation