INTERNATIONAL CIVIL AVIATION ORGANIZATION
South American Regional Office

THIRD VIRTUAL MEETING OF UAS/RPAS FOCAL POINTS OF THE SAM AND SRVSOP STATES

REPORT

Online, 26 July 2021

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HISTORY OF THE MEETING

ii-1 PLACE AND DURATION OF THE MEETING

The Third Virtual Meeting of UAS/RPAS Focal Points of the SAM and SRVSOP States was held on the Zoom platform, on 26 July 2021.

ii-2 OPENING CEREMONY AND OTHER MATTERS

Mr. Marcelo Ureña, Regional Safety Officer of the ICAO South American Office greeted the participants and acknowledged the UAS/RPAS focal points for the support provided during the preparation of this Third virtual meeting of UAS/RPAS focal points of the SAM and SRVSOP States and for their contribution to the drafting of the working papers prepared by the rapporteurs of each working team. In this regard, he offered the support of the South American Regional Office on any technical aspect required for the fulfilment of the work by the focal points.

ii-3 SCHEDULE, ORGANISATION, WORK METHODS, OFFICERS AND SECRETARIAT

The meeting agreed to hold its sessions from 09:00 to 11:00 hours, without a break. The plenary work modality was adopted.

Mr. Marcelo Ureña, Regional Safety Officer of the South American Regional Office, acted as Secretary of the meeting. The Secretariat was supported by Mr. Fernando Hermoza, Regional ATM/SAR Officer of the South American Regional Office.

ii-4 WORKING LANGUAGES

The working language was Spanish. The meeting documentation was presented in Spanish.

ii-5 AGENDA

The agenda was adopted as follows:

Agenda Item 1: Presentation of the progress made by the working team in charge of developing the operational concept (CONOPS) aircrafts (UA)

Agenda Item 2: Presentation of the progress made by the working team in charge of developing unmanned aircraft systems (UAS) traffic management (UTM)

Agenda Item 3: Presentation of the progress made by the working team in charge of developing the UAS LAR regulatory framework model and its roadmap

Agenda Item 4: Presentation of the progress made by the working team in charge of developing previous actions to the development of the RPAS LAR regulatory framework

Agenda Item 5: Other business

ii-6 ATTENDANCE

A total of 26 participants attended the Meeting: 22 participants from the following eleven (11) States of the SAM Region: Argentina, Brazil, Chile, Colombia, Ecuador, Guyana, Panama, Paraguay, Peru, Uruguay and Venezuela, 1 member of the SRVSOP Technical Committee and 2 ICAO Officers. The list of participants is shown on Page iii-1.

ii-7 LIST OF CONCLUSIONS

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Agenda item 1: Presentation of the progress made by the working team in charge of developing the operational concept (CONOPS) for unmanned aircrafts (UA)

1.1 Under this agenda item, the rapporteur of the working team proposed to the meeting to first define the open category before developing the CONOPS for unmanned aircrafts (UA), proposal which the meeting agreed to accept.

Agenda item 2: Presentation of the progress made by the working team in charge of developing unmanned aircraft systems (UAS) traffic management (UTM)

2.1 Under this agenda item, the group's new rapporteur, Mr. Jorge Regis from Brazil, reported that Ms. Daniele Lins had been transferred to another section within the Brazilian Air Force. He informed the meeting that he had been designated as the UAS/RPAS focal point for his Administration in replacement of Mrs. Lins, for which he was taking over the task of rapporteur for the UAS UTM working group.

2.2 The group's acknowledgments were expressed to Mrs. Lins, wishing her every success in her new tasks.

2.3 The new rapporteur of the group presented the progress of the working team in charge of developing the traffic management of unmanned aircraft systems (UAS UTM) and presented WP/02 - Work schedule for the development of the UTM CONOPS, the same one that was approved by the meeting..

2.4 He also pointed out that, during the second meeting of the UTM CONOPS Group, held on 5 April 2021, a proposal on the CONOPS structure was presented for the consideration of the participants, based on the third edition of the ICAO UTM framework and the Second edition of the FAA UTM CONOPS. He also reported that, during the third meeting, held on 19 May 2021, the members of the working group were presented with the proposal for the division of activities, based on the structure approved in the RVPF-UAS-RPAS/2-NE/04, as well as the deadlines for the deliverables. On the other hand, he commented that during the Fourth meeting of the UTM group, held on 30 June 2021, the working group approved Chapter 1 - Introduction, presented by Brazil and Colombia, and ratified the previously approved work proposal..

2.5 Next, the meeting considered the schedule of activities of RVPF-UAS-RPAS/3-WP/02, presented as **Appendix A** of this part of the report**,** developed in compliance with Conclusion RVPF-UAS-RPAS/2-03, for which the following Conclusion was agreed:

Conclusion RVPF-UAS-RPAS/3-01 Approval of the calendar of activities to continue with the development of the SAM Region and the SRVSOP UTM CONOPS

a) approve the schedule of activities in Appendix A of this report to continue with the development of the UTM CONOPS of the SAM Region and the SRVSOP; and

b) Present the progress of the work carried out, through a working paper (WP), at the Fourth Virtual Meeting of UAS/RPAS Focal Points of the SAM and SRVSOP States, to be held on 25 October 2021. This WP will be presented to the Secretariat on 11 October 2021 for review and distribution to the UAS/RPAS Focal Points of the States of the SAM Region and the SRVSOP.

APPENDIX A

Work schedule for the development of UTM CONOPS

Chapter	Title	Activities	Responsible	Dates
1	Introduction abbreviations	Remittal of necessary abbreviations	All	19 Nov 21
		Presentation of abbreviations	Brazil	29 Nov 21
		Approval of abbreviations	All	29 Nov 21
2	Operational concept	Draft presentation	Argentina/Uruguay	20 Sept 21
		Remittal of comments to draft	All	28 Sept 21
		Draft and comments presentation	Argentina/Uruguay	30 Sept 21
		Approval of Chapter 2	All	30 Sept 21
3	Operative scenarios	Remittal of draft comments	All	30 Jul 21
		Compilation of comments	Brazil	30 Jul–19 Aug
		Presentation of compiled draft	Brazil	20 Aug 21
		Remittal of comments on compiled draft	All	21-29 Aug 21
		Presentation of compiled draft	Brazil	30 Aug 21
		Approval of Chapter 3	All	30 Aug 21
4	UTM implementation	Draft presentation	Venezuela/Peru	20 Oct 21
		Remittal of comments to draft	All	20-27 Oct 21
		Presentation of draft and comments	Venezuela/Peru	29 Oct 21
		Approval of Chapter 4	All	29 Oct 21
	CONOPS	Final adjustments	All	19-29 Nov 21
		Presentation for revision and approval by the SRVSOP	Brazil	10 Dec 21

Agenda item 3: Presentation of the progress made by the working team in charge of developing the UAS LAR regulatory framework model and its roadmap

3.1 Under this agenda item, WP/03 - *Background and proposal of the open category*, and WP/04 - *Work schedule for the development of LAR 101 and CA 101-1* were presented.

Background and proposal of the open category

3.2 The definition of drones is quite broad and this is because it includes all UAS/RPAS, from the smallest, oriented for recreational purposes, to the largest, used from great distances, which has an impact on security and operations that we can consider as critical.

3.3 The explosive evolution that these operations have had in the various fields of development and research in the American countries is seen as a growth potential adding possibility in the creation of jobs, new investments and a flourishing economic activity. However, at the same time, it is necessary that a safe, ecologically responsible development and respectful of citizens concerns about operational safety, privacy and data protection are to be guaranteed by the civil aviation authorities control mechanisms.

3.4 In accordance with the general rule proposed by EASA, which is better adapted to the South American reality, it has been estimated that UAS/RPAS of more than 150 kilos be regulated in a similar way to manned aircraft. In the case of drones of less than 150 kilos, these are regulated by each State in particular. However, the significant growth in the use of these devices, especially in aerial work and in recreational activities, as well as in sports, after the recognition of the International Aeronautical Federation (FAI), puts a significant turning point to the activities of this new area of aviation. On the other hand, the weight of the drone is not the only criteria to be followed in an operational analysis.

3.5 In the Second Virtual Meeting of the UAS/RPAS Focal Points of the SAM and SRVSOP States, the regulations that the States have developed in the field of UAs were analysed. In this regard, it was agreed to establish an open category, ideally common to all SAM States, aspiring to create a requirement that will address the safety of operations for drones, independently from their weight. In addition to proposing an approach that is proportional and focused on the operation, centred on “how” and “what conditions” will the drones be used rather than on their particular characteristics. This will result in changes in the aviation safety regulations linked to each of the States.

3.6 The objective is to make a proposal that should be included in the safety requirements of commercial and non-commercial activities, and that will cover three categories of operation: open category, specific category and certified category. This time, we are only going to refer to the open category, leaving the others for a later analysis and proposal.

3.7 As it has already been discussed, the proposed categories, and especially the “open category”, are based on “the analysis of the risk for third parties”, namely people and property. Using risk when classifying UAS/RPAS operations implies, for example, that a UA/RPA aircraft operating over the open sea will offer less risk than a smaller one that flies over a group of people in a show. Risk evaluation should be carried out by the inspectorate of operations of the controlling body and that its participants are qualified to carry out an SMS.

3.8 One of the important elements to consider in the proposed regulation of operations should be given in the definition of commercial and non-commercial operations, since the same drone can be used in both types of activities.

3.9 Regarding the open category, considered low risk, safety can be guaranteed but with operational limitations, compliance with industrial safety standards, compliance with requirements to have certain functionalities and a minimum of operational requirements. In the smallest, it is proposed that the police be the main one in charge of supervising their compliance, this is like a vehicle that moves through the commune or town hall and can affect the lives of people like a traffic violation and, be it treated by the local police courts of the communes or town halls, where the infractions or complaints occur. The States will propose legal and regulatory modifications to carry out this proposal, exempting the Aeronautical Directorates from supervising this task.

3.10 As proposed, a set of limitations for the operation of drones was described, which will not imply a regulatory burden or the restriction of new uses but, at the same time, would guarantee the safety of third parties, people and goods. In Appendices A and B of this working paper, definitions of the open category of EASA and AESA of Spain, respectively, are presented as reference material in the definition of the open category of the SAM Region.

3.11 After the presentation of the open category and an interesting exchange of ideas on technical matters, such as the use of parachutes in drones, the meeting commented and agreed that the definition of the open category should be very simple so that it can be considered in national regulations by all States.

3.12 The meeting then took note of a proposed work schedule for defining the open category. In this regard, the meeting commented that the deadlines could be too short to reach a consensus definition, so it considered that, if the working group needed to extend the deadlines for any of the tasks, this would be requested and the schedule could be modified according to needs.

3.13 In order to meet the deadlines of the proposed schedule, the working team rapporteur requested the collaboration of two volunteers to support him in this task, for which the following specialists were offered:

- ✓ Mr. Ailton de Oliveira Junior, from ANAC Brazil; and
- ✓ Mr. Javier Alemán from Peru DGAC.

3.14 After the presentation and the exchange of ideas between the UAS/RPAS Focal Points, the meeting agreed on the following conclusion:

Conclusion RVPF-UAS-RPAS/3-02 Approval of the work schedule for the definition of the open category

Approve the following work schedule for the definition of the open category:

- ✓ By 26 August 2021; presentation of a proposal on the definition of the open category, which must be evaluated by the States, sending their remarks and proposals for agreement on the implementation of this category;
- ✓ By 27 September 2021; presentation of the first draft for circulation among the States;
- ✓ By 11 October 2021, presentation to the Secretariat by the rapporteur of the working team of the proposal for the definition of the open category through a working paper (WP); and

- ✓ By 25 October 2021; acceptance of the proposal for the definition of the open category that will be presented at the Fourth Meeting of the UAS / RPAS Focal Points, on 25 October 2021.

3.15 **Appendices A** and **B** to this part of the report present the definitions of the open category by EASA and AESA of Spain, respectively, to be used as reference material in the definition of the open category of the SAM Region and SRVSOP.

Work schedule for the development of LAR 101 and CA 101-1

3.16 Under Agenda item 3, WP/04 - *Work schedule for the development of LAR 101 and CA 101-1* was also presented.

3.17 On this subject, the meeting noted that ICAO published on 17 December 2020, a new model regulation to help countries develop and refine their own national guidelines for the internal operations of unmanned aircraft systems (UAS).

3.18 This new model regulation on UAS was designed with the aim of providing flexibility in terms of content and risk tolerance levels, so that regulators and drone operators have a uniform framework as UAS technologies progress.

3.19 States can choose to adopt the model regulation in its entirety or take from it only the provisions that serve them to complement their national UAS regulation - These were the words of the ICAO Secretary General when making available this document to the States.

3.20 Continuing with this topic, the meeting was informed that the ICAO Air Navigation Director emphasized that, although the aerospace industry evolves very rapidly, the new model regulation on UAS will take advantage of the accumulated safety data and the expanded safety management principles generated and enhanced in the recent decades.

3.21 These data, together with risk-based decision support tools such as the model regulation on UAS, will strengthen global harmonization and expand opportunities for unmanned aviation around the world.

3.22 The ICAO model regulation on UAS covers the States' essential needs to have requirements for the certification of UAS and for their operations to be safe. However, this does not interfere in local matters that are under the sovereignty of the States, such as the determination of sanctions in cases of infringement of the regulation, limits for the protection of privacy, requirements in terms of assurance or others.

3.23 ICAO intends to keep its UAS model regulations updated so that, as States' UAS programmes evolve, they also evolve and can be expanded in their context.

3.24 The meeting then recalled that, in the Second Virtual Meeting of the UAS/RPAS Focal Points of the SAM and SRVSOP States, the regulations that the States had developed in the field of UAS were analysed, and that the Conclusion RVPF-UAS-RPAS/2-*04: Acceptance of the development of the UAS regulatory framework in parts* was agreed upon.

3.25 To comply with this conclusion, a work schedule was proposed to the meeting for approval. In this regard, the proposals for the structures of Regulation 101 and CA 101-1, respectively, were presented

to the meeting as a starting point for the development of the aforementioned documents. These proposals are attached as **Appendices C** and **D** to this part of the report.

3.26 Next, the rapporteur of the working group requested the collaboration of two volunteers to support him in the development of the task, for which the following specialists were offered:

- ✓ Mr. Alexey Quinteros from INAC Venezuela; and
- ✓ Ms. Silvia López from UAEAC Colombia.

3.27 Once the proposed work schedule was analysed, the meeting agreed on the following conclusion:

Conclusion RVPF-UAS-RPAS/3-03 Approval of the work schedule for the development of LAR 101 and CA 101-1

Approve the following work schedule for the development of LAR 101 and CA 101-1:

- ✓ By 26 August 2021; presentation of the final structure of LAR 101 and CA 101-1. At the meeting to be scheduled on the referred date, the work on the chapters of each document will be divided among groups of States;
- ✓ By 27 September 2021; presentation of the first drafts that will later be circulated for comments by the States;
- ✓ By 11 October 2021; presentation of the proposals of Regulation LAR 101 and CA 101-1 to the Secretariat by the rapporteur of the working team through a working paper (WP); and
- ✓ By 25 October 2021; acceptance of the proposals of Regulation LAR 101 and CA-101-1 by the Fourth Meeting of the UAS / RPAS Focal Points.

APPENDIX A

EASA definition for open category

(Only in Spanish)

Definición de la categoría abierta de EASA

Con el fin de tener más información para el trabajo de evaluación de la definición de la categoría abierta, se adjunta lo prescrito por EASA para esta categoría y que es lo que actualmente se encuentra vigente para la comunidad europea.

1. CATEGORÍA ABIERTA

En esta categoría operacional se engloban los **vuelos de bajo riesgo**, para los que no se requerirá autorización previa ni tampoco declaración por parte del operador.

Las **prohibiciones explícitas** para la categoría abierta son:

- Está prohibido el sobrevuelo de grupos de personas.
- No se autoriza el transporte y/o arrojo de materiales o mercancías peligrosas.
- No están permitidas las operaciones autónomas.

Por otra parte, **la categoría abierta establece una serie de requisitos a cumplir**:

- La edad mínima del piloto será de 16 años (o realizar la operación bajo la supervisión directa de un piloto remoto que cumpla los requisitos aplicables).
- Registro del operador UAS (pueden aplicarse excepciones).
- Aprobar una formación teórica online y un examen (formación y examen online para las Subcategorías A1 y A3; examen presencial para la Subcategoría A2).
- Siempre mantener el UAS en la línea de visión (el modo de vuelo 'First Person View' y el 'Follow-me' pueden ser considerados bajo ciertas condiciones como VLOS).
- La altura máxima de la operación será de 120 metros.
- La masa máxima al despegue del dron será de menos de 25 kg y, además, deberá llevar marcado de acuerdo con los requisitos aplicables.

Adicionalmente, se establecen **tres subcategorías diferentes** en base a limitaciones operacionales, requerimientos a los pilotos y requisitos técnicos de los UAS.

LIMITACIÓN SUBCATEGORÍA	REQUISITOS DE AERONAVES	REQUISITOS DE PILOTOS
A1 Se permite el **sobrevuelo** de personas ajenas a la operación	Construcción privada o previa a la norma de <250 g y < 19 m/s	Familiarizarse con el **manual de usuario** del fabricante
	Clase C0 (<250 g)	Familiarizarse con el **manual de usuario** del fabricante
	Clase C1 (<900 g y < 80J con e-ID y Geo-awareness)	Familiarizarse con el **manual de usuario** del fabricante Completar un **curso online** Superar **examen teórico online**
A2 Se permite el vuelo **cerca** de personas ajenas a la operación Manteniendo, una distancia de seguridad (30 - 5 metros)	Clase C2 (<4 kg con low-speed, e-ID y Geo-awareness)	Familiarizarse con el **manual de usuario** del fabricante Poseer un **certificado de competencia de piloto remoto**, obtenido mediante formación y examen online, autopráctica y examen presencial
A3 Operaciones en áreas donde **no se espera** poner en peligro a personas ajenas a la operación Manteniéndose a < 150 metros de áreas residenciales, comerciales, industriales o recreacionales	Construcción privada o previa a la norma de <25 kg	Lo mismo que la Clase C1 en A1
	Clase C2 (<4 kg con e-ID y Geo-awareness)	
	Clase C3 (<25 kg con e-ID y Geo-awareness)	
	Clase C4 (<25 kg)	

SUBCATEGORÍA

A1

Para los drones de **menos de 250 gr**, de construcción privada previa a la norma, o de tipo **C0 y C1**, que vuelen sobre personas ajenas a la operación, se establece la necesidad de conocer el manual de la aeronave.

Además, para los de **Tipo C1**, se tendrá que realizar un curso de formación online y superar un examen teórico, también online.

SUBCATEGORÍA

A2

Esta subcategoría se establece para drones de **Tipo C2**, es decir, de **menos de 4 kg** de peso que incorporen los sistema *e-ID, low-speed* y *geo-awareness*). Se permitirá el vuelo cerca de personas ajenas a la operación, siempre que se mantenga una distancia de seguridad de entre 5 y 30 metros.

Para ello, será necesario conocer el manual del dron y estar en posesión de un certificado de competencia, obtenido mediante formación y examen teórico-práctico.

SUBCATEGORÍA

A3

Para drones de **construcción privada o previa a la norma de menos de 25 kg**, se permitirán operaciones en áreas alejadas de zonas residenciales, recreacionales, industriales o comerciales, en un mínimo de 150 metros.

Los requisitos serán el conocimiento del manual de usuario y la realización de un curso online con su respectivo examen.

APPENDIX B

Definition for open category from AESA Spain

(Only in Spanish)

Definición de la categoría abierta de AESA - ESPAÑA

Con el fin de tener más información para el trabajo de evaluación de la definición de la categoría abierta, se adjunta lo prescrito por AESA- ESPAÑA para esta categoría y que es lo que actualmente se encuentra vigente en dicho país.

Operaciones UAS/Drones - Categoría abierta (Subcategorías A1, A2 Y A3)

La categoría operacional 'abierta' cubre todas las operaciones con UAS que sean de bajo riesgo operacional, como marca la normativa europea y no requieren de ninguna autorización operacional ni de una declaración por parte del operador del UAS previo al vuelo.

Los operadores de UAS, que residan, si son personas físicas o que tengan su centro de actividad, si son personas jurídicas en España, deberán registrarse de forma telemática a través de la sede electrónica de AESA a partir del 31 de diciembre de 2020, cuando:

- ✓ Utilicen en la categoría 'abierta' cualquier aeronave no tripulada:
  - Con una MTOM de 250 g o más, o que, en caso de colisión, pueda transferir a un ser humano una energía cinética superior a 80 julios;
  - equipada con un sensor capaz de capturar datos personales, salvo que sea conforme con la Directiva 2009/48/CE ("Directiva de juguetes").
- ✓ Utilicen una aeronave no tripulada de cualquier masa en la categoría 'específica'.

Para registrase como operador puede acceder a través de la sede electrónica de AESA desde el 31/12/2020 (apartado de registro de operador de UAS)

Nota: Un operador de UAS es toda persona física o jurídica que utilice o tenga intención de utilizar uno o varios UAS, tanto para fines profesionales como recreativos.

Disponibilidad de seguro de responsabilidad civil obligatorio

Tras la modificación de la Ley de Navegación Aérea, y hasta la entrada en vigor del Real Decreto de UAS[1] que complete el régimen jurídico para la utilización civil de sistemas de aeronaves no tripuladas, será necesario tener contratada una póliza de seguro que cubra la responsabilidad civil frente a terceros por daños que puedan surgir durante y por causa de la ejecución de cada vuelo que se realice *(tanto fines recreativos como profesionales)* de acuerdo con los Artículos 11 y 127 de la Ley de Navegación Aérea:

- ✓ Los UAS con una MTOM igual o superior a 20Kg con fines profesionales deben ajustarse al Reglamento 785/2004; y
- ✓ Los UAS profesionales con MTOM igual o inferior a 20Kg y aquellos con fines recreativos se deberán ajustar a lo indicado en el Real Decreto 37/2001, de 19 de enero, por el que se actualiza la cuantía de las indemnizaciones por daños prevista en la Ley de Navegación Aérea.

  El Reglamento 785/2004 establece una cuantía mínima por daños a terceros en tierra de 750.000 DEG -Derechos Especiales de Giro- (para drones de hasta 500kg) mientras que el Real Decreto 37/2001 la cuantía mínima a cubrir es de 220.000 DEG.

Deberá disponerse del seguro adecuado para cubrir cada vuelo realizado, no siendo necesaria la contratación de una póliza con carácter permanente.

[1]Proyecto de Real Decreto de UAS actualmente en tramitación que en su borrador remitido a consulta pública eximirá del requisito de seguro obligatorio a los UAS de clase C0 y a aquellos sin marcado de clase con masa máxima al despegue inferior a 250 g operados en subcategoría A1.

Documentación mínima necesaria para llevar a cabo operaciones con UAS en categoría 'abierta'

Todo operador que pretenda llevar a cabo operaciones en categoría 'abierta' deberá disponer de la siguiente documentación:

- ✓ Certificado de registro y/o justificante de registro de operador de UAS (enlace a apartado de registro). El número de registro de operador debe indicarse en todos los UAS que se operen de tal forma que este pueda leerse a simple vista cuando el dron se encuentre en tierra. El número de registro podrá indicarse en el compartimento de las baterías si el tamaño del UA no permite mostrarlo en el exterior o si se trata de un aeromodelo réplica de una aeronave real e indicar el número de registro de operador en el fuselaje pudiera afectar al realismo de la representación.
- ✓ Los pilotos del operador deben contar con certificado de formación como piloto a distancia A1/A3 (y A2 según proceda). Más información en el apartado Formación de pilotos UAS/drones en categoría 'abierta'
- ✓ Póliza de seguro de responsabilidad civil según lo indicado en el punto anterior.
- ✓ En el caso de que el operador disponga de más de un piloto a distancia, deberá contar con procedimientos para coordinar las actividades entre sus empleados y establecer y mantener una lista del personal y tareas asignadas.

UAS/drones sin marcado de clase

Las disposiciones particulares relativas al uso de determinados UAS en categoría 'abierta' se indican en el Artículo 20 del Reglamento de Ejecución (UE) 2019/947. Los UAS que no sean de fabricación privada y cumplan con la directiva de comercialización de productos aplicable actualmente en la Unión Europea (Decisión 768/2008/CE), pero no pertenezcan a una de las clases C0, C1, C2, C3 o C4 establecidas en el Reglamento Delegado (UE) 2019/945 de la Comisión, podrán seguir utilizándose si han sido introducidos en el mercado de la Unión Europea antes del 1 de enero de 2023 de la siguiente forma:

- ✓ Si la masa máxima de despegue de la aeronave no tripulada es inferior a 250 g, incluida la carga útil, operación en Subcategoría A1.
- ✓ Si la masa máxima de despegue de la aeronave no tripulada es inferior a 25 kg, incluidos el carburante y la carga útil, operación en Subcategoría A3.

Transitorio categoría 'abierta' UAS no cumplan Reglamento Delegado (UE) 2019/945

Los UAS que vayan a operar en categoría 'abierta' y no pertenezcan a una de las clases C0, C1, C2, C3 o C4 establecidas en el Reglamento Delegado (UE) 2019/945 de la Comisión, podrán seguir utilizándose hasta el 1 de enero de 2023 bajo las siguientes condiciones, como se recoge en el Artículo 22:

a) Si la masa de despegue de la aeronave no tripulada es inferior a 500 g, operación en subcategoría A1, por un piloto a distancia que se recomienda que esté familiarizado con el manual de usuario del fabricante o, a falta de éste, documento equivalente desarrollado por el propio operador de UAS;

b) Si la masa de despegue de la aeronave no tripulada es inferior a 2 kg, y se opera a una distancia horizontal mínima de 50 m de las personas, por pilotos a distancia con un nivel de competencia al menos equivalente al correspondiente a la subcategoría A2, considerándose aceptable estar en posesión de un certificado básico o avanzado según la Ley 18/2014 o al Real Decreto 1036/2017 y realizar una declaración de autoformación práctica; y

c) Si la masa de despegue de la aeronave no tripulada es inferior a 25 kg, y la operación se lleva a cabo en Subcategoría A3, por pilotos a distancia con un nivel de competencia al menos equivalente al correspondiente a las Subcategorías A1 y A3, considerándose aceptable estar en posesión de un certificado básico o avanzado según la Ley 18/2014 o al Real Decreto 1036/2017.

Operaciones de UAS en categoría 'abierta' que cumplan el Reglamento Delegado (UE) 2019/945

Para las operaciones con UAS en categoría 'abierta' se deben cumplir los siguientes requisitos que exige el artículo 4 del Reglamento de Ejecución (UE) 2019/947:

- ✓ El UAS pertenece a una de las clases establecidas en el Reglamento Delegado (UE) 2019/945, es de construcción privada o cumple las condiciones definidas en el punto "UAS/drones sin marcado de clase".
- ✓ MTOM < 25 kg;
- ✓ mantener una distancia horizontal segura de las personas y no sobrevuele concentraciones de personas;
- ✓ mantener el UAS en alcance visual (VLOS) del piloto a distancia en todo momento, con excepción en caso de volar en modo sígueme o cuando haya un observados de la aeronave no tripulada;
- ✓ límite máximo de altura de vuelo, desde el punto de despegue, de 120m.
- ✓ durante el vuelo el UAS no dejará caer artículos ni transportará mercancías peligrosas.
- ✓ A su vez la categoría 'abierta' se divide en 3 subcategorías: A1, A2 y A3.

Subcategoría A1

Las operaciones en *subcategoría A1* se realizan evitando el sobrevuelo de personas no participantes y de concentraciones de personas. Los UAS aptos para volar dentro de esta subcategoría deben tener alguna de las siguientes características:

- ✓ Ser de construcción privada con una MTOM <250 g y velocidad máxima inferior a 19m/s.
- ✓ Tener una MTOM <250 g, **sin marcado de clase** y hayan sido introducidas en el mercado antes del 1 de enero de 2023, con los requisitos expuestos en el punto "UAS/drones sin marcado de clase".
- ✓ Llevar etiqueta de marcado de **clase C0** y por tanto cumplan con los siguientes requisitos técnicos:

  - MTOM < 250 g;
  - velocidad máxima en vuelo horizontal de 19m/s;
  - fuente de alimentación eléctrica.

- ✓ Llevar etiqueta de marcado de **clase C1** y por tanto cumplan con los siguientes requisitos técnicos:

  - MTOM < 900 g o energía transmitida en caso de impacto < 80 J;
  - velocidad máxima en vuelo horizontal de 19m/s;
  - fuente de alimentación eléctrica;
  - número de serie único;
  - sistema de identificación a distancia directa y de red;
  - sistema de geoconsciencia;
  - sistema de aviso de batería baja para la aeronave no tripulada y la estación de control (CS).

Subcategoría A2

Las operaciones en *subcategoría A2* se realizan manteniendo una distancia horizontal de seguridad de al menos 30 m respecto de personas no participantes en la operación.

Las operaciones en la subcategoría A2 únicamente se realizarán con UAS que lleven la etiqueta de marcado de **Clase C2**, es decir, que cumplan con las siguientes características:

- ✓ MTOM < 4 kg;
- ✓ salvo si es una aeronave no tripulada de ala fija, estar equipado con un modo de baja velocidad seleccionable que limite la velocidad a un máximo de 3 m/s;

  - fuente de alimentación eléctrica;
  - número de serie único;
  - sistema de identificación a distancia directa y de red;
  - sistema de geoconsciencia;
  - sistema de aviso de batería baja para la aeronave no tripulada y la estación de control (CS);
  - estar equipado con un enlace de datos protegido contra el acceso no autorizado a las funciones de mando y control (C2);

- ✓ equipar luces para control de actitud y vuelo nocturno.

Subcategoría A3

Las operaciones en la *Subcategoría A3* se realizan en zonas donde no se ponga en riesgo a ninguna persona no participante y a una distancia horizontal de seguridad mínima de 150 m de zonas residenciales, comerciales, industriales o recreativas.

Las operaciones en la Subcategoría A3 se realizan con aquellos UAS que cumplan con alguno de los siguientes requisitos:

- ✓ Ser de construcción privada con una MTOM < 25 kg.
- ✓ Sin marcado de clase y hayan sido introducidas en el mercado antes del 1 de enero de 2023, con los requisitos expuestos en en el punto "UAS/drones sin marcado de clase".
- ✓ Llevar etiqueta de marcado de Clase C2.
- ✓ Llevar etiqueta de marcado de Clase C3 y por tanto cumplan con los siguientes requisitos técnicos:

  - MTOM < 25 kg y una dimensión máxima inferior a 3 m;
  - fuente de alimentación eléctrica;
  - número de serie único;
  - sistema de identificación a distancia directa y de red;
  - sistema de geoconsciencia;

- sistema de aviso de batería baja para la aeronave no tripulada y la estación de control (CS);
- estar equipado con un enlace de datos protegido contra el acceso no autorizado a las funciones de mando y control (C2);
- equipar luces para control de actitud y vuelo nocturno.

✓ Llevar etiqueta de marcado de **Clase C4** y por tanto cumplan con los siguientes requisitos técnicos:

- MTOM < 25 kg;
- ser controlable y maniobrable de manera segura por un piloto a distancia siguiendo las instrucciones del fabricante;

✓ no disponer de modos de control automático, excepto para la asistencia a la estabilización del vuelo sin ningún efecto directo en la trayectoria y para la asistencia en caso de pérdida del enlace, siempre que se disponga de una posición fija predeterminada de los mandos de vuelo en caso de pérdida del enlace;

✓ estar destinadas para la práctica del aeromodelismo.

APPENDIX C

Structure of Regulation 101

Subpart A – General provisions

101.001 – Applicability
101.003 – Definitions
101.005 – Falsification, reproduction or alteration
101.007 – Inspection, trial and demonstration of compliance
101.009 – Accidents notification

Subpart B – Operation rules

101.3 – Applicability and **open category**
101.5 – Unmanned aircrafts registration and registration certificate
101.7 – Standard operation conditions meaning for unmanned aircrafts
101.9 – Approval of areas for the operation of unmanned aircrafts
101.11 – Segregated airspace
101.13 – Controlled airspace
101.15 – Airspace knowledge
101.17 – Minimization of hazards and risks
101.19 – Suppression of articles
101.21 – Approved person or organization (AAO)
101.23 – Aerodromes
101.25 – Airspace
101.27 – Visual line of sight (VLOS) operations
101.29 – Day and climate limitations
101.31 – Night operations
101.33 – Right of way
101.35 – Operations over and near people
101.37 – Aircraft mass limits
101.41 – Remote pilot license requirement
101.43 – Forbidden UAS operations
101.45 – Alcohol or drugs (Ref. Part 91 of General Aviation Operative Regulations)

APPENDIX D

Structure of Advisory circular 101-1

Unmanned aircrafts systems (UAS) (25 kg. or less)
Operate in conformity with rules of [Part 101]

Subpart A – General provisions

101.001 – Applicability
101.009 – Approval or areas for the operation of unmanned aircrafts

Subpart B – Operation rules

101.5 – Registration
101.13 – Controlled airspace
101.15 – Airspace knowledge
101.17 – Minimization of hazards and risks
101.19 – Suppression of articles

Subpart C – Unmanned aircrafts

10 1.21 – Authorized person or organization
101.23 – Aerodromes
101.23 (a) (1) (To be defined)
What does a protected operation constitute?
101.25 – Airspace
101.25 (a) (To be defined)
101.25 (a) (1) (To be defined)
Requirement to obtain the consent of the people with whom it is intended to fly on public land and spaces
101.25 (c) (To be defined)
101.27 – Visual line of sight (VLOS) operations
101.37 – Aircrafts mass limits

Additional orientations for UAS operators

Avoid manned aircrafts
What to do if an UA is lost or flies away?
What human control level is required?
Can I operate my UA under the influence of alcohol or drugs?
Where are there likely to be low-flying planes? In addition, what should I do to operate in a safe way in these areas? Etc.

Agenda item 4: Presentation of the progress made by the working team in charge of developing previous actions to the development of the RPAS LAR regulatory framework

4.1 Under this agenda item, WP/05 was presented - *Report of international operations according to IFR rules with RPAS in the SAM Region.*

4.2 The rapporteur of this working group reported that the complete ICAO international regulatory framework will only be available around 2030 and that, according to the current planning of the Organization, the basic provisions are expected to be applicable in 2026.

4.3 In this context, the existence of clear provisions was verified for the States involved to issue a special authorization, in order to make this type of operation feasible.

4.4 However, and for the reasons indicated above, it was considered that in the short term it would be important to develop a report format that allows the States of the SAM Region and the SRVSOP to have visibility on the demands of the type of a UA/RPA international operation that exists in the region, as this information could be very useful for future developments.

4.5 In this regard, a report format proposal that could be adopted in the SAM region regarding international operations, according to IFR rules with RPAS, was presented to the meeting. The report format would be circulated to the States of the region, requesting to send the completed forms to the South American Regional Office, whenever the States authorize an international operation according to IFR rules with RPAS.

4.6 The meeting commented that the mention of certain certificates, licenses, etc., should not be understood as a requirement for authorization by the States involved, since they have full sovereignty to determine the necessary conditions in the issuance of said authorization. In this sense, the first objective would be to know the operations that occur in the region and the practical experience of the States potentially involved in the issuance of authorizations.

4.7 Based on the above, the meeting agreed to the following conclusion:

Conclusion RVPF-UAS-RPAS/3-04 Adoption of the format to report on international IFR operations with RPAS

a) Adopt the report format presented as **Appendix A** to this part of the report;

b) Circulate the report format to SAM and SRVSOP States, requesting to forward the information to the SAM Office and the SRVSOP, regarding the authorizations to be issued by the States for international operations with RPAS according to IFR rules in order to facilitate future regulatory developments in this field;

c) Create a repository in the SAM Office and the SRVSOP to collect the information received; and

d) Based in the information received, contribute to the technical and administrative coordination channel to be established and implemented in accordance with Conclusion RVPF-UAS-RPAS/2-02 to treat RPAS international operations requests.

APPENDIX A

REPORT FORMAT FOR RPAS IFR INTERNATIONAL OPERATIONS REPORTING

UA/RPA International operation report		
Take-off place:		
Take-off date/time:		
Arrival place:|.....		
Arrival Date/time:		
Aircraft (manufacturer/model):		
Responsible remote pilot:		
Operator:		
Aircraft registered?	❑ Yes	❑ No
Airworthiness certificate?	❑ Yes	❑ No
Air operator certificate?	❑ Yes	❑ No
Remote pilot licence?	❑ Yes	❑ No
Operation in aerodrome?	❑ Yes	❑ No
Rules of IFR flight?	❑ Yes	❑ No
Non-segregated airspace?	❑ Yes	❑ No
Insurance policy?	❑ Yes	❑ No

Agenda item 5: Other business

5.1 Under this agenda item, it was agreed that the Fourth Virtual Meeting of UAS/RPAS Focal Points of SAM and SRVSOP States would be held on Monday, 25 October 2021, starting at 9 a.m., Lima time.