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WORKING PAPER

ASSEMBLY — 41ST SESSION

TECHNICAL COMMISSION

Agenda Item 31: Aviation Safety and Air Navigation Standardization

PROPOSAL TO INCORPORATE THE OPERATION OF REMOTELY PILOTED AIRCRAFT (RPA) IN THE FILED FLIGHT PLAN (FPL) FORM

(Presented by Venezuela (Bolivarian Republic of), supported by the Dominican Republic and Panama)

EXECUTIVE SUMMARY

The purpose of this working paper is to propose the incorporation of the operation of remotely piloted aircraft (RPA) into the filed flight plan (FPL) form in order to regulate and establish control over the activities of such aircraft. The flight plan is the specific information submitted to the air traffic services with respect to a planned flight, or part of a flight, of an aircraft. Remotely piloted aircraft systems (RPAS) include a remote pilot station (RPS) for control and management, together with other necessary components, which vary across a wide spectrum of aircraft, from model aircraft to highly complex remote equipment operated by licensed aviation professionals. In the light of this modern-day aeronautical revolution, there is a need to regulate and control the flight operations of these aircraft as set out in the flight plan.

Each State, within its aeronautical jurisdiction and regulations, should establish the technical operational procedures for the regulation and control of remotely piloted aircraft, all within the framework of the provisions of *Air Traffic Management* (Doc 4444).

Action: The Assembly is invited to:

a) take note of the information provided;
b) propose the incorporation of the operation of remotely piloted aircraft (RPA) into the filed flight plan (FPL) form;
c) request States to share their experience on the subject;
d) request the Secretary General to disseminate information on this matter through symposiums, seminars and workshops with a view to better defining national standards;
e) take any other action that the Assembly deems appropriate.

Strategic Objectives:	This working paper relates to the Air Navigation Capacity and Efficiency Strategic Objective.
Financial implications:	Not applicable
References:	Doc 10019, *Manual on Remotely Piloted Aircraft Systems (RPAS)* Doc 4444, *Procedures for Air Navigation Services — Air Traffic Management* Remotely Piloted Aircraft System (RPAS) Concept of Operations (CONOPS) for International IFR Operations

[1] Spanish version provided by Venezuela (Bolivarian Republic of).

1. INTRODUCTION

1.1 The Bolivarian Republic of Venezuela, as a Member State of the International Civil Aviation Organization (ICAO) and a signatory to the Chicago Convention, has amended, in accordance with Doc 10019, Manual on Remotely Piloted Aircraft Systems (RPAS), of the International Civil Aviation Organization, a series of Venezuelan aeronautical regulations under the legal framework established by the Bolivarian Republic of Venezuela in order to regulate the authorization of remotely piloted aircraft (RPA) within Venezuelan airspace.

1.2 It is for this reason that, in order to establish control and order in the operations of RPA within its national territory, the Venezuelan State undertook the initiative to update the regulations on this matter, taking into account the vast potential of these aircraft and the development to which their technology can contribute in various sectors, including agriculture, primary health care, industrial inspections and aerial photography.

1.3 RPAS are a new component of the aviation system, one which ICAO, States and the aerospace industry seek to understand, define and ultimately integrate.

1.4 These systems are based on cutting-edge developments in aerospace technologies, offering advancements which may open new and improved civil/commercial applications as well as improvements to the safety and efficiency of all civil aviation.

1.5 The safe integration of RPAS into non-segregated airspace is a long-term activity with many stakeholders adding their expertise on such diverse topics as licensing and medical qualification of remote pilots, technologies for detect and avoid systems, frequency spectrum (including its protection from unintentional or unlawful interference), separation standards from other aircraft and development of a robust regulatory framework.

1.6 Civil aviation has, to this point, been based on the notion of a pilot operating the aircraft from within the aircraft itself and more often than not with passengers on board. Removing the pilot from the aircraft raises important technical and operational issues, the extent of which is being actively studied by the aviation community.

1.7 This proposal provides guidance on many of these issues. It is anticipated that information and data pertaining to RPAS will evolve rapidly as States and the aerospace industry advance their work and bring their input to ICAO.

1.8 The goal of ICAO in addressing RPAS is to provide an international regulatory framework through Standards and Recommended Practices (SARPs), with supporting Procedures for Air Navigation Services (PANS) and guidance material, to underpin routine operation of RPAS throughout the world in a safe, harmonized and seamless manner comparable to that of manned operations.

1.9 Remotely piloted aircraft, or RPA, thanks to technological advances, offer great potential for use in a wide variety of areas of human endeavour and make it possible to reduce equipment and personnel costs, but they also represent a major challenge for providers of air navigation services , who must integrate these new systems within the already developed commercial aviation industry, always bearing in mind operational safety.

2. DISCUSSION

2.1 In light of the foregoing considerations relating to RPA operations, and based on ICAO Doc 10019, which deals with remotely piloted aircraft, there is a need to seek to regulate such flights through the necessary documents, such as the application of flight plan formats, in order to oversee the aerial operations of this type of aircraft, as this will allow us to maintain and acquire knowledge and be able to keep statistics on flights of RPA and the areas they fly over, including take-offs and landings and the purposes of such flights.

2.2 The operation of these aircraft should be regulated taking into account their particular characteristics and the context or scenario in which they are operating. Accordingly, without getting into the specifics of each type of RPAS, it is necessary to consider that, given the limitations on operations in the vicinity of aerodromes – a matter that has been regulated in Venezuelan Aeronautical Regulation (RAV) 281 – the approach or guideline for indicating or providing the relevant information on RPAS operations is not the same as for general and commercial aviation aircraft, for which information is reported through the filed flight plan (FPL) form. In the case of RPAS, although several RAVs already regulate certain specific aspects relating to air traffic services reporting (ARO), aeronautical information services (AIS) and communications (COM), the recommendation is to activate specific spaces tailored to the capabilities of RPA and the limitations established in the legal framework, such that, once the aforementioned areas are established, the area of influence or responsibility of each ARO/AIS/COM office should be considered and RPA operators should report operations in accordance with the procedure established in the FPL form.

3. CONCLUSION

3.1 The Venezuelan State, by incorporating the regulation of remotely piloted aircraft in its national regulations, has taken an important step forward for international aviation. It has created limitations and requirements for RPA flights that will guide the adaptation of and compliance with the recommended standards and methods of the International Civil Aviation Organization in order to achieve uniformity with national aeronautical regulations and promote the development of civil aviation in a safe, orderly and efficient manner.

3.2 The officials of the National Civil Aviation Institute are highly qualified and stand ready to cooperate in order to advance the establishment of international standards to regulate and ensure the proper use of these aircraft for the benefit of our peoples.

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