



WORKING PAPER

ASSEMBLY — 41ST SESSION

TECHNICAL COMMISSION

Agenda Item 31: Aviation Safety and Air Navigation Standardization

RPAS INFORMATION, LOCATION AND OPERATION SYSTEM FOR RECREATIONAL AND AIR WORK PURPOSES

(Presented by Venezuela (Bolivarian Republic of) with the support of Panama and the Dominican Republic)²

EXECUTIVE SUMMARY

This working paper addresses the exponential development of operations involving remotely piloted aircraft systems (RPAS) for a variety of activities, such as aerial photography, aerial spraying, topographic surveys, assessment of structures, among others, and the need for harmonization of States' technical regulations, in order to ensure the sustainable development of unmanned operations for commercial, private and recreational purposes, by means of assessment, authorization and follow-up, as well as the certification of national enterprises that carry out aerial works with this type of aircraft.

Action: The Assembly is invited to:

- a) take note of the information set out in this working paper; and
- b) consider this working paper, which proposes the incorporation into national regulations of a system of compulsory compliance by Member States, to manage RPAS information, location and operation, which will make possible the standardization of RPAS authorization requirements, thus ensuring the development of safe, orderly and efficient unmanned aviation activity.

<i>Strategic Objectives:</i>	This working paper relates to the Strategic Objectives of Economic Development of Air Transport, Safety, and Air Navigation Capacity and Efficiency
<i>Financial implications:</i>	
<i>References:</i>	Annex 2 – <i>Rules of the Air</i> Doc 10019, <i>Manual on Remotely Piloted Aircraft Systems (RPAS)</i> Circ 328, <i>Unmanned Aircraft Systems (UAS)</i>

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

² Member States of the Latin American Civil Aviation Commission (LACAC).

1. INTRODUCTION

1.1 Given the current prevailing trends and the exponential development of remotely piloted aircraft system (RPAS) operations for various activities, such as aerial photography, aerial spraying, topographic surveys, and structure assessment, among others, it is necessary to harmonize States' technical regulations, in order to guarantee the sustainable development of unmanned operations for commercial, private and recreational purposes, by means of assessment, authorization and follow-up, as well as the certification of national enterprises and the authorization of foreign enterprises that carry out aerial works with this type of aircraft.

1.2 This being the case, the National Civil Aviation Institute of the Bolivarian Republic of Venezuela has been adapting its operations to the prevailing trends, to meet the ever increasing demands of users and national and foreign RPA operators, which require authorization in order to comply with the technical regulations in force and to carry out their aviation activities.

2. BACKGROUND

2.1 The Bolivarian Republic of Venezuela carried out a communications deployment in 2016, implementing a national RPAS census with the aim of collecting information on the quantity and types of RPAS present in the country at that time. There were found to be some 700 craft not registered in any way with the Aviation Authority.

2.2 The Venezuelan Aviation Authority adapted its legislation so as to amend 12 regulatory instruments with the aim of incorporating RPAS operations and improving the efficiency of aeronautical activities, in accordance with the Chicago Convention and its Annexes: Annex 1 – *Personnel Licensing*; Annex 2 – *Rules of the Air*; Annex 6 – *Operations of Aircraft, Part II — International General Aviation — Aeroplanes* and III — *International Operations — Helicopters*; and Annex 19 – *Safety Management*; as well as the Latin American Aeronautical Regulations (LAR) to the extent they were applicable and compatible with the Venezuelan legal order.

2.3 Once the national regulations were updated, it became clear that less than 10 per cent of the 700 craft counted in the above-mentioned census had been fully registered with the National Aeronautical Register. Given this situation, special information days have been organized in Venezuela since 2020, in order to offer services to the owners of these craft in respect of registration, technical inspection, certification of insurance policies, advice, licensing, medical certificates, etc. As a result of this campaign, a considerable increase was achieved in the number of RPAS registered in accordance with the existing legal framework.

2.4 In addition, a system for notifying the incoming and outgoing movement of remotely piloted aircraft (SIRPA) was developed, which can be accessed via the official web page of the National Civil Aviation Institute (INAC). The system must be used by any passenger travelling with an RPA, with the aim of maintaining full control of equipment entering Venezuelan territory by air.

3. CURRENT SITUATION

3.1 In response to the growth of unmanned aviation in Venezuela, INAC set up a unit to deal with all aspects of RPAS operations, focusing on the assessment, authorization and supervision of such operations. In the case of enterprises that carry out air works with this type of aircraft, a remote operator

certificate (ROC) is issued for a period of three years, after the satisfactory completion of a certification process.

3.2 Given the current prevailing trends and in order to promote scientific and technological advancement, the Venezuelan State has developed a flight information, location and operations management application for remotely piloted aircraft; this application, dubbed VeGEO RPAS, provides pilots and users with a detailed guide by means of an interactive map covering the Maiquetía flight information region (FIR), which enables the user to manage the aeronautical information needed to plan flights in an orderly and safe manner from any device (smartphone, tablet or computer). The application gives details of restricted, dangerous and prohibited areas, as well as the security areas of airfields and airports at national level, and provides for prohibited airspace notifications (NOTAMs) emanating from air navigation services, which will facilitate responsible remotely piloted aircraft flights. A module for the authorization of air works using unmanned aircraft is also under development, which will facilitate the processing of permits for these types of operations on the national territory, in order to ensure safe, orderly and efficient operations.

3.3 This platform not only provides a map of restricted, prohibited and dangerous areas in the Maiquetía FIR, but is also capable of adding alerts, rules and flight conditions in real time, indicating the places where aircraft operations are permitted; it also provides a history of operations logged by the user. The VeGEO application (“RPAS information, location and operation system”) is available to recreational users of remotely piloted aircraft (between 0 and 3 kg), thus providing the competent authorities with a tool to monitor and control operations involving this type of aircraft.

4. CONCLUSION

4.1 A compliance system incumbent on Member States for the management of RPAS information, location and operations is recommended for incorporation in the international regulations; this will facilitate standardization of authorization requirements, in accordance with the provisions of Appendix 4 to Annex 2, thereby ensuring the development of safe, orderly and efficient unmanned aviation.

4.2 It is considered appropriate to complete the publication of Standards and Recommended Practices (SARPs) relating to RPAS, with the aim of providing guidance to Member States on the monitoring, supervision and authorization of operations of this kind, so that RPAS can be integrated into the air traffic management system, in accordance with the standardization requirement laid down by the Convention on International Civil Aviation.