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WORKING PAPER

ASSEMBLY — 39TH SESSION

TECHNICAL COMMISSION

Agenda Item 33: Aviation safety and air navigation monitoring and analysis

INTEGRATION OF REMOTELY PILOTED AIRCRAFT SYSTEMS (RPAS)

(Presented by the Dominican Republic)

EXECUTIVE SUMMARY

In the last few years, innovation and the development of remotely piloted aircraft systems (RPAS) have gained much ground, and each citizen can now own such systems; the number of remotely piloted aircraft systems cannot therefore be ignored and their operation will, in the near future, exceed the number of manned aircraft and their operations.

As this is a matter of genuine concern for manned aviation safety, this new component is being integrated into the existing aviation system. This raises the need to establish a regulatory framework so that RPAS can be integrated safely and efficiently. The Dominican Republic has begun to integrate RPAS by issuing provisional regulations on the accreditation of craft and persons, and this has been supplemented by informational and educational activities.

Action: The Assembly is invited to:

a) Mandate the ICAO Secretariat to publish guidance material to enable States to draw up regulations for safe RPAS operation and to enable RPAS operators to apply risk management principles to their operations.
b) Ensure that ICAO compiles guidelines to support the development of technologies for monitoring and supervising RPAS and to support States' oversight and operational safety measures.
c) Promote sensitization campaigns in order to make users aware of the impact of their actions and in order to secure compliance with existing regulations.
d) Encourage in-State training of specialists to build knowledge of the regional and global advances in the matter, which would foster strategic alliances with stakeholder groups (universities, manufacturers, service providers, users, associations and event organizers) who have the influential capacity to promote adequate RPAS development.
e) Promote RPAS standardization worldwide, primarily in relation to RPAS terminology and classification according to their weight and use, and minimum training requirements for the issuance of RPAS-operator certificates in order to ensure possible inter-State recognition.

Strategic Objectives:	This working paper relates to the Safety Strategic Objective.
Financial implications:	The activities listed in this working paper can be carried out if budgetary resources can be provided under the regular programme for 2017-2019; additional resources may, however, be required in the light of decisions taken by the Assembly.
References:	Doc 10019, *Manual on Remotely Piloted Aircraft Systems (RPAS)* Cir 328, *Unmanned aircraft systems (UAS)* Resolution 008-2015 of the Dominican Civil Aviation Institute regulating RPAS use and operations in the national territory

[1] Spanish version provided by the Dominican Republic.

1. INTRODUCTION

1.1 On 15 July 2015, the Dominican Civil Aviation Institute (IDAC), the civil aviation authority of the Dominican Republic, adopted Resolution No. 008-2015 regulating the use and operations of remotely piloted aircraft systems RPAS/ Drones in the national territory.

1.2 The regulation was published provisionally, pending issuance by ICAO of guidance material for the implementation of a regulation to govern safe RPAS operation.

1.3 In accordance with this provisional regulation, training and awareness-raising activities such as seminars, meetings and round tables with stakeholder groups have been conducted in order to promote operational safety and manage the impact of RPAS operations on manned aircraft operations.

1.4 From October 2015 to July 2016, IDAC issued special permits for RPAS operations, registered RPAS and initiated procedures to grant RPAS operator certificates.

2. ANALYSIS

2.1 Owing to the great interest shown by persons and organizations that develop or are interested in developing RPAS operational activities and by training institutions that are collaborating in technological innovation projects, the trend now is to design more efficient RPAS to meet the needs of a booming industry.

2.2 The number of RPAS flying over urban and populated areas is a primary justification for the publication of regulation to ensure operational safety and to establish clear operational rules.

3. MONITORING

3.1 The monitoring of RPAS operations must focus on operational safety and must ensure that users and operators comply with the regulations. In view of the complexity and number of operations, it is unlikely that the civil aviation authority can supervise all RPAS activities efficiently, and strategic alliances with various State safety authorities must therefore be formed.

3.2 It is necessary for ICAO to issue guidelines to support the development of technologies for monitoring and supervising RPAS.

3.3 It is also necessary to develop guidance material to enable RPAS operators to apply risk management principles to their operations.

4. CHALLENGES

4.1 Conduct a user-friendly and effective sensitization campaign in order to raise users' awareness of the impact of their actions and to ensure compliance with the regulation.

4.2 Owing to the emergence of possible applications for the use of available technology, ICAO must exercise leadership by maintaining the lead in the formulation of RPAS regulations covering

all possible uses. This is exemplified by the development of social and/or commercial projects that will create freight transport networks based independent RPAS.

4.3 Another important factor that must be taken into account is the trend among operators certified by civil aviation authorities to perform aviation tasks to use RPAS for those operations. Such activities include photogrammetry, fumigation, film shooting and aviation publicity.

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