



LEGAL COMMITTEE – 37th SESSION

(Montréal, 4 to 7 September 2018)

Agenda Item 2: Consideration of the General Work Programme of the Legal Committee

STUDY OF LEGAL ISSUES RELATING TO REMOTELY PILOTED AIRCRAFT

(Presented by the United States)

SUMMARY	
As the market for Unmanned Aircraft Systems (UAS) ¹ continues to develop rapidly and experience significant growth, an emerging issue involves UAS flights over the high seas. The present framework governing high seas operations does not provide for States and/or their appropriate authorities to authorize non-certificated UAS to access this airspace safely, and this paper recommends an approach for ICAO and States to address this shortfall to accommodate the continued safe integration of these new, non-traditional entrants into the aviation sector.	
Action: The Legal Committee is invited to take the proposed actions in paragraph 3.1.	
<i>Strategic Objectives:</i>	This working paper relates to Strategic Objective F (Rule of Law).
<i>Financial implications:</i>	None.
<i>References:</i>	Articles 29 and 31 of the Convention on International Civil Aviation

1. INTRODUCTION

1.1 Worldwide, rapid growth in demand for UAS operations is spurring thousands of new entrants to aviation and a multitude of new products and services requiring incorporation into the global aviation framework. An emerging issue involves offshore UAS flights. In this environment, UAS have been involved in commercial ventures such as fish spotting, atmospheric research, and oil platform inspections; and in government operations including in situ weather measurement, fishery compliance, search and rescue, and security operations.

1.2 The Convention on International Civil Aviation (Chicago Convention) recognizes that States have sovereignty over the airspace above their territory, where territory includes the land areas and

¹ Excluding unmanned free balloons

territorial waters adjacent thereto. Airspace beyond the territorial waters of a State is considered international or high seas airspace and aircraft engaged in international navigation are subject to certification requirements, including the carriage of a certificate of airworthiness in the aircraft.² However, international aviation standards and guidance material applicable to the high seas were not written with UAS in mind, and compliance with existing requirements may be difficult, impractical, or, in some instances, impossible to meet.

1.3 Article 31 of the Chicago Convention requires that: *Every aircraft engaged in international navigation shall be provided with a certificate of airworthiness issued or rendered valid by the State in which it is registered.*

1.4 The Convention also provides that certain documents must be carried on board. Article 29 provides: *Every aircraft of a contracting State, engaged in international navigation, shall carry the following documents in conformity with the conditions prescribed in this Convention:*

- a) *Its certificate of registration;*
- b) *Its certificate of airworthiness.*

2. BACKGROUND

2.1 As the number of UAS operating globally continues to multiply, the demand for offshore UAS activities is sure to increase. ICAO and Member States must work together to ensure that regulatory measures keep pace with developments and support a safe and efficient global aviation system.

2.2 Provisions currently exist for UAS operations over the high seas by state aircraft and certificated Remotely Piloted Aircraft Systems,³ but establishing type and airworthiness certification procedures for the rapidly growing UAS industry presents significant challenges for States and in many instances may not be a necessary safety measure based on aircraft characteristics or operational capabilities. Certification may not be practical or reasonable for those UAS that will not, for example, transport passengers or cargo or operate beyond the visual line of sight of the remote pilot. In lieu of certification, a variety of other risk-based operational safety measures are available to States, such as establishing limits on when and where UAS flights may be allowed or requiring operators to demonstrate they can fly safely without endangering people or property on the ground or in the air.

2.3 International aviation standards and guidance material⁴ include requirements for the implementation of safety management systems by aviation service providers to ensure that risks are systematically analyzed, assessed, and controlled to an acceptable level. Nevertheless, the present framework governing high seas operations does not afford States and/or their appropriate authorities providing Air Traffic Services in the high seas the ability to establish procedures enabling non-certificated UAS to access this airspace safely and therefore, States are unable to address many prospective offshore UAS activities. In particular, States are constrained from promulgating procedures for the permit or authorization of UAS operations, as well as operational procedures and associated guidance material.

² Articles 31 and 29 of the Convention on International Civil Aviation, respectively.

³ Annex 2 Rules of the Air defines RPAS as follows: A remotely piloted aircraft, its associated remote pilot station(s), the required command and control links and any other components as specified in the type design.

⁴ Annex 19 Safety Management and the Safety Management Manual, respectively.

2.4 This paper identifies a shortfall in existing provisions that requires action by ICAO and States to enable continued progress in the safe integration of UAS, and recommends an approach to provide for States and/or their appropriate authorities to enable expanded UAS operations in the high seas while continuing to ensure the safety of other aircraft operations in this airspace.

3. **ACTION BY THE LEGAL COMMITTEE**

3.1 The Legal Committee is invited to :

- a) Provide an interpretation, as a matter of urgency, addressing non-certificated UAS within existing provisions of the Chicago Convention applicable to international air navigation, which will enable States to authorize operations in international airspace and facilitate the continued safe integration of these new entrants into the global aviation framework; and
- b) Agree that States and/or their appropriate authorities providing Air Traffic Services in high seas airspace may develop and implement procedures for the permit or authorization of operations over the high seas by non-certificated UAS, provided such procedures are consistent with safety management principles and applicable regional operational procedures, and take into account aircraft performance capabilities and an operations risk assessment.

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