

**55th CONFERENCE OF
DIRECTORS GENERAL OF CIVIL AVIATION
ASIA AND PACIFIC REGIONS**

*Denarau Island, Nadi, Fiji
22 — 26 October 2018*

AGENDA ITEM 3: AVIATION SAFETY

**REGULATION OF UNMANNED AIRCRAFT SYSTEMS IN
HONG KONG, CHINA**

Presented by Hong Kong, China

SUMMARY

This paper presents the proposed way forward for regulation of unmanned aircraft systems (UAS) in Hong Kong, China, and invites member States to share their experience and national best practices on this topic.

REGULATION OF UNMANNED AIRCRAFT SYSTEMS IN HONG KONG, CHINA

1. INTRODUCTION

1.1 The UAS technology evolves rapidly and its application is increasingly versatile in recent years. Governments around the world are actively reviewing how to cope with the latest technological development and the aspirations of the public and commercial operators to use UAS for various purposes. Given that each city is unique in its environment and societal factors, governments have to take into account local situations, and formulate policies and regulatory regimes which suit the local needs.

1.2 In Hong Kong, China, UAS are classified as aircraft and are governed, as far as aviation safety is concerned, by the civil aviation legislation under the purview of the Civil Aviation Department (CAD). According to the prevailing laws, any operator of UAS, regardless of the weight of aircraft, must observe Article 48 of the Air Navigation (Hong Kong) Order (Cap. 448C). Under this provision, a person shall not recklessly or negligently cause or permit an aircraft to endanger any person or property. Apart from operating in a safe manner in accordance with the applicable civil aviation legislation, operators must also observe other relevant laws of Hong Kong.

1.3 To assist the Government of the Hong Kong Special Administrative Region on reviewing the effectiveness of the existing statutory requirements, and exploring ways to refine the prevailing regulatory regime with a view to accommodating the technological development and diversified uses of UAS while further safeguarding public safety, the CAD commissioned a consultant in March 2017 to conduct a study on the regulation of UAS. The objective is to provide recommendations that can strike a reasonable balance between facilitating the use of UAS by the public and protecting public safety.

2. DISCUSSION

2.1 Taking into consideration the recommendations of the consultant, the CAD conducted a public consultation including soliciting views from local interest groups and organizations in the second quarter of 2018. Some key recommendations proposed in the public consultation are outlined in the ensuing paragraphs.

Establishment of an UAS Registration System

2.2 An online registration system is recommended to be established for UAS weighing over 250 grams. Registration system and labelling requirements allow the owners of UAS to be identifiable, and ensure accountability of owner and that they are aware of the regulation and their responsibility for the safe use of UAS.

2.3 Through an online registration system, owners will be required to provide personal / contact information to identify themselves and the UAS they own or operate. They are also expected to update the information provided from time to time. For example, transfer of ownership, new telephone number, de-registration of a lost or stolen UAS, etc.

Risk-based Classification of UAS Operations

2.4 UAS operations will be classified according to weight and operational risk level and will be applied to all uses including recreational and commercial use as the risks to persons or properties are similar.

- a) **Category A — “Low-Risk” Operations:** “Category A” comprises sub-categories of “Category A1” (UAS weighing 250 grams or less) and “Category A2” (UAS weighing 7 kilograms or less). Prior authorisation to operate these UAS by the CAD is not required but those UAS must be operated within specified parameters, for instance, flights are to be operated during daytime, within visual range, and away from airports etc.
- b) **Category B — “Regulated, Low Risk” Operations:** “Category B” UAS may weigh 25 kilograms or less, and should be subject to more stringent safety requirements. The UAS operations will be subject to safety assessment by operators and CAD’s authorisation before flight. Operation of UAS irrespective of weight that exceed prescribed Category A operating parameters will be considered as Category B operation and thus require authorization.
- c) **Category C — “Regulated, High Risk” Operations:** “Category C” covers UAS that weigh over 25 kilograms and may conduct international operations in controlled airspace with other manned aircraft. This category of operations will not be covered by the regulatory regime for the time being. The CAD will formulate operating requirements and conditions for this category with reference to international safety standards when it is readily available.

2.5 Operating requirements (such as daytime flying, operating height, distance from people/buildings and operator, visual line of sight (VLOS), speed, etc.) will be outlined under the above proposed classification.

2.6 To enhance awareness of UAS operators and traceability for enforcement purpose, consideration will be given to the mandatory requirements for geo-awareness, flight log (e.g. means to record flight details such as time, position of aircraft and operator, height, speed, etc.) and electronic identification capabilities for effective enforcement of UAS regulations.

Training and Assessment Requirements

2.7 Suitable training helps to improve the safety awareness of UAS operators. Certain requirements on operator training will be imposed via the registration process. For example, any person operating a “Category A2” UAS may undergo an online training/assessment on aviation knowledge and regulations as well as knowhow on safe UAS operation. For “Category B” operations, the operators should undertake more advanced training and assessment depending on the use and characteristics of the UAS.

Drone Maps for UAS Operators

2.8 The CAD publishes textual information about areas where UAS operations are prohibited. However, there is a general expectation that pictorial or visual representation on where drones may or may not be operated will benefit UAS operators as well as other airspace users (for example areas near aerodromes or flight paths etc). In this connection, CAD is considering to provide a drone map, at which the UAS operators will be able to access the drone map through an electronic portal.

Prescribing Insurance Requirements for UAS

2.9 In view of the potential risk to third party, consideration will be given to mandatory requirements for “Category A2” and above UAS operations to be covered by insurance. The CAD will determine the appropriate level of coverage for different types of UAS operations with reference to motored vehicle insurance requirement and relevant requirements in other countries.

Indoor Operations of UAS

2.10 Indoor environments vary. It will be difficult to develop standards that could cover all types of indoor venues and situations. For instance, the operating requirements (e.g. operating heights) will not be applicable to all different indoor operations.

2.11 Consideration will be given to requiring the UAS operator to seek the consent of owners/property managers of the venues concerned and the Government may also issue general safety guidelines for the owners/property managers to consider.

Way Forward

2.12 In the light of the fact that the operations and regulation of UAS involve a myriad of considerations, such as enforcement and monitoring, and may affect various stakeholders, including operators of UAS for recreational or commercial uses, UAS manufacturers, unmanned/model aircraft associations, and Government bureaux/departments, the CAD will, together with relevant policy bureaux and departments, take into consideration the views of the public and best practices by other aviation authorities and put forward a regulatory proposal for UAS that suits local environment and circumstances well with due regard to the unique circumstances of Hong Kong, China, and relevant policies and resources involved.

3. ACTION BY THE CONFERENCE

3.1 The Conference is invited to note the content of this paper and member States to share their experience and national best practices to regulate UAS, and to participate in and take note of the outcomes of the Asia/Pacific Unmanned Aircraft Systems Task Force (APUAS/TF).

— END —