



International Civil Aviation Organization

**WORKING PAPER**

A40-WP/473  
EX/199  
30/8/19  
**(Information paper)**  
**English only**

**ASSEMBLY — 40TH SESSION**

**EXECUTIVE COMMITTEE**

**Agenda Item 12: Aviation Security — Policy**

**NECESSITY TO ANTICIPATE STRATEGIES TO TACKLE THE SECURITY CHALLENGES  
AND DANGERS OF DRONE USE IN ANNEX 17**

(Presented by the Islamic Republic of Iran)

**EXECUTIVE SUMMARY**

Drones (UAVs) are unmanned aerial vehicles like quadcopters that are widely used today because of their excellent manoeuvrability and high-balance flights.

When people first became familiar with drones, they thought that these drones could only be used for military and espionage purposes. But this idea is not at all true, since the use of drones can go so far beyond that. Presence and flight of civilian drones has posed new challenges in the field of air safety related legislation and has faced serious challenges in many countries and security agencies. Therefore, in response to these challenges, according to internal conditions, restrictions and laws have been approved and communicated. The diversity and heterogeneity of laws enacted by countries indicates a lack of comprehensive upstream binding rules and regulations adopted by the International Civil Aviation Organization (ICAO), so, the question is: “whether ICAO plans to update the rules and develop comprehensive standards on security threats and dangers posed by the use of drones, or not”.

<i>Strategic Objectives:</i>	This working paper relates to Safety Strategic Objectives.
<i>Financial implications:</i>	N/A
<i>References:</i>	Annex 17 — <i>Security</i> Doc 8973 <i>Aviation Security Manual</i>

## 1. INTRODUCTION

1.1 Nowadays anyone can do whatever with these unmanned aerial vehicles that are considered as a part of the aviation industry; for this reason, the main issue on drones-related laws and regulations is “security”.

1.2 The key point here is to maintain air priorities for drones and national security in day-to-day situations and emergencies, as well as vehicles for transporting goods or passengers, to prevent malicious and criminal use.

1.3 Now that drones have a multitude of civilian uses, countries should not overlook the potential benefits of this market and the lucrative benefits of civilian drones, but in case human beings seek for making more use of drones and reducing the security risks and threats arising from its development, it must take into account specific laws and regulations and develop and implement new systems and solutions.

1.4 Therefore, enactment of clear security laws, are not only for the protection of military and nuclear sites and for the privacy of people, but they also help the market of drones industry.

## 2. CHALLENGES AND POTENTIAL RISKS OF USING PROFESSIONAL DRONES

2.1 While the benefits of using these drones in civilian areas are far more prominent than the inherent dangers of the technology, it can pose serious security risks and damages in the current legal vacuum.

2.2 Drones flying over and around airports, in addition to endangering the safety of aircraft due to the risk of drones and aircraft crash that may cause serious financial and personal injury, is also closely linked to threats against security of airports and critical locations in the airports. Also, failure to equip some drones, especially hand-made drones, with some control systems such as geofencing and electronic identification and operate them on some unusual and uncommon frequencies and also failure to divide airspace, raises security concerns concerning probability of terrorist activities.

2.3 Flying these drones near military bases, factories and industrial facilities such as nuclear, hydro, electricity, etc., in addition to increasing the risk of espionage, may interfere with the operation of these facilities and factories, or even these drones may carry explosive materials.

2.4 Another major problem that these drones can create is a breach of the privacy of people's lives. Professional drones equipped with photography and filming capabilities, can monitor the quality of people's private lives, and it may create huge costs and consequences for the community.

2.5 Nowadays, illegal hunters use drones to monitor hunting areas to make sure that environmental protection officers are not present and then identify the exact location of the animals in order to hunt them safely.

2.6 Another challenge in defending a country's airspace is to balance the use of civilian airspace with the protection against harmful drones. Detecting an aircraft or an enemy air fleet in a country's airspace is in itself a very difficult and challenging task, and the drones have posed more challenges because of their small size, low altitude, and low radar cross section. The Islamic Republic of Iran, due to locating in a high-risk area, also has to be prepared to face probable air and even missiles attacks. Therefore, the presence of drones may impede air defense capabilities.

### 3. CONCLUSION

3.1 Unfortunately, in many countries, the entity responsible for the management, control and monitoring of drones has not yet been formally introduced. In order to regulate this field, such components as intellectual processes, laws, regulations, employment creation, human resources training and so on are necessary, therefore, international bodies involved in this matter, such as ICAO, should take responsibility for this matter as soon as possible and adopt comprehensive and binding rules to be implemented by the Member States.

3.2 In order to confront with security threats, both ICAO, through adoption of binding laws, and consequently the Member States, by introduction of competent authorities to determine the rules for using drones, can identify and register the identities of individuals and entities importing or producing drones, as well as registering the drones themselves in the supervisory system of the organization concerned in order to deal with security threats as the first and important step that can prevent many potential threats early on.

3.3 The next step is to develop a law and regulation on the use of civilian drones, and then, informing the public about it. Prohibition of flying in urban and populated areas, setting maximum flight altitude, as well as not using drones at night, etc., can be considered as law provisions in this regard.

3.4 Determination of flight zones and no-fly zones is another issue that ICAO and Member States can address to enhance safety and security. Today, geographic fence technologies, electronic IDs and other tracking systems can be helpful to reach the aims.

3.5 In conclusion, determining the permissible distance of drones from airports or aircraft landing sites, as well as determining the permissible distance from military bases, factories and industrial installations such as nuclear, hydro, electricity, etc. can prevent many security threats and risks.

3.6 The Assembly is invited to consider the necessity to anticipate strategies to tackle the security challenges and dangers of drone use in Annex 17.

— END —