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Pursuant to paragraph 5, Article 179i of the Aviation Act (OG RS No. 81/2010, official consolidated text) and pursuant to third indent Article 15 of the Ruling on the establishment of the Civil Aviation Agency of the Republic of Slovenia (OG RS No. 81/2010) I hereby issue the following

Safety Directive

on Unmanned Aircraft

Civil Aviation Agency of the Republic of Slovenia Kotnikova ulica 19a SI-1000 Ljubljana Slovenia

Rok Marolt, Director





1. Applicable law

In accordance with the <u>Aviation Act</u>, an aircraft violates Slovenian airspace if it flies over or within it without a special permission issued by the competent authority or contrary to the terms requirements stated within that authorisation, or contrary to the provisions of this Act and regulations issued pursuant thereto. In accordance with Article 10 of the Aviation Act, flying of foreign guided and unguided flying devices within the airspace of the Republic of Slovenia without a permission of the competent authority is considered a violation of the airspace of the Republic of Slovenia.

In addition, Article 77 of the Aviation Act provides, inter alia, that provisions under Article 76 of the Act apply mutatis mutandis for special purposes flights (such as aerial work, aerial photography, aerial advertising, sightseeing flights, etc.), even if such activities is not performed for remuneration. In order to perform such activities, the operator must acquire a specific permission issued by the Agency. Eligibility to perform the above-mentioned activities is assessed also in accordance with the conditions put forward by the Joint Aviation Requirements.

Paragraph 3, Article 3 of the <u>Regulation of ultralight aircrafts</u> defines that unmanned aircrafts with an operating mass of no more than 150 kg, excluding replicas, that do not endanger flight safety, fall under ultralight aircrafts. However, due to their properties, unmanned aircrafts cannot be compared to ultralight aircrafts.

Additionally, Article 174 of the Regulation on aircraft operations reads as follows:

"Flight of model aircrafts which may compromise the safety of air navigation due to their technical characteristics, weight, and flight altitude, must be reported to the nearest air traffic control no later than 24 hours in advance and a flight plan must be submitted.

The flight plan must include the following:

- 1) Technical properties of the model aircraft (dimensions, engine power, control mode, etc.);
- 2) Aircraft model number and number of planned flights;
- 3) Date, time, and location of flight;
- 4) Flight duration and flight altitude;
- 5) Information of the person, responsible for flying model aircraft.

Model aircrafts may pose a threat to the safety of air traffic in the following instances:

- 1) If the operating weight of model aircraft exceeds 5 kg or in the event of rocket powered model aircraft regardless of its weight;
- 2) If the flight plan includes a combustion-engine model aircraft flying less than 1,500 m from a public airport or populated area;
- 3) If the flight plan includes a glider model aircraft attached by a steel cable of 100 m or longer.

If the steel cable exceeds 100 metres in length, it must include red and white flags every 100 metres, or red and white lights every 100 metres if the model aircraft is to be flown by night."

Remotely operated aircrafts must be marked in accordance with the provisions of the <u>Rules on nationality</u>, registration and other marks on civil aircraft (OG RS Nos. 88/2014, 12/2015, and 90/2015).

2. Problem definition

Civil Aviation Agency of the Republic of Slovenia has received numerous questions and requests for obtaining appropriate permissions for users of various unmanned systems. On the one hand, the current legislation does not prescribe any detailed requirements, methods or procedures relating to acquisition of appropriate permissions, licences or attestations to carry out such activities, or permissions for airworthiness reviews.

On the other hand, the current legislation lays down stiff penalties for violations of airspace, rules of the air, operating without licences, etc.



It should be noted that a crash of an unmanned aircraft poses a significant risk to the drone pilot as well as persons present in its airspace area. Crashing of an unmanned aircraft is most often caused by an air traffic obstacle, unreliable global navigation satellite system, or power supply failure. Furthermore, inappropriate use of an unmanned aircraft can pose risks to air traffic, while an aerial survey may constitute an invasion of privacy.

3. Safety Directive

In the light of the foregoing, the Director of the Civil Aviation Agency of the Republic of Slovenia issues the following Safety Directive on Unmanned Aircraft Systems <u>valid until</u> the publication date of a comprehensive regulation on the matter of unmanned aircraft.

Definitions and Scope

Unmanned aircraft means a pilotless aircraft flying either remotely or entirely controlled from another place, or one that is programmed and entirely autonomous. The term *unmanned aircraft* also refers to model aircrafts.

This Safety Directive applies to all unmanned aircrafts with an operating mass of up to and including 150 kilograms. The provisions of this Directive shall not apply to unmanned aircrafts with an operating mass of up to and including 250 g and if they cannot achieve kinetic energy greater than 79 J.

Operation of an unmanned aircraft is permitted under the following conditions:

- > Flying an unmanned aircraft is permitted for sport and recreational purposes, whereby flight is permitted in Class I area of operation (area with no elevated structures or facilities nor people, except the drone pilot and personnel necessary for flying) and in Class II area of operation (area with auxiliary farm buildings or structures not intended for stay and without people, except the drone pilot and personnel necessary for flying). It is allowed for people to occasionally pass through the area, but without retention (cyclists, pedestrians, etc.);
- Unmanned aircraft shall be flown only during the day;
- > The drone pilot shall <u>check and ensure the integrity</u> of the unmanned aircraft system before flight
- Prior to the flight, the drone pilot shall gather all necessary information for the planned flight and ensure that meteorological and other conditions in flight area ensure safe flight performance (NOTAM messages are available at Slovenia Control website: http://www.sloveniacontrol.si/);
- The drone pilot shall ensure that all equipment or cargo is properly attached to unmanned aircraft in a way to prevent unintentional drop off;
- The drone pilot shall ensure that the unmanned aircraft <u>safely clears all obstacles</u> during takeoff or landing;
- > The drone pilot shall ensure safe distance of unmanned aircraft from persons, animals, objects, vehicles, vessels, other aircraft, roads, railways, waterways or transmission lines, not less than 30 metres, and that the minimum distance of unmanned aircraft from assembly of people is 150 metres, whereby an assembly of people consists of more than 12 persons;
- The drone pilot shall ensure that during the unmanned aircraft flight <u>no objects are dropped</u> with exception of a model aircraft which can drop another model aircraft during flight;
- The drone pilot shall ensure that the unmanned aircraft flight is performed within their visual line of sight and at the distance of no more than 500 metres from the drone pilot;
- ➤ The drone pilot shall ensure that the flight of unmanned aircraft is performed <u>outside of controlled airspace</u>, or in accordance with the agreement with Slovenia Control and up to 150 <u>metres</u> above the ground;
- One drone pilot shall control only one unmanned aircraft;



- ➤ General aviation aircrafts always <u>have right of way over unmanned aircrafts</u>. When the unmanned aircraft is operated by using the system to display view from the aircraft (FPV), the drone pilot and/or associated observer must observe the air traffic situation. System of view from the aircraft display ("First Person View" FPV) is a system that uses aircraft mounted camera and a display unit on the ground that enables the drone pilot to display the view from the aircraft. In the event of a conflict, the drone pilot must immediately commence manoeuvres to ensure appropriate horizontal or vertical separation.
- > The drone pilot shall perform a FPV flight only if accompanied by <u>an associated observer</u>. The drone pilot shall brief the associate observer with all essential details of the planned flight, at least with regards to height and route planned. Associate observer shall maintain uninterrupted visual contact with the unmanned aircraft throughout flight and inform the drone pilot of any deviation from the planned flight, possible disruption of minimum distances, and other matters related to flight safety. During the flight, associate observer and drone pilot shall be at a distance that allows unhindered voice communication without technical aids. If a FPV flight is conducted within Class I area of operation, to the altitude of 200 metres and the weight of unmanned aircraft does not exceed 5 kilograms, the following may apply:
 - In the event of numerous drone pilots conducting FPV flights at the same time, only one associated observer may be present for sporting activities (competition flights, training, etc.);
 - In the event that the FPV drone pilot has a minimum of 5 hours experience with FPV flight with an associated observer on familiar terrain, the drone pilot may conduct the flight by himself/herself.

Unmanned aircraft flights shall be conducted in accordance with applicable regulations governing rules of the air and the provisions of this Directive.

The following shall be prohibited:

- Conducting services with unmanned aircraft, whereby conducting services means utilisation of an unmanned aircraft in aerial activities either against payment or free of charge (such as aerial photography, aerial advertising, aerial surveillance, fire protection, avalanche launch, scientific research flights, television, movie and news flights, special events flights including flying displays, competition flights and similar);
- Unmanned aircraft flights in Class III area of operation: area with buildings or facilities primarily intended for residential, business or recreational purposes (residential buildings and houses, schools, offices, sports facilities, parks, etc.), or in an area featuring civil engineering constructions where people are present (motorways etc.), and in Class IV area of operation: urban zone area (centre of towns or other settlements).

Exceptions

Exceptions to the rules of the air laid down in this Directive may be determined by the Agency in its permission for an air show or a competition.

4. Inspection

Civil Aviation Agency of the Republic of Slovenia shall, within its powers set out in the Aviation Act, exercise control over the implementation of the requirements under this Directive.

Consequently, it is appropriate to stress the penal provisions of the Aviation Act:

> Flying unmanned aircrafts or foreign guided and unguided flying decices within the airspace without a permission of the competent authority is considered a violation of the airspace of the Republic of Slovenia. This violation is punishable by criminal penalties



- ranging from EUR 4,000 to EUR 33,000 for legal persons, and from EUR 300 to EUR 600 for natural persons;
- ➤ In the event that the flight is not reported to the air navigation services (FPL), it constitutes a felony which is punishable by criminal penalties ranging from EUR 4,000 to EUR 33,000 for legal persons, and from EUR 300 to EUR 600 for natural persons;
- > Violation of rules of the air by the pilot in command is punishable by criminal penalties ranging from EUR 400 to EUR 600;
- ➤ In the event that the operator conducts special purposes flights (e.g. aerial photography) without appropriate permission, this is punishable by criminal penalties ranging from EUR 2,500 to EUR 25,000 for legal persons, and from EUR 250 to EUR 600 for natural persons;
- ➤ Flying an aircraft registered in the Republic of Slovenia which is lacking markings of state affiliation ("S5") and/or registration markings is punishable by criminal penalties ranging from EUR 2,500 to EUR 25,000 for legal persons, and from EUR 250 to EUR 580 for natural persons.

in the event that an unmanned aircraft drone pilot endangers the general health and safety of persons or property through an intentional or negligent dangerous act or omission of appropriate actions, this constitutes the act of causing general danger pursuant to Article 314 of the Criminal Code, and is punishable by financial penalties (if arising from negligence), or imprisonment (in serious cases).