

Democratic Socialist Republic of Sri Lanka



Civil Aviation Authority of Sri Lanka

Implementing Standards

(Issued under Sec. 120, Civil Aviation Act No. 14 of 2010)

Title: Requirements for Operation of Pilotless Aircraft (Unmanned Aerial Vehicles Unmanned Aircraft Systems /Remotely Piloted Aircraft/Drones)

Reference No. : CA-IS-2017-GEN-001 **SLCAIS : 053** **Date:** 10th January 2017

Pursuant to Sec.120 of the Civil Aviation Act No.14 of 2010 which is hereinafter referred to as the CA Act, Director General of Civil Aviation has the power to issue, whenever he considers it necessary or appropriate to do so, such Implementing Standards for the purpose of giving effect to any provision in the CA Act, Regulations or Rules made thereunder including the Articles of the Convention on International Civil Aviation specified in the Schedule to the CA Act.

Accordingly I, being the Director General of Civil Aviation do hereby issue the Implementing Standards as mentioned in the Attachment hereto (Ref: CA-IS-2017-GEN-001-Att.01, titled **Requirements applicable for Operation of Pilotless Aircraft, Unmanned Aerial Vehicles /Remotely Piloted Aircraft/Drones etc.**) that shall be complied with when operating pilotless aircraft under the provision of Section 80 of the CA Act, Article 8 of its Schedule or the applicable International Standards and Recommended Practices specified in Appendix 4 of Annex 2 to the Convention.

This Implementing Standard (IS) which supersedes IS-053 dated 25th February 2016 shall come in to force with immediate effect and remain in force until further notice.

Attention is also drawn to Section 103 of the CA Act, which states inter alia that failure to comply with Implementing Standard is an offence.

Civil Aviation Authority of Sri Lanka
04, Hunupitiya Road
Colombo 02.

H.M.C. Nimalsiri
Director General of Civil Aviation and
Chief Executive Officer

Enclosure: Attachment No. CA-IS-2017-GEN-001-Att.01

Implementing Standards No. SLCAIS-053

Requirements for the Operation of Pilotless Aircraft

(Unmanned aircraft systems / Remotely Piloted Aircraft / Drones)

1. APPLICABILITY

The requirements stipulated in this Implementing Standards shall be applicable to operation of remotely piloted aircraft, control line model aircraft, free flight model aircraft or drone which is hereinafter collectively referred to as **pilotless aircraft**-within Sri Lanka airspace under the provision in Section 80 of the Civil Aviation Act No.14 of 2010 and Article 8 of the Schedule thereto.

2. APPROVED PERSON OR ORGANIZATION

A. Director General of Civil Aviation may approve a person or an organization having appropriate expertise in the design, construction or operation of remotely piloted aircraft, who is hereinafter referred to as an **approved person** or **approved organization** as the case may be, to perform one or more of the following functions for and on behalf of Director General of Civil Aviation.

- (i) issuing a remote pilot qualification for operating pilotless aircraft; or
- (ii) appointing persons to give instruction to remote pilots of pilotless aircraft or
- (iii) authorizing a person to notify the aeronautical information service provider, for the issue of a NOTAM of pilotless aircraft operations; or
- (iv) authorizing the construction or modification of pilotless aircraft; or
- (v) inspecting and approving the construction of a pilotless aircraft; or
- (vi) Authorizing the operation of a pilotless aircraft.

B. Notwithstanding the foregoing, Director General of Civil Aviation may approve a person or an organization applying to him directly for operation of a pilotless aircraft.

C. A person or organization intending to receive status of Approved Person or Approved Organization for the purposes of this Implementing Standard may apply to Director General of Civil Aviation in the prescribed form, giving his/her qualifications and experience in the construction, operation, maintenance and training of pilots of pilotless-aircraft

3. MASS CATEGORIES OF PILOTLESS AIRCRAFT

For the purpose of this Implementing Standard, a pilotless aircraft are grouped into four categories as follows based on mass.

<u>Mass</u>	<u>Category of Pilotless aircraft</u>
25 kg or above	A
Above 1 kg but below 25 kg	B
Above 200 g but at or below 1 kg	C
200 g or below	D

4. LIMITATIONS ON OPERATIONS

A. CATEGORY - A

A pilotless aircraft of Category A shall not be operated unless:

- (i) explicit approval from Director General of Civil Aviation has been obtained, and,
- (ii) the published requirements on Personnel Licensing, Aircraft Operations and Airworthiness applicable to manned aircraft are fully complied with.

B. CATEGORY - B

A pilotless aircraft of Category B, subject to compliance with the applicable requirements in this Implementing Standards, may be:

- (i) designed, constructed or maintained under the authority of Director General of Civil Aviation, an approved person or approved organization; and,
- (ii) Operated under the authority of the Director General of Civil Aviation, an approved person or approved organization.

C. CATEGORY - C

A pilotless aircraft of Category C, which has no capability for data capturing tools such as camera, body-sensing or self-priming devices which has a potential of posing a safety or security threat to a person or property or infringing privacy of a third person and which has no means of carrying foreign objects other than the apparatus needed for its operations may be operated with the Registration of a Vender who is certified for the purpose by the Director General of Civil Aviation, subject to compliance with guidelines to be provided by such vender.

D. CATEGORY - D

A pilotless aircraft-of Category D may be operated below 150ft from Ground Level without approval from the Director General of Civil Aviation if it is operated for leisure or education purposes at a private premise with the consent of the property owner or at public places which are clearly identified for the purpose, with due regard to safety and security of persons and property whilst respecting the rights of privacy of persons.

5. FLIGHT CLEARANCE

A pilotless aircraft of any mass category fitted with any data capturing or data retrieval tools such as a camera, body-sensing or self-priming which has a potential of posing a safety or security threat to a person or property or of undermining the right of privacy of a person shall not be flown in the open-air over any area, without flight clearance obtained from the local Police in charge of the area, over which the pilotless aircraft is flown except in the following situations:

- (i) Pilotless aircraft is operated in an approved aerodrome with the written approval of the person in charge of the aerodrome or,
- (ii) Pilotless aircraft is operated in the presence of an authorized person of the Civil Aviation Authority of Sri Lanka (CAASL).

6. MANUFACTURING, ASSEMBLING, IMPORTING, SELLING OR LEASING OF PILOTLESS AICRAFT

A pilotless aircraft of any mass category shall not be manufactured, assembled, exported, imported, sold, chartered, leased by any person unless he has satisfied the following requirements:

- A. The person has registered with the CAASL for manufacturing, assembling, importing, exporting, selling, chartering or leasing pilotless aircraft as the case may be and,
- B. The person maintains an updated record of details of each pilotless aircraft of category A, B or C being manufactured, assembled, imported, exported, sold, chartered or leased, and if such aircraft is made available to a third person the following requirements are complied.
 - (i) Name of the third person, address, emergency contact information (email and mobile number) and National Identity Card number
 - (ii) Product, type/model and Serial Number and any other identification of the pilotless aircraft
 - (iii) Product serial numbers of accessory units that may be provided with the pilotless aircraft such as cameras, remote control, other sensors etc.
 - (iv) In the case of category C , the third person is informed in writing of the requirements of;
 - a. registering the pilotless aircraft with the CAASL prior to commencement of operations,
 - b. obtaining flight clearance from the local Police Stations where the pilotless aircraft is operated in accordance with the requirements of this Implementing Standard.

7. REGISTRATION OF PILOTLESS AIRCRAFT

- A. A pilotless aircraft of any mass category fitted with any data capturing or retrieval tools such as camera, body-sensing and self-priming which has a potential of posing a safety or security threat to person or property or infringing the rights of privacy of a person, shall be registered with the CAASL,
- B. A pilotless aircraft of Category-A or Category-B, shall be registered with the CAASL,
- C. The registration requirements of pilotless aircraft of Category-A shall be as same as for any other powered aircraft,
- D. A pilotless aircraft of Category-C which is not fitted with any data capturing or retrieval tools such as camera, body-sensing and self-priming which has a potential of posing a safety or security threat to person or property or infringing the rights of privacy of a person shall be registered with a certified Vender authorized to do so.

- E. A pilotless aircraft of Category-D which is not fitted with any data capturing or retrieval tools such as camera, body-sensing and self-priming which has a potential of posing a safety or security threat to person or property or infringing the rights of privacy of a person shall be exempted from the requirement for registration.
- F. Except for a Temporary Certificate which may be issued for a shorter period depending on the circumstances, a Pilotless aircraft Registration Certificate will be valid for a period of two (02) years and renewable thereafter.
- G. The Owner of pilotless aircraft shall ensure that the person remotely operating the pilotless aircraft will at all the time be in possession of the Registration Certificate when the pilotless aircraft is engaged in any kind of operation.
- H. In an event that the Registered Owner of pilotless aircraft transfers ownership to another person, the new owner shall register the Change of Ownership with CAASL prior to any operation. Transferor shall also inform CAASL that he/she had transferred the ownership of the particular unit furnishing the details of the Transferee.
- I. Any pilotless aircraft of mass Category-A, B or C, as well as Category-D fitted with any data capturing or retrieval tools such as camera, body-sensing and self-priming which has a potential of posing a safety or security threat to person or property or infringing the rights of privacy of a person, shall be produced for inspection by CAASL or a designated person/organization, if so required by the CAASL as a pre-requisite for its registration with CAASL.
- J. De-registration: The owner shall inform the Director General of Civil Aviation if/when the registered pilotless aircraft becomes permanently unserviceable, or ceases operations within Sri Lanka.

8. REGISTRATION OF PERSONS WHO OPERATE PILOTLESS AIRCRAFT

- A. A person who operates or intending to operate a pilotless aircraft of mass Category A, B or C shall be registered at CAASL after successful completion of a Competency Check conducted by the CAASL or any other designated person or organization and obtain a Remote Pilot Authorization Certificate on payment of a prescribed fee.
- B. The remote pilot of a pilotless aircraft of mass Category A, B or C shall be over 18 years of age unless otherwise authorized by the Director General of Civil Aviation in writing.
- C. The remote pilot of a pilotless aircraft of mass Category A, B or C shall renew his/her authorization Certificate once in two (02) years on payment of the prescribed fee to CAASL unless the cessation of operations is notified to CAASL.
- D. Any remote pilot of-a pilotless aircraft other than a citizen of Sri Lanka will only be entitled to a Temporary Registration with CAASL with a limited period of validity.

9. IDENTIFICATION STAMP

- A. No pilotless aircraft in the mass Category A, B or C shall be operated in any part of Sri Lanka, unless it carries an Identification Stamp issued by the Director General of Civil Aviation or a person or organization duly authorized by him.
- B. An identification stamp on a pilotless aircraft shall indicate its Registration Number, owner's national identity card number and his/her emergency contact numbers.

10. OPERATION OF FOR COMMERCIAL PURPOSES

Pilotless aircraft of any mass category shall not be operated for hire or reward, unless special approval is obtained from the Director General of Civil Aviation in writing after payment of the specified fee on case-by-case basis.

11. OPERATION OF PILOTLESS AIRCRAFT FOR AERIAL WORK

Pilotless aircraft of any mass category shall not be operated for any aerial work, unless special approval is obtained from the Director General of Civil Aviation in writing after payment of the specified fee on case-by-case basis.

12. CONTROL LINE MODEL AIRCRAFT

A control line model aircraft shall not be operated with a single or multiple wire system longer than 30 m without the prior approval of the Director General of Civil Aviation.

13. SAFE OPERATION OF PILOTLESS AIRCRAFT

- A. Pilotless aircraft of any mass category shall not be operated unless its method of propulsion, source of power, means of controls, command and control links are checked and verified for normal operations prior to the intended flight ensuring safe operations without endangering persons or property.
- B. Ensure that external devices such as telemetric devices attached to pilotless aircraft are secured and do not adversely affect the flight characteristics or controllability of the aircraft.
- C. The person remotely operating a pilotless aircraft at all times shall maintain awareness of the location of operation and expected flight path, be aware of other aircraft, persons, and property in the vicinity of the operating area, and shall maneuver the pilotless aircraft to avoid a collision, as well as to prevent other aircraft from having to take action to avoid the pilotless aircraft.
- D. Pilotless aircraft shall not be operated in reckless and careless manner.
- E. Unless otherwise authorized by the DGCA, a pilotless aircraft shall not be flown faster than a ground speed of 87 knots (100 miles per hour).

- F. Pilotless aircraft shall not be operated under the conditions of gusty winds, rain, thunder, lightning or any other adverse weather conditions, or when visibility is reduced below 5 km.
- G. The person who remotely operate pilotless aircraft shall not engage in operating multiple pilotless aircraft simultaneously at any given time
- H. Pilotless aircraft shall not be operated from a moving vehicle or from a moving platform
- I. In an event of an in-flight emergency, an unexpected and unforeseen serious occurrence or situation that requires urgent prompt action, emergency action should be taken in such a way as to minimize injury to persons or damage to property.
- J. While abiding by these regulations on pilotless aircraft operations, person who remotely operates pilotless aircraft shall comply with all other applicable public laws that govern such operations.

14. STATUS OF PERSON WHO OPERATES A PILOTLESS AIRCRAFT

A pilotless aircraft shall not be operated by any person if the person;

- A. is not familiar with operations and maneuvering of the aircraft safely.
- B. is not in good physical and mental health condition;
- C. is under the influence of alcohol or psychoactive substance;
- D. does not have sound sense of social responsibility.

15. RESPONSIBILITY OF THE PERSON REMOTELY OPERATING PILOTLESS AIRCRAFT WITH RESPECT TO CIVIL RIGHTS OF THIRD PARTIES

When operating a pilotless aircraft fitted with telemetry devices, the person remotely operating the pilotless aircraft shall at all the time observe that he/she captures the planned and intended objects only and shall ensure that privacy, civil rights and civil liberties of 3rd parties are not undermined at any time.

16. RESTRICTED AREAS OF OPERATIONS

- A. Unless otherwise permitted under this Implementing Standards, a pilotless aircraft-shall not be operated at any place within Class C, D or E airspace without approval from the Air Traffic Control unit in charge of the place :
- B. A pilotless aircraft-shall not be operated on or within 5 miles of boundary of :
 - (i) an uncontrolled aerodrome, unless :
 - a) the operation is undertaken in accordance with the approval of the Director General of Civil Aviation and an agreement with the aerodrome operator; and,

- b) in the case of a free flight model aircraft, the aircraft is launched downwind of an active runway; and,
 - c) in the case of a remotely piloted aircraft :
 - 1) each person remotely operating the pilotless aircraft has an observer in attendance while the pilotless aircraft is in flight; and,
 - 2) the pilotless aircraft is not operated at a height of more than 150 feet above ground level unless otherwise approved by Director General of Civil Aviation; and,
 - (ii) a controlled aerodrome, unless it is operated in accordance with an authorization from the relevant ATC unit and the Director General of Civil Aviation; and,
 - (iii) any aerodrome unless the person remotely operating pilotless aircraft has obtained prior approval from the Director General of Civil Aviation and,
 - a) is the holder of, or is under the direct supervision of the holder of a pilot qualification issued by an approved person or organization; or
 - b) is under the direct supervision of a person appointed to give instruction in the operation of pilotless aircraft by an approved person or organization; or
 - c) is the holder of a pilot licence or certificate issued by the Director General of Civil Aviation.
- C. Unless otherwise authorized by the Director General of Civil Aviation in writing, a pilotless aircraft shall not be operated in any part of Sri Lanka;
- (i) on or over any movement area of an active aerodrome; or
 - (ii) on or over any active runway strip area; or
 - (iii) over assembly of persons or public gatherings; or
 - (iv) over congested areas; or
 - (v) along or over roadways or railways; or
 - (vi) below or above open electricity power lines; or
 - (vii) within proximity to communication towers; or
 - (viii) over national parks, archeological sites and over protected areas or security establishments without approval.
- D. Paragraph 16. B does not apply to a shielded operation that is conducted :
- a) outside of the boundary of the aerodrome; and
 - b) in an airspace that is physically separated from the aerodrome by a barrier that is capable of arresting the flight of the aircraft.

17. AIRSPACE

- A. A pilotless aircraft must not be operated;
- a) above any property unless explicit prior consent has been obtained from persons occupying that property or the property owner; and,
 - b) causing safety or security hazard to third person or property, and,

- c) without maintaining observation of the surrounding airspace in which the pilotless aircraft is operating for other aircraft; and,
 - d) at any height above 150 feet above ground level except in accordance with paragraph 16. D.
- B. Nothing in paragraph 16. B (i) will be applicable if the aircraft is operated under the authority of Director General of Civil Aviation or an approved organization; and,
- C. A pilotless aircraft may be operated more than 5 miles away from an aerodrome boundary and above 150 feet above ground level:
- a) if operation takes place in an active area designated for that purpose; or,
 - b) if the operation takes place within Class C, D, and E airspace and that, at least 24 hours before the operation, a person authorized by an approved person or organization, notifies the Aeronautical Information Service Provider, for the issuance of a NOTAM, of the following information:
 - (i) the name, address, and telephone number of the person remotely operating the pilotless aircraft,
 - (ii) the location of the proposed operation,
 - (iii) the date, time and duration of the proposed operation,
 - (iv) the maximum height above ground level proposed for the aircraft UAS operation.

18. RIGHT OF WAY

- A. A person remotely operating pilotless aircraft must ensure that the pilotless aircraft gives way to, and remains clear of, all manned aircraft and on the ground and in flight.
- B. A person who operates a free flight model aircraft, before launching the aircraft must ensure that during the operation the aircraft will remain clear of all manned aircraft on the ground and in flight.
- C. The person remotely operating a pilotless aircraft must ensure that the pilotless aircraft gives way to and remains clear of all moving objects on earth or water surface
- D. The person remotely operating a pilotless aircraft must ensure that pilotless aircraft remains well clear of persons, animals, birds or property.

19. DROPPING OF OBJECTS OR DISPLAY OF BANNERS

Nothing shall be dropped nor shall any banner be displayed on a pilotless aircraft in flight without approval from the Director General of Civil Aviation.

20. TOWING

Nothing shall be towed from a pilotless aircraft in flight without specific approval from the Director General of Civil Aviation.

21. CARRIAGE OF ANY FOREIGN OBJECT :

No foreign object shall be carried in a pilotless aircraft without specific approval from Director General of Civil Aviation.

22. VISUAL LINE OF SIGHT OPERATION

A. A pilotless aircraft shall not be operated:

- a) over any area in which the person's view of the surrounding airspace in which the aircraft will operate is obstructed; or
- b) from an elevated ground, building or an object;
- c) under meteorological conditions that obstruct the operating person's ability to maintain visual line of sight of the aircraft.

B. The person remotely operating a pilotless aircraft must at all times:

- a) maintain visual line of sight with the pilotless aircraft; and,
- b) be able to see the surrounding airspace in which the pilotless aircraft is operating; and,
- c) maintain the pilotless aircraft below the cloud base.

C. For the purposes of this Implementing Standard, visual line of sight means a straight line along which an observer has a clear view and which may be achieved with the use of—

- a) spectacles, contact lenses, or a similar device used to correct subnormal vision of the user to no better than normal vision but not the use of an electronic, mechanical, electromagnetic, optical, or electro-optical instrument; or a First-Person View (FPV), or
- b) a trained and competent observer who maintains—
 - (i) visual line of sight of the aircraft; and,
 - (ii) sight of the surrounding airspace in which the pilotless aircraft is operating; and,
 - (iii) direct communication with the person remotely operating the pilotless aircraft.

23. NIGHT OPERATIONS

An pilotless aircraft shall not be operated from 20 minutes after dusk to 20 minutes before dawn unless the operation is :

- A. indoors with adequate lighting; or,
- B. a shielded operation with adequate illumination
- C. specifically authorized by the Director General of Civil Aviation

24. AIR COMPETITION

Pilotless aircraft shall not be operated in a race or competition of any form, without special approval from Director General of Civil Aviation.

25. MODIFICATIONS

Pilotless aircraft which has already received approval from the Director General of Civil Aviation, approved person or approved organization, shall not be modified without requisite approval for the modification.

26. RADIO INTERFERENCE

A pilotless aircraft shall not be operated to cause interference to radio communication, navigation or surveillance of aircraft and/or Air Traffic Management system.

27. ACCIDENT / INCIDENT REPORTING

The person remotely operating the pilotless aircraft or the owner shall immediately report any occurrence of an accident or incident involving destruction of private or public property and any injury caused to the third party by any operation of pilotless aircraft-to the nearest police station of the location of occurrence.

Report on the incident shall be submitted to CAASL by the owner/ the person remotely operated the pilotless aircraft at the earliest but not later than 48 hours of its occurrence.

The report should include the following information:

- 1) Name of the owner and contact information
- 2) Name of the operator and contact details
- 3) Registration details issued to pilot-less aircraft.
- 4) Location of the accident;
- 5) Date of the accident;
- 6) Time of the accident;
- 7) Person(s) injured and extent of injury, if any or known;
- 8) Property damaged and extent of damage, if any or known;
- 9) Description of what happened.

28. EXEMPTION

On account of humanitarian relief operations conducted by public organizations on occasions such as search and rescue, aircraft accidents and national disasters, the requirements stated in this Implementing Standard may be exempted by the Director General of Civil Aviation.

29. INSURANCE COVER

No pilotless aircraft of mass Category A, B or C shall be operated without a valid Insurance Cover at least in respect of 3rd party injury and/or damage.

30. PROHIBITION OF OFF-SHORE OPERATIONS

Off-shore operations of pilotless aircraft shall not be conducted within the territorial waters of Sri Lanka without the approval of the Director General of Civil Aviation.

31. NON-PRECLUSION

The approval granted by the Director General of Civil Aviation for the operation of pilotless aircraft does not exclude the Operator from the need of obtaining the approval of any other Ministry, Authority, Department, Board, Agency or such Organization(s) depending on the relevance of the area, dates/times and/or nature of the intended operation.

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