The Swedish Transport Agency's Code of Statutes

TSFS 20[Year]:[No]

Published
on [Select a date]

AVIATION

OPS series

The Swedish Transport Agency's Regulations and general advice on unmanned aircraft systems (UAS)

Contents

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The Swedish Transport Agency's Regulations and general advice on unmanned aircraft systems (UAS);

adopted on [Select a date].

The Swedish Transport Agency provides[1] for the following, pursuant to Chapter 1, Sections 6 and 22; Chapter 6, Sections 10, 11 and 13; and Chapter 14, Section 16 of the Aviation Ordinance (2010:770), and Section 15 of the Ordinance (2006:311) on the transport of dangerous goods, and adopts the following general advice.

Chapter 1. Introductory provisions

Scope of application

Section 1 These regulations shall apply to the operation of unmanned aircraft systems (UAS) within Swedish territory. The regulations shall not apply to indoor operations.

General advice
The European Union Aviation Safety Agency (EASA) issues Acceptable Means of Compliance (AMC) in Commission Implementing Regulation (EU) 2019/947 and Commission Delegated Regulation (EU) 2019/945. Such an AMC may be used to achieve compliance with some of the requirements of these regulations. EASA also issues Guidance Material (GM) that can be used to help get an understanding of the requirements of the regulations. The AMC and GM are available in the document library on the EASA website. There are also Easy Access Rules, where regulations, the AMC and the GM are compiled in a document. This document is also available in the document library on the EASA website.

[1] See Directive (EU) 2015/1535 of the European Parliament and of the Council of 9 September 2015 laying down a procedure for the provision of information in the field of technical regulations and of rules on Information Society services.

Common Provisions

Section 2 The provisions of Chapter 2 apply to operations that are subject to Regulation (EU) 2018/1139 of the European Parliament and of the Council of 4 July 2018 on common rules in the field of civil aviation and establishing a European Union Aviation Safety Agency, and amending Regulations (EC) No 2111/2005, (EC) No 1008/2008, (EU) No 996/2010, (EU) No 376/2014 and Directives 2014/30/EU and 2014/53/EU of the European Parliament and of the Council, and repealing Regulations (EC) No 552/2004 and (EC) No 216/2008 of the European Parliament and of the Council and Council Regulation (EEC) No 3922/91.

The provisions also apply to activities outside of the scope of the Regulation, with the exception of military activities.

Unmanned aircraft system (UAS) activities covered by Regulation (EU) 2018/1139

Section 3 The provisions of Chapter 3 only apply to activities covered by Regulation (EU) 2018/1139 of the European Parliament and of the Council and complements Commission Implementing Regulation (EU) 2019/947 of 24 May 2019 on the rules and procedures for the operation of unmanned aircraft systems, and Commission Delegated Regulation (EU) 2019/945 of 12 March 2019 on unmanned aircraft systems and on third-country operators of unmanned aircraft systems.

Unmanned aircraft system (UAS) activities not covered by Regulation (EU) 2018/1139

Section 4 Article 2(3)(a) of Regulation (EU) 2018/1139 of the European Parliament and of the Council states that military, customs, police, search and rescue, fire-fighting, border control, coastguard or similar activities or services under the supervision and responsibility of a Member State which are performed in the public interest by or on behalf of a body of government authority, as well as personnel and organisations involved in the activities and services performed by these aircraft, are not covered by the Regulation.

Section 5 The provisions of Chapters 4 to 7 shall only apply to activities that are not covered by Regulation (EU) 2018/1139 of the European Parliament and of the Council.

Section 6 These regulations do not apply to military aviation.

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Activities within model aircraft clubs or associations

Section 7 Additional provisions for activities within model aircraft clubs or associations, as well as for unmanned aircraft systems (UAS) used in such activities, are set out in Chapter 3.

Tethered unmanned aircrafts

Section 8 These regulations shall not apply to operations with tethered unmanned aircrafts as referred to in Article 2(3)(d) and point 2 of Annex I to Regulation (EU) 2018/1139.

Section 9 The Swedish Transport Agency's regulations and general advice (TSFS 2020:88) on the marking of objects that could endanger aviation and on flight obstacles notifications contain provisions on the marking of tethered balloons, kites, and other similar objects.

Air traffic service providers

Section 10 With regard to Chapter 2, Sections 3 to 6, these regulations shall also apply to air traffic service providers.

Aerodrome operators

Section 11 With regard to Chapter 2, Sections 3, 5 and 7 to 8, these regulations shall also apply to aerodrome operators, including heliport operators.

Definitions

Section 12 For the purposes of these regulations, the following definitions shall apply:

AIP	(Aeronautical Information Publication) means a publication issued by or with the authority of a State and containing aeronautical information of a lasting character essential to air navigation;
AIP Supplement (AIP SUP)	(AIP Supplement) means a temporary change to the information contained in the *AIP*, which is provided by means of special pages;
air traffic services (ATS) reporting office (ARO)	(air traffic services (ATS) reporting office (ARO)) means a unit established for the purpose of receiving reports concerning *air traffic services* and flight plans submitted before departure;
direct remote identification	means a system that ensures the local broadcast of information about a *UA* in operation, including the

	marking of the UA, so that this information can be obtained without physical access to the UA;
operations manual	means collected documentation, which may consist of one or more parts, comprising instructions, safety rules and any safety management systems for the operation in question;
indoor operation	means operation inside a house or a building, or in an enclosed space, which the *UA* is unlikely to venture outside of;
visual line of sight operation (VLOS)	means a type of UAS operation in which, the *remote pilot* is able to maintain continuous unaided visual contact with the *UA*, allowing the remote pilot to control the flight path of the unmanned aircraft in relation to other aircraft, people and obstacles for the purpose of avoiding collisions;
beyond visual line of sight operation (BVLOS)	means a type of UAS operation which is not conducted in *VLOS*;
dangerous goods	means articles or substances which are capable of posing a risk to health, safety, property or the environment and which are shown in the list of *dangerous goods* in the *ICAO*-TI or which are classified according to those instructions;
dangerous goods incident	(dangerous goods incident) 1. an occurrence which: (a) does not constitute a *dangerous goods* accident; (b) is associated with and related to the transport of dangerous goods by air; (c) does not necessarily occur on board an aeroplane; and (d) results in injury to a person, damage to property or the environment, fire, breakage, spillage, leakage of fluid or radiation or other evidence that the integrity of the packaging has not been maintained; or 2. an event related to the transport of dangerous goods that seriously endangers the safety of the aircraft or its passengers;
dangerous goods accident	(dangerous goods accident) means an occurrence associated with and related to the transport of *dangerous goods* by air which results in death or serious injury to a person or major damage to

	property or the environment;
mis-declared dangerous goods	means *dangerous goods* submitted by senders for transport by air, but which do not comply with the relevant provisions of *ICAO*-TI relating to marking, labelling or packaging;
remote pilot	means a natural person responsible for safely conducting the flight of a *UA* by operating its flight controls, either manually or, when the UA flies automatically, by monitoring its course and remaining able to intervene and change its course at any time;
flight information zone (FIZ)	(Flight Information Zone) has the same meaning as in Regulation (EU) 2017/373;
air traffic control (ATC) unit	has the same meaning as in Regulation (EU) 2017/373;
aerodrome	means a defined area, on land or on water, on a fixed, fixed offshore or floating structure, including any buildings, installations and equipment thereon, intended to be used either wholly or in part for the arrival, departure and surface movement of aircraft;
aerodrome operator	means a person, an organisation or an undertaking operating an *aerodrome*;
air traffic services unit	(Air Traffic Services unit) is a generic term meaning variously *air traffic control unit*, flight information centre, aerodrome flight information service (AFIS) unit or air traffic services (ATS) reporting office;
air traffic service	(ATS, Air Traffic Services) means a generic term meaning variously, flight information service, alerting service, air traffic advisory service, air traffic control service;
air navigation services	means air traffic services; communication, navigation and surveillance services (CNS); meteorological services for air navigation (MET); aeronautical information services (AIS);
assemblies of people	means gatherings where persons are unable to move away due to the density of the people present;
follow-me mode	means a mode of operation of a *UAS* where the *unmanned aircraft* constantly follows the *remote pilot* within a predetermined radius;
UAS geographical	means a portion of airspace established by the competent authority that facilitates, restricts or

zone	excludes UAS operations in order to address risks pertaining to safety, privacy, protection of personal data, security or the environment, arising from UAS operations;
geo-awareness	means a function that, based on the data provided by Member States, detects a potential breach of airspace limitations and alerts the *remote pilots* so that they can take immediate and effective action to prevent that breach;
ICAO	means the International Civil Aviation Organization (the International Civil Aviation Organization);
ICAO-TI	(Technical Instructions For The Safe Transport of Dangerous Goods by Air (Doc 9284)) means ICAO's technical instructions for the safe transport of dangerous goods by air,;
uninvolved persons	means persons who are not participating in the UAS operation or who are not aware of the instructions and safety precautions given by the *UAS operator*;
air traffic control clearance	means authorisation for an aircraft to proceed under conditions specified by an *air traffic control unit*;
controlled airspace	means an airspace of defined dimensions within which air traffic control service is provided in accordance with the airspace classification;
control zone	means a controlled airspace extending upwards from the surface of the Earth to a specified upper limit;
maximum take-off mass (MTOM)	means the maximum *UA* mass, including *payload* and fuel, as defined by the manufacturer or the builder, at which the UA can be operated;
model aircraft club or association	means an organisation legally established in a Member State for the purpose of conducting leisure flights, air displays, sporting activities or competition activities using UAS;
NOTAM	(notices to airmen) means a notice distributed by means of telecommunication containing information concerning the establishment, condition, or change in any aeronautical facility, service, procedure, or hazard, the timely knowledge of which is essential to personnel concerned with flight operations;
payload	means any instrument, mechanism, equipment, part, apparatus, appurtenance, or accessory, including

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	communications equipment, that is installed in or attached to the aircraft, and is not used or intended to be used in operating or controlling an aircraft in flight, and is not part of an airframe, engine, or propeller;
unmanned aircraft (UA)	means any aircraft operating or designed to operate autonomously or to be piloted remotely without a pilot on board;
unmanned aircraft system (UAS)	means an *unmanned aircraft* and the equipment to control it remotely;
unmanned aircraft observer	means a person, positioned alongside the *remote pilot*, who, by unaided visual observation of the unmanned aircraft, assists the remote pilot in keeping the unmanned aircraft in *VLOS* and safely conducting the flight;
undeclared dangerous goods	means *dangerous goods* submitted by senders for transport by air, but which have not been declared as dangerous goods;
Operational procedures	(Standard Operating Procedures (SOP)) means the operator's instructions as described in an *operations manual*, so that the personnel can carry out the work in a uniform and safe manner;
unmanned aircraft system operator (UAS operator)	means any legal or natural person operating or intending to operate one or more UAS;
privately built UAS	means a UAS assembled or manufactured for the builder's own use, not including UAS assembled from a set of parts placed on the market by the manufacturer as a single ready-to-assemble kit.

Mutual Recognition

Section 13 Goods that are lawfully marketed in another Member State of the European Union or in Türkiye, or that originate from and are lawfully marketed in an EFTA State that is party to the EEA Treaty, are presumed to be in compliance with these provisions. The application of these provisions is covered by Regulation (EU) 2019/515 of the European Parliament and of the Council of 19 March 2019 on the mutual recognition of goods lawfully marketed in another Member State and repealing Regulation (EC) No 764/2008.

Chapter 2. Common provisions

Flights of unmanned aircraft in Swedish airspace

Section 1 Before flying the UA, the remote pilot shall verify information about and conditions for current UAS geographical zones in the area where the flight is planned to take place.

The remote pilot shall also verify information in the AIP Sweden, the AIP supplement (AIP SUP) and NOTAM to ensure that the flight does not concern areas where access has been restricted.

> ***General advice***
> *Information referred to in the first subparagraph is provided, for example, through the Swedish Civil Aviation Authority's map services for unmanned aviation and can be found on the Authority's website.*
>
> *Information referred to in the second subparagraph is presented through the Aeronautical Information Service (AIS), which is provided by the Swedish Civil Aviation Authority (LFV) and is available on the LFV's self-briefing system, AROWeb.*

Section 2 The Protection Act (SFS 2010:305) contains rules prohibiting access by unmanned vehicles to objects of protection.

In certain geographical areas, departure and landing with unmanned aircraft may be restricted due to nature reserve or national park regulations.

> ***General advice***
> *Information about objects of protection is available on the Swedish Armed Forces' website and on the websites of the respective county administrative boards. Information on natural areas, such as nature reserves, bird protection areas or national parks, is available on the Swedish Environmental Protection Agency's website.*

Flights in control zones (CTR)

Section 3 Unmanned aircraft flying in a control zone (CTR) within five kilometres from any part of the aerodrome's runways may only be flown with an air traffic control clearance or with the permission of the relevant air traffic services unit for the airspace in question, and in accordance with the conditions provided by the same air traffic services unit.

Section 4 For flights with unmanned aircraft at an altitude of less than 10 metres above ground level within the control zone at the military aerodromes of Karlsborg, Linköping/Malmen, Luleå/Kallax, Ronneby, Såtenäs, Uppsala, Vidsel, Hagshult, Jokkmokk and the civil aerodromes Linköping/SAAB and Visby, no air traffic control clearance or permission from the relevant air traffic services unit is required, if the unmanned aircraft is flown at least five kilometres from all parts of the aerodrome's runways.

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In control zones other than those specified in the first subparagraph, air traffic control clearance or permission from the relevant air traffic services unit is not required for flights with unmanned aircraft at an altitude of less than 50 metres above ground level, if the unmanned aircraft is flown at least five kilometres from all parts of the aerodrome's runways.

Flights in a flight information zone (FIZ)

Section 5 Flights with unmanned aircraft in a flight information zone (FIZ) within five kilometres from any part of the aerodrome's runways may only take place after communication with the air traffic services unit.

Section 6 In a flight information zone (FIZ), no communication with the air traffic services unit is required for flights with unmanned aircraft at an altitude lower than 50 metres above ground level and more than five kilometres away from any part of the aerodrome's runways.

Section 7 The provisions of Sections 3 to 6 shall not apply in a published UAS geographical zone when special conditions for flights are specified for the zone. In such cases, the conditions set out in the published UAS geographical zone apply.

Flights near aerodromes not surrounded by a control zone (CTR) or flight information zone (FIZ)

Section 8 If a remote pilot intends to fly an unmanned aircraft less than 1 000 metres from any part of the runways at aerodromes that are not surrounded by a control zone (CTR) or flight information zone (FIZ), the provisions of Sections 1 and 2 shall apply.

1. Before the flight, the remote pilot shall obtain information about ongoing or planned flights at the aerodrome that the remote pilot must take into account when planning the flight with the unmanned aircraft.

2. Using this information, the remote pilot shall ensure that the flight with the unmanned aircraft will not pose any risk to manned aviation, in accordance with the obligations set out in Chapter 5, Section 22(1), and Chapter 6, Section 13.

General advice

The aerodromes include heliports and are listed in AIP Sweden AD 1.1 subsections 11 and 12 and AD 3.

Some aerodromes are covered by a control zone (CTR) or flight information zone (FIZ) during the air traffic service's operating hours. When the air traffic service at such an aerodrome is closed, the aerodrome is considered to be an aerodrome not covered by a control zone (CTR) or flight information zone (FIZ).

Information about known or planned flights can be obtained, example, by calling or sending an email to the aerodrome, or by visiting the aerodrome's website.

Section 9 If no information has been obtained in accordance with Section 8, the flight may still take place. Particular care and attention to the risk of manned aviation shall be taken in such cases.

Flights in restricted areas, danger areas and UAS geographical zones

Section 10 Provisions stipulating that restricted areas and danger areas may be defined by the Government and the Swedish Transport Agency are found in Chapter 1, Sections 12 to 14 of the Aviation Act (2010:500) and Chapter 1, Sections 14 to 20 of the Aviation Ordinance (2010:770).

A decision on a restricted area means that flying in the restricted area is prohibited unless otherwise stated in the decision.

A designation of a danger area means that flights in the area should be avoided for reasons of aviation safety, unless the pilot-in-command is satisfied that flying in the area can take place without risk.

General advice
Before flying, the UAS operator should verify which restricted areas and danger areas have been defined in the area where the flight is to take place. Defined restricted areas and danger areas are published in AIP Sweden, which is available on the Civil Aviation Authority's website. More details about the extent of an area and what applies to a permanent or temporary restricted area or danger area can be found in AIP Sweden ENR 5.1, or in the AIP supplement (AIP SUP) or NOTAM.

Section 11 Provisions on UAS geographical zones may be established in accordance with Article 15 of Commission Regulation (EU) 2019/947. A designation of a UAS geographical zone may exclude, restrict or facilitate the operation of unmanned aircraft systems (UAS).

Section 12 flights in a permanent or temporary UAS geographical zone may only take place in accordance with the specified conditions for the UAS geographical zone in question.

Insurance

Section 13 Provisions on insurance are set out in Regulation (EC) No 785/2004 of the European Parliament and of the Council of 21 April 2004 on insurance requirements for air carriers and aircraft operators.

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Occurrence reporting

Section 14 Rules on mandatory and voluntary occurrence reporting are set out in Regulation (EU) No 376/2014 of the European Parliament and of the Council of 3 April 2014 on the reporting, analysis and follow-up of occurrences in civil aviation, the Aviation Act (2010:500) and the Aviation Ordinance (2010:770).

Radio telephony privileges

Section 15 Anyone who, when operating unmanned aircraft, uses an aeronautical radio must be able to demonstrate to the Swedish Transport Agency, in an acceptable manner, their competence in the use of aeronautical radio in the aviation system.

The UAS operator shall document how the person operating an aircraft, as referred to in the first subparagraph, has received the required flight radio competence.

The Swedish Transport Agency's regulations and general guidelines (TSFS 2019:36) on radio telephony and phraseology contain provisions on radio communication.

Transponder usage

Section 16 A 24-bit ICAO code is required in order to be allowed to use a transponder on an unmanned aircraft.

Applications for a 24-bit ICAO code are to be submitted to the Swedish Transport Agency. The application must be accompanied by a statement

1. demonstrating the need for and benefits of a transponder on the aircraft in question;
2. on the transponder model concerned and its compliance; and
3. on the transponder's
   a) ability and capacity to detect manned aircraft; and
   b) response when approaching different airspaces, exceeding certain heights or losing contact with the remote pilot's control unit.

General advice

Transponder transmission licences are applied for from the Swedish Post and Telecom Authority. Before an application to the Swedish Post and Telecom Agency is sent, the UAS operator should have received a 24-bit ICAO code from the Swedish Transport Agency.

Chapter 3. Additional provisions for activities covered by Regulation (EU) 2018/1139 of the European Parliament and of the Council

Age requirements for UAS operators

Section 1 A person who is a UAS operator or who represents a UAS operator who is a legal person must be at least 18 years of age.

Age requirements for remote pilots

Section 2 Article 9 of Commission Implementing Regulation (EU) 2019/947, and Chapter 8, Section 15 of the Aviation Ordinance (2010:770) specify the minimum age for remote pilots.

UAS operations in the framework of model aircraft clubs or associations

Section 3 For the operation of unmanned aircraft within the framework of a model aircraft club or association in accordance with Article 16 of Commission Implementing Regulation (EU) 2019/947, an authorisation from the Swedish Transport Agency is required. An application shall be sent to the Swedish Transport Agency.

The application must specify the area where the operation will take place and include a description of the model aircraft club or association's operating rules. The operating rules shall describe the flight operations and show how the risk of damage to third parties in the air and on the ground has been addressed. The organisation's accountable manager is responsible for ensuring that all members have access to and can comply with the organisation's approved operating rules and the specific conditions in the Swedish Transport Agency certificate. Applications shall contain the information specified in Annex 3.

For the purposes of these regulations, the term "model aircraft association" also refers to model aircraft federations.

Section 4 Prior to flights at a height above 120 metres, special approval from the Swedish Transport Agency is required. The model aircraft club or association shall submit an extended risk analysis to the Swedish Transport Agency and set out risk mitigation measures as regards interaction with other aviation.

Section 5 A model aircraft club or association remote pilot may only fly following the certification of the club or association.

> ***General advice***
> *Operating rules may, for example, take the form of the association's statutes, instructions, operations manual, or additions to these.*

Chapter 4. Operations of unmanned aircraft systems (UAS) not covered by Regulation (EU) 2018/1139 of the European Parliament and of the Council

Categories, notification and special decisions

Section 1 UAS operations that are not covered by Regulation (EU) 2018/1139 of the European Parliament and of the Council are to be carried out in the operational categories: national open, national specific or national certified category.

Section 2 When operating a UAS in the national open category, the UAS operator must submit a notification to the Swedish Transport Agency before commencing operations. The notification shall contain the data set out in Annex 4.

Section 3 The operation of UAS that does not take place in the national open category shall be carried out in the national specific or national certified category. Before commencing operations, the UAS operator must apply to the Swedish Transport Agency for a special decision regarding the activity.

Section 4 UAS operators who have received a special decision for operations in the national specific or national certified category do not need to submit a notification of operations in the national open category to the Swedish Transport Agency.

Activities subject to licence

Section 5 Operations in the national specific or national certified category that does not constitute other aviation for government purposes pursuant to Chapter 14, Section 6 of the Civil Aviation Act, requires an authorisation from the Swedish Transport Agency.

Description of operations

Section 6 The UAS operator's operation manuals shall contain a description of all UAS operations. The description shall be adapted to the complexity of the activity.

> ***General advice***
> *If the UAS operator also conducts UAS operations based on other provisions, such as the Swedish Space Activities Act (1982:963), the Protection against Accidents Act (2003:773), or EU regulations, this should be described in the UAS operator's operation manuals. There should also be a documented procedure for such UAS activities. It should also be described how the UAS operator, after flying in accordance with other provisions, returns to flying in accordance with these regulations.*

The requirement for an operations manual is applicable to all categories. Adapting to the complexity of the operation means that a UAS operator with a simple operation may have a more concise description than an activity with a larger operation.

Risk assessment

Section 7 When applying for a special decision, the UAS operator shall have carried out a risk assessment in accordance with Annex 2. The risk assessment must be submitted to the Swedish Transport Agency together with the application and must include the necessary mitigation measures.

Safety culture

Section 8 A UAS operator shall actively work to promote a good safety culture.

General advice
A UAS operator who uses a safety management system should describe it in the operations manual. The safety work should be based on the most recent knowledge in aviation activities.

Period of validity

Section 9 A special decision for the operation of UAS shall apply for the period specified in the decision, but no longer than five years.

Dangerous goods transport

Section 10 Transport of dangerous goods may only take place in the national specific or the national certified category and after specific approval for the transport of dangerous goods has been obtained from the Swedish Transport Agency.

In the case of dangerous goods incidents and dangerous goods accidents, undeclared dangerous goods and mis-declared dangerous goods, reporting shall be done in accordance with the conditions of the specific approval.

Section 11 Dangerous goods may be transported in the national specific category if the UAS operator can demonstrate that the dangerous goods, in the event of an accident, will not cause damage to third parties or to the environment.

General advice
A crash-resistant container that prevents leakage or dispersion of dangerous goods in the event of an accident may be acceptable. This requires that the UAS operator demonstrates that, taking into account flight speed, altitude, weather and other factors that may

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affect the risk, the container prevents leakage or dispersion of dangerous goods in the event of an accident.

Section 12 The transport of dangerous goods that may pose a high risk to third parties in the event of an accident shall be carried out in the nationally certified category.

Section 13 Before transporting dangerous goods, the UAS operator shall ensure that

1. an assessment of the risks involved in the transport of dangerous goods is carried out in accordance with Section 14, and that the risks are reduced through proper packaging, communication, marking, labelling, handling and loading;
2. a check of the dangerous goods is carried out;
3. the packaging is checked to ensure that it is intact and does not leak during loading and unloading; and
4. the dangerous goods are accompanied by transport documentation.

Section 14 When applying for approval to transport dangerous goods, the UAS operator shall submit a risk analysis concerning the transport. The risk analysis forms the basis for the conditions laid down in the special approval by the Swedish Transport Agency. No transport of dangerous goods may be carried out before the Swedish Transport Agency has decided on such conditions.

The risk analysis shall include:

1. the risk posed by the dangerous goods to persons directly involved in the handling of the dangerous goods, to the environment and to third parties and property;
2. the danger posed by the quantity and class of the dangerous goods;
3. the characteristics of the container in which the dangerous goods are transported;
4. the competence level of those handling the dangerous goods; and
5. the geographical area in which the flight is to be carried out.

Section 15 The UAS operator is to set up a training programme for the personnel involved with the handling of dangerous goods. The training programme shall include at least:

1. dangerous goods terminology;
2. classification of dangerous goods;
3. labelling of dangerous goods;
4. identification of dangerous goods;
5. the use of dangerous goods tables in ICAO-TI;
6. storage and handling of dangerous goods, including but not limited to, separation of incompatible dangerous goods, loading of dangerous goods and securing of dangerous goods;
7. instructions and safety measures provided to employees and third parties; and

8. emergency procedures and reporting procedures for accidents and incidents involving dangerous goods as described in the UAS operator's emergency response plan.

Section 16 Articles and substances that are classified as dangerous goods, but which are used for the propulsion of the unmanned aircraft or for the operation of its specialised equipment, or which are required in accordance with the relevant operational requirements, shall not be considered as transported dangerous goods. The safety of these articles and substances shall be verified during the technical evaluation of the unmanned aircraft system.

General advice
The articles and substances referred to above are, for example, fuel, batteries and other things used during the flight to supply energy to the unmanned aircraft.

Categories of unmanned aircraft system (UAS) operations

Operation of UAS in the national open category

Section 18 The operation of UAS in the national open category is divided into three subcategories in accordance with the requirements of Chapter 5.

Section 19 The operation of UAS is classified as operation in the national open category if all of the conditions in points 1 to 6 are met:

1. The UAS has undergone class certification and is included in one of the classes specified in Parts 1 to 5 of the Annex to Commission Delegated Regulation (EU) 2019/945, as amended by Commission Delegated Regulation (EU) 2020/1058, complies with Chapter 5, Section 9(4), or Chapter 5, Section 15(5), or is a privately built UAS.
2. The maximum take-off mass of the unmanned aircraft is less than 25 kg.
3. The remote pilot ensures that the unmanned aircraft flies at a safe distance from people and does not fly over assemblies of people.
4. The remote pilot shall keep the unmanned aircraft within visual line of sight at all times, except when flying in follow-me mode or when an unmanned aircraft observer is used.
5. During the flight, the unmanned aircraft is kept at a height of no more than 120 metres from the nearest point on the earth's surface, except when flying over an obstacle as described in Annex 1.
6. During the flight, the unmanned aircraft does not carry any dangerous goods and does not release any material.

UAS operations in the national specific category

Section 20 If the conditions in Section 19 are not met, the operation shall be classified as an operation in the national specific category or the national certified category.

Operation of UAS in the nationally certified category

Section 21 The operation of UAS not covered by Regulation (EU) 2018/1139 shall be classified as operation in the national certified category if:

1. the UAS has been certified in accordance with Article 40(1)(a), (b) and (c) of Commission Delegated Regulation (EU) 2019/945, as amended by Commission Delegated Regulation (EU) 2020/1058;
2. the flight involves the transport of passengers;
3. the flight takes place over assemblies of people; or
4. the flight involves the transport of dangerous goods that could pose a high risk to third parties in the event of an accident.

Operation of UAS shall also be classified as operation of UAS in the national certified category if the Swedish Transport Agency, based on the risk assessment in accordance with Annex 2, assesses that the risk associated with the flight cannot be sufficiently compensated for without certification of the UAS and by the UAS operator and, where applicable, without the issuance of a licence to the remote pilot.

> ***General advice***
> *The flight can be classified as operating in the national certified category if the packaging for the transport of dangerous goods is not so well protected that the risk to third parties is eliminated.*

Flights over assemblies of people

Section 22 Organisations that perform socially essential activities may, if necessary, be permitted to fly over assemblies of people in the national specific category instead of the national certified category.

In order to operate in the national specific category, the organisation shall submit a description of the operation and a risk analysis with mitigation measures. Before commencing the operation, the organisation shall have received a decision from the Swedish Transport Agency on the conditions of operation.

Operations carried out by the Swedish Police Authority

Section 23 Operations carried out by the Swedish Police Authority shall not be subject to Chapter 5, Section 23 and Chapter 6, Section 13(5). If a police unit is to fly close to or within an area where an emergency response is taking place, such a procedure must be described in an operative operations

manual. As far as possible, coordination with the person responsible for the response should take place.

For the purposes of these regulations, the term ‘emergency response’ also refers to rescue operations.

Operational limitations for the operation of unmanned aircraft systems (UAS) in the national open category

Section 24 The operation of UAS in the national open category shall comply with the operational limitations specified in Chapter 5.

Operational limitations for the operation of unmanned aircraft systems (UAS) in the national specific category

Section 25 The operation of UAS in the national specific category shall comply with the operational limitations specified in Chapter 6 and the conditions specified by the Swedish Transport Agency in the special decision.

Section 26 Provisions on rules of the air are set out in Commission Implementing Regulation (EU) No 923/2012 of 26 September 2012 laying down the common rules of the air and operational provisions regarding services and procedures in air navigation and amending Implementing Regulation (EU) No 1035/2011 and Regulations (EC) No 1265/2007, (EC) No 1794/2006, (EC) No 730/2006, (EC) No 1033/2006 and (EU) No 255/2010.

Operational limitations for the operation of unmanned aircraft systems (UAS) in the national certified category

Section 27 The operation of UAS in the national certified category shall comply with the operational limitations specified in Chapter 7 and the conditions specified by the Swedish Transport Agency in the specific decision.

Section 28 Provisions on rules of the air are laid down in Commission Implementing Regulation (EU) No 923/2012.

Remote pilot competence

Section 29 Chapter 5, Sections 8, 11 and 14 contain provisions on competence requirements for remote pilots who use UAS in the national open category.

Section 30 Remote pilots using UAS in the national specific category shall meet the competence requirements specified in the special decision

issued by the Swedish Transport Agency and shall have at least the skills listed in points 1 to 3.

1. Situational awareness.
2. The ability to:

a) apply operational procedures (normal, contingency and emergency procedures, flight planning, pre-flight and post-flight inspections);

b) manage aeronautical communication;

c) manage the unmanned aircraft flight path and automation;

d) manage workload.

3. Knowledge of:

a) leadership, teamwork and self-management;

b) problem solving and decision-making; and

c) coordination or handover, as applicable.

Section 31 Training to obtain the competence referred to in Section 30 shall be carried out

1. at an authorised drone school (ADS); or
2. with a UAS operator, if the UAS operator has a training programme that has been approved by the Swedish Transport Agency.

Section 32 Remote pilots flying within the national certified category must, at a training organisation, have completed and been examined in a training course approved by the Swedish Transport Agency.

Impact on the health and general fitness of the remote pilot to conduct flights

Section 33 Remote pilots may not perform assignments under the influence of psychoactive substances or alcohol, or when injury, fatigue, medication, illness or other factors prevent them from fulfilling their duties.

Rules and procedures for the airworthiness of unmanned aircraft systems (UAS) in the national open category

Section 34 In operations involving UAS that are not privately built, the UAS shall comply with the technical requirements, rules and procedures for airworthiness set out in Commission Delegated Regulation (EU) 2019/945, unless otherwise specified in these regulations.

Amendment of a special decision

Section 35 UAS operators wishing to add or amend information in special decisions shall send an application for this to the Swedish Transport Agency. The changes shall be described in the application and the updated operation manuals shall be attached.

Access

Section 36 The UAS operator shall keep all facilities, unmanned aircraft, documents, records, data, procedures, and other material relevant to the operation available to the Swedish Transport Agency to the extent deemed necessary by the Agency.

Deviations

Section 37 If activities and assignments deviate from the specified notification, a new notification shall be submitted. If the operation deviates from the submitted notification or the conditions specified in a special decision, the UAS operator must report this to the Swedish Transport Agency.

Any deviations made by virtue of other regulations shall also be reported to the Swedish Transport Agency.

Section 38 If a UAS operator deviates from the requirements in these regulations or from the conditions in an issued permit or special decision, the Swedish Transport Agency may revoke, restrict or temporarily suspend the permit or special decision.

Marking

Section 39 Unmanned aircraft shall be marked with the name of the UAS operator or the number specified in the special decision.

Chapter 5. Provisions on the operation of unmanned aircraft systems (UAS) in the national open category

General provisions

Section 1 UAS operations in the national open category are divided into the three subcategories N1, N2 and N3, based on operational limitations, demands on the remote pilot and technical requirements for the unmanned aircraft system (UAS).

Section 2 If the operation of a UAS involves an unmanned aircraft taking off from a natural elevation in the terrain or above terrain with natural elevations, the unmanned aircraft shall be kept within 120 metres of the nearest point on the earth’s surface. The measurement of the distance shall be adapted to the geographical characteristics of the terrain, for example, whether it consists of plains, hills or mountains.

Section 3 When an unmanned aircraft is flown within a horizontal distance of 50 metres from an artificial obstacle taller than 105 metres, the maximum height of the flight may be increased up to 15 metres above the

height of the obstacle, at the request of the person responsible for the obstacle.

General advice

An artificial obstacle is created by human hand and may be, for example, a building or an antenna, in contrast to a natural obstacle, which may be a mountain, a tree or the like.

Section 4 Annex 1 contains a description of the height measurement referred to in Sections 2 and 3.

Operation of unmanned aircraft systems (UAS) in subcategory N1

Section 5 The operation of unmanned aircraft referred to in Section 9(3) shall be carried out in such a way that the remote pilot does not fly the unmanned aircraft over assemblies of people and that the remote pilot can reasonably expect that the aircraft will not fly over uninvolved persons. If the aircraft unexpectedly flies over uninvolved persons, the remote pilot shall minimise, to the greatest extent possible, the time that the unmanned aircraft flies over these persons.

Section 6 When operating unmanned aircraft as referred to in Section 9(1), (2) or (4), the unmanned aircraft may be flown over uninvolved persons but never over assemblies of people.

Section 7 When the unmanned aircraft is flown in follow-me mode, it shall be flown at a distance of no more than 50 metres from the remote pilot.

Section 8 Operations in subcategory N1 shall be carried out by a remote pilot who

1. is familiar with the instructions provided by the UAS manufacturer; and
2. in the case of a class C1 unmanned aircraft as defined in Part 2 of the Annex to Commission Delegated Regulation (EU) 2019/945, hold a certificate of completion of the category A1 theory examination in accordance with Commission Implementing Regulation (EU) 2019/947.

Section 9 Operations in subcategory N1 shall be carried out with an unmanned aircraft that

1. has a maximum take-off mass (MTOM), including payload, of less than 250 g and a maximum operational speed of less than 19 m/s, in the case of privately built UAS;
2. is marked as class C0 and meets the requirements for this class, in accordance with Part 1 of the Annex to Commission Delegated Regulation (EU) 2019/945;
3. is marked as class C1 and complies with the requirements for that class, as defined in Part 2 of the Annex to Commission Delegated Regulation (EU) 2019/945, and is operated with active and, if required, updated direct remote identification and geo-awareness systems; or

4. have been placed on the market before 1 January 2024 and have a maximum take-off mass (MTOM), including payload, of less than 250 grams, in the case of non-privately built UAS.

Operation of unmanned aircraft systems (UAS) in subcategory N2

Section 10 Operations in subcategory N2 shall be conducted in such a way that the unmanned aircraft does not fly over uninvolved persons and flies at a safe horizontal distance of at least 30 metres from these persons. The remote pilot may reduce the horizontal safety distance to a minimum of five metres from uninvolved persons when operating an unmanned aircraft that has an active low speed mode with a maximum speed of 3 m/s and after an assessment of the situation in terms of

1. weather conditions;
2. performance of the unmanned aircraft; and
3. segregation of the overflown area.

Notwithstanding the provisions in the first paragraph, the minimum distance to uninvolved persons shall be at least the same as the flight altitude of the unmanned aircraft.

Section 11 UAS operations in subcategory N2 shall be carried out by a remote pilot who is familiar with the instructions provided by the UAS manufacturer and who holds a valid certificate of competence for subcategory A2 in accordance with Commission Implementing Regulation (EU) 2019/947.

Section 12 UAS operations in subcategory N2 is to be carried out with an unmanned aircraft that is marked as class C2 and complies with the requirements for that class, in accordance with Part 3 of the Annex to Commission Delegated Regulation (EU) 2019/945, and, if required, is operated with active and updated direct remote identification and geo-awareness systems.

Operation of unmanned aircraft systems (UAS) in subcategory N3

Section 13 Operations of UAS in subcategory N3 shall be carried out in an area where the remote pilot can reasonably expect that the physical safety of uninvolved persons will not be endangered during the entire time that the UAS is in operation.

Operations shall be carried out at a horizontal safety distance of at least 150 metres from residential, commercial, industrial and recreational areas.

Section 14 UAS operations in subcategory N3 shall be carried out by a remote pilot who holds a valid certificate of competence for subcategory A3 in accordance with Commission Implementing Regulation (EU) 2019/947.

Section 15 Operations in subcategory N3 shall be carried out with an unmanned aircraft that

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1. has a maximum take-off mass (MTOM), including payload, of less than 25 kg, in the case of privately built UAS;
2. is marked as class C2 and complies with the requirements for that class, as defined in Part 3 of the Annex to Commission Delegated Regulation (EU) 2019/945, and, if required, is operated with active and updated direct remote identification and geo-awareness systems;
3. is marked as class C3 and complies with the requirements for that class, as defined in Part 4 of the Annex to Commission Delegated Regulation (EU) 2019/945, and, if required, is operated with active and updated direct remote identification and geo-awareness systems;
4. is marked as class C4 and meets the requirements for this class, in accordance with Part 5 of the Annex to Commission Delegated Regulation (EU) 2019/945; or
5. have been placed on the market before 1 January 2024 and have a maximum take-off mass (MTOM), including payload, of less than 25 kg, in the case of non-privately built UAS.

Obligations of the UAS operator

Section 16 The UAS operator is obliged to establish operational procedures that are adapted to the type of operation and the risk in question.

Section 17 The UAS operator shall appoint a remote pilot for each flight. During operations in the national open category, transfers between remote pilots are not permitted. The UAS operator shall ensure that remote pilots and any other personnel performing tasks in support of operations

1. are familiar with the instructions provided by the manufacturer of the unmanned aircraft system (UAS);
2. have the appropriate competence to perform their duties within the scope of the subcategory of UAS operations to be performed in accordance with Sections 5 to 15 or, in the case of personnel other than remote pilots, have completed work training developed by the UAS operator;
3. are fully familiar with the UAS operator's procedures, and
4. receive the information on UAS geographical zones, AIP Sweden, AIP supplements (AIP SUP) and NOTAM that is relevant to the intended operation and has been made public.

Section 18 The UAS operator shall, where applicable, update the information in the geo-awareness system, taking into account the location where the operation is planned to take place.

Section 19 When operating an unmanned aircraft in one of the classes defined in Parts 1 to 5 of Commission Delegated Regulation (EU) 2019/945, the UAS operator shall ensure that

1. the UAS is accompanied by a relevant EU declaration of conformity, including a reference to the relevant class; and
2. the related class mark is affixed to the unmanned aircraft.

Section 20 When operating UAS in subcategory N2 or N3, the **UAS operator** shall ensure that all involved persons who are in the area where the operation takes place have been informed of the risks and have explicitly agreed to participate.

Obligations of remote pilots

Section 21 Before commencing the operation of an unmanned aircraft system (UAS), remote pilots shall

1. ensure that they have the appropriate competence to perform their tasks for the relevant subcategory of UAS operations to be performed in accordance with Sections 5 to 15;
2. ensure that they carry a certificate of competence when operating a UAS, except when operating an unmanned aircraft referred to in Section 9(1), (2) and (4);
3. ensure that they are informed of the information, conditions and restrictions relating to the airspace in which operation is to take place and which are set out in Chapter 2, Section 1;
4. observe the operating environment by checking for obstacles and checking whether there are any uninvolved persons present;
5. ensure that the UAS is in a condition to complete the flight safely and that the direct remote identification system is active and up to date, if such a system is used; and
6. verify, in cases where the unmanned aircraft has additional payload, that its mass does not exceed the maximum take-off mass specified by the manufacturer or the limitations applicable to its class.

Section 22 During the flight, remote pilots are obliged to:

1. keep the unmanned aircraft within sight and maintain a careful visual scan of the airspace around the unmanned aircraft, so as to avoid the risk of collision with a manned aircraft, as well as to abort the flight if it poses a risk to other aircraft, people, animals, the environment or property;
2. comply with the conditions and restrictions relating to the airspace in which operation is to take place and which are set out in Chapter 2, Section 1;
3. operate the UAS in accordance with the instructions provided by the manufacturer of the UAS, including any applicable restrictions;
4. comply with the UAS operator's procedures, if any;
5. have the ability to maintain control of the unmanned aircraft, except in the case of a lost link or when operating a free-flight unmanned aircraft;
6. ensure that a flashing green light is activated on the unmanned aircraft when operating in darkness.

> ***General advice***
> *If the unmanned aircraft is capable of displaying a green flashing light, this light should be activated in conditions of reduced visibility during daylight hours.*

Section 23 During the flight, remote pilots and UAS operators may only, upon agreement and coordination with the party responsible for the operation, fly close to or within areas where an emergency response is taking place.

Section 24 When applying Section 21(4), remote pilots may be assisted by an unmanned aircraft observer. In such cases, clear and effective communication shall be established between the remote pilot and the unmanned aircraft observer.

Chapter 6. Provisions on the operation of unmanned aircraft systems (UAS) in the national open category

General provisions

Application for a special decision

Section 1 Before commencing operations in the specific national category, the UAS operator shall apply for and obtain a special decision from the Swedish Transport Agency. Applications for a special decision shall contain the information specified in Annex 5.

Risk assessment

Section 2 When applying for a special decision for the operation of UAS in the national specific category, the UAS operator shall submit a risk assessment to the Swedish Transport Agency concerning the intended operation in accordance with Annex 2. The UAS operator shall regularly evaluate whether the mitigation measures taken are sufficient, and update them if necessary.

Special decision

Section 3 The special decision shall specify the specific conditions that apply to

1. the UAS operation and the operational limitations;
2. the necessary competence of the UAS operator and, where applicable, the remote pilots; and
3. the technical characteristics of the UAS, including certification, where applicable.

Section 4 If there are significant changes to the operation or to the mitigation measures specified in the special decision, the UAS operator shall apply for and obtain an updated decision before continuing the operation.

Obligations of the UAS operator

Competence

Section 5 For operations in the nationally specific and the nationally certified categories, the UAS operator must demonstrate that the person responsible for the operations has sufficient competence for their responsibilities.

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Description of operations

Section 6 The UAS operator shall describe the activity in a manner acceptable to the Swedish Transport Agency.

> ***General advice***
> *The ConOps operational concept can be used to describe the activity. ConOps is part of a risk-based approach and should describe the operations and provide insight into the UAS operator's safety culture. It should also describe how and when the UAS operator will interact with the air navigation services (ANSP).*

Section 7 When operating in the national specific category, UAS operators are required to

1. establish procedures and restrictions adapted to the type of operation and current risk, including:

a) operational procedures to ensure operational safety;

b) procedures to ensure that the intended operation complies with the aviation security requirements applicable to the area where the operation is to take place;

c) measures to protect the unmanned aircraft system (UAS) against unlawful acts and unauthorised access; and

d) guidelines for their remote pilots to plan the UAS operation to minimise nuisances, including noise and other emissions-related nuisances, for people and animals; and

2. appoint a remote pilot for each flight or, in the case of autonomous operations, ensure that responsibilities and tasks, in particular those specified in Sections 12 and 13, are appropriately allocated during all phases of the operation in accordance with the procedures established in accordance with Section 3.

Section 8 The UAS operator is also obliged to

1. ensure that each flight is carried out within the limitations, conditions and mitigation measures specified in the special decision;

2. keep and maintain an up-to-date register of

a) all relevant qualifications and training undertaken by the remote pilot, other personnel responsible for tasks essential to the operation of the UAS and maintenance personnel, and retain the records for at least three years after those persons have left their employment or changed position within the organisation;

b) the maintenance carried out on the UAS and store the data for at least three years; and

c) information on the operation of UAS, including all unusual technical or operational events and other data as required by the special decision, and store the data for at least three years;

3. use UAS that are designed so that possible faults do not cause them to fly outside the intended airspace or risk causing a fatal accident;

4. use human-machine interfaces that minimise the risk of pilot errors and which do not cause unreasonable fatigue;

5. keep the UAS in a condition that ensures safe operation by

a) establishing maintenance instructions and employ suitably trained and qualified maintenance personnel;

b) complying with Section 10, if required; and

c) using unmanned aircraft designed to minimise noise and other emissions, taking into account the type of intended operation and geographical areas where noise and other emissions from aircraft are significant;

6. establish and maintain an up-to-date list of designated remote pilots for each flight;

7. establish and maintain an up-to-date list of maintenance personnel employed by the UAS operator to perform maintenance or, if the UAS operator uses subcontractors, demonstrate that the applicable requirements for maintenance personnel are met; and

8. ensure that each unmanned aircraft is equipped with at least one flashing green light so that the unmanned aircraft is visible in the dark, and, if required, an active and up-to-date remote identification system.

General advice

If the unmanned aircraft is capable of displaying a green flashing light, this light should be activated in conditions of reduced visibility during daylight hours.

Section 9 Before a flight is carried out, the UAS operator is to ensure that the remote pilot:

1. has the competence to carry out its tasks in line with the applicable training in the special decision;

2. has completed competency-based training for remote pilots as laid down in the special decision and which includes the skills set out in Chapter 4, Section 30;

3. has been informed about the UAS operator's operations manual and established procedures, and

4. has taken note of the restrictions for the area where the operation is to take place, through information and conditions from the UAS geographical zones, AIP Sweden, AIP supplement (AIP SUP) and NOTAM that are relevant to the intended operation of UAS and that have been published.

Section 10 The UAS operator shall ensure that persons responsible for tasks essential to the operation of the UAS, other than the remote pilot himself, have

1. completed training developed or approved by the UAS operator;

2. been informed about established procedures and the UAS operator's operations manual; and

3. received updated information relevant to the intended operation concerning geographical zones, AIP Sweden, AIP Supplement (AIP SUP)

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and NOTAM that is relevant to the intended operation of UAS and that has been published.

Obligations of the remote pilot

Section 11 The remote pilot is obliged to

1. have relevant competence for remote pilots in accordance with the special decision;
2. ensure that proof of a valid competency is available when using a UAS; and
3. be familiar with the instructions provided by the manufacturer of the unmanned aircraft system (UAS).

Section 12 Before commencing the operation of a UAS, the remote pilot shall ensure that

1. they are informed of the information, conditions and restrictions relating to the airspace in which operation is to take place and which are set out in Chapter 2, Section 1;
2. the operating environment is in compliance with the restrictions and conditions set out in the special decision;
3. the UAS is in a condition to complete the flight safely and, if a direct remote identification system is used, verify that the system is active and up to date; and
4. information on the operation has been made available to the air traffic services unit concerned, other airspace users and relevant stakeholders, as required by the special decision and in accordance with the conditions for geographical areas that have been published.

Section 13 During the flight, the remote pilot is obliged to

1. comply with the restrictions and conditions set out in the special decision;
2. avoid any risk of collision with other aircraft and discontinue a flight if its continuation could pose a risk to aircraft, people, animals, the environment or property;
3. comply with the conditions and restrictions relating to the airspace in which operation is to take place and which are set out in Chapter 2, Section 1;
4. comply the UAS operator’s procedures; and
5. not fly near or within areas where an emergency response is in progress, unless this has been agreed upon and coordinated with the person responsible for the response.

Use of certified equipment and certified unmanned aircraft

Section 14 If, for the operation of UAS, an unmanned aircraft for which a certificate of airworthiness or a restricted certificate of airworthiness has

been issued, or if certified equipment is used, the requirements in Chapter 7, Section 4 shall be complied with.

Chapter 7. Provisions on the operation of unmanned aircraft systems (UAS) in the national certified category

General provisions

Section 1 Before commencing operations, the UAS operator shall have

1. applied for a special decision for the activities from the Swedish Transport Agency;
2. described to the Swedish Transport Agency how the UAS operator intends to fulfil the conditions issued by the Swedish Transport Agency; and
3. received a special decision from the Swedish Transport Agency that the activity may commence.

The application referred to in the first paragraph, point 1, shall include an acceptable description of the operation, together with an assessment of operational risk regarding the intended operation, including mitigation measures to reduce the assessed operational risk.

> ***General advice***
> *The ConOps operational concept can be used to describe the activity. ConOps is part of a risk-based approach and should describe the operations and provide insight into the UAS operator's safety culture. It should also describe how and when the UAS operator will interact with the air navigation services (ANSP).*

Application for a special decision

Section 2 Applications for a special decision shall contain the information specified in Annex 6.

Special decision

Section 3 The special decision shall specify the specific conditions that apply to

1. the UAS operation and the operational limitations;
2. the technical characteristics of the UAS to be used; and
3. the necessary competence of the UAS operator and the remote pilots.

Certification of unmanned aircraft systems (UAS)

Section 4 When operating in the national certified category, the UAS must be certified in accordance with the requirements of Commission Delegated Regulation (EU) 2019/945, or in a different manner approved by the Swedish Transport Agency.

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The UAS operator's obligations in continued operation

Section 5 The UAS operator shall regularly evaluate whether the mitigation measures taken to reduce the operational risk are sufficient, and update them if necessary.

If there are significant changes to the operation or to the mitigation measures taken, the UAS operator shall apply for, and have obtained, an updated special decision before continuing the operation.

Remote pilot competence

Section 6 Remote pilots using UAS in the national certified category shall at least meet the competence requirements specified in the conditions of the special decision. The purpose of the operation and the characteristics of the aircraft determine the competence requirements for the pilot, which shall correspond to the requirements for operations with a manned aircraft.

Chapter 8. Exemptions

Section 1 The Swedish Transport Agency may grant exemptions from these regulations.

Entry into force and transitional provisions

1. These regulations shall enter into force on xx xxxx 2026.
2. This statute repeals the Swedish Transport Agency's regulations (TSFS 2017:110) on unmanned aircraft.
3. However, before the entry into force, the repealed regulations shall apply to applications received.
4. This statute also repeals the Swedish Transport Agency's regulations (TSFS 2020:55) on age requirements for unmanned aircraft system operators and level of competence for remote pilots.
5. Decisions on special conditions issued by the Swedish Transport Agency pursuant to the Aviation Ordinance (2010:770) and the Swedish Transport Agency's regulations (TSFS 2017:110) shall continue to apply until the end date specified in the decision, however, no longer than two years after the entry into force of this statute. In the event of a change of such decisions on special conditions within the period of validity of the decision, the repealed regulations shall apply.

On behalf of the Swedish Transport Agency

JONAS BJELFVENSTAM

Karl-Axel Edén
(Civil Aviation and Maritime Department)

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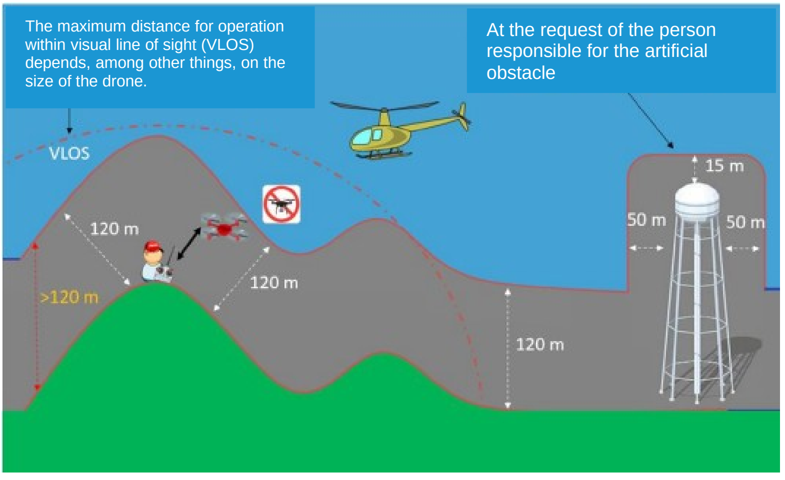
Annex 1. Altimetry

MAXIMUM HEIGHT

The remote pilot must ensure that the distance between the unmanned aircraft and the nearest point of the surface of the earth is within 120 metres. The image below illustrates how the maximum height changes depending on the topography of the underlying terrain. When operating in a geographical zone with a lower specified maximum altitude, the remote pilot shall ensure that the unmanned aircraft system (UAS) complies with the requirements applicable in that zone.

The person responsible for an artificial obstacle as described in Chapter 5, Section 3, must have expressly requested, and thereby permitted, that the UAS operator conduct operations in the vicinity of the obstacle. Chapter 5, Section 3 states that unmanned aircraft may fly up to 15 metres above an obstacle that is so high that the actual height above the underlying terrain exceeds 120 metres.



Annex 2. Operational risk assessment

The UAS operator's operational risk assessment shall be described in the organisation's operations manuals. The assessment of operational risk shall result in a safety level equivalent to the safety level of manned aviation and take into account specific characteristics of the operation of the unmanned aircraft system (UAS).

The assessment shall contain:

1. a description of the specific conditions and operational risks of the intended activity; and
2. proposals for operational safety targets based on risks on the ground and in the air, designed with regard to

a) the extent to which third parties or property on the ground could be endangered by the activity;

b) the complexity, performance and operational characteristics of the UAS concerned;

c) the purpose of the flight, the type of unmanned aircraft, the risk of collision with other aircraft and the class of airspace used;

d) the type, scale, and complexity of the UAS operation or activity, including, where relevant, the size and type of traffic handled by the responsible organisation or person; and

e) the extent to which persons affected by the risks involved in the activity are able to assess and control those risks.

The UAS operator's identification of risks shall highlight the following:

1. the risk of the activity on the ground before mitigation measures, taking into account the type of operation and the operating conditions; The identification of risks shall include at least the following:

a) operation in or beyond the visual line of sight (VLOS);

b) population density of the overflown areas;

c) whether assemblies of people are flown over; and

d) the dimension and mass characteristics of the unmanned aircraft.

2. The risk of the activity in the air before mitigation measures, taking into account:

a) the exact airspace volume where the operation will take place, extended by a volume of airspace necessary for contingency procedures;

b) the class of the airspace; and

c) the impact on other air traffic and air traffic services, in particular with regard to flight altitude, controlled versus uncontrolled airspace, aerodrome versus non-aerodrome environment, airspace above urban and rural environment, and separation from other traffic.

The UAS operator's description of the risk mitigation measures developed shall include considerations of the elements set out in points 1 to 9 in order to achieve the desired level of safety.

1. Containment measures for people on the ground.
2. Appropriate (strategic) operational limitations to the UAS operation, with regard to the activity, in particular restricting

a) the geographical volumes where the operation takes place;

b) the duration or schedule of the time slot in which the operation takes place.

3. Strategic mitigation by common flight rules or common airspace structure and services.
4. Capability to cope with adverse operating conditions.
5. Organisation factors such as operational and maintenance procedures elaborated by the UAS operator and maintenance procedures compliant with the manufacturer's user manual.
6. The level of competency and expertise of the personnel involved in the safety of the flight.
7. The risk of human error in the application of the operational procedures.
8. The design features and performance of the UAS in particular:

a) the availability of means to mitigate risks of collision;

b) the availability of systems limiting the energy at impact or the frangibility of the unmanned aircraft;

c) the design of the UAS to recognised standards and the fail-safe design.

9. A determination of the robustness level of the risk-mitigation measures. The level shall ensure that they are commensurate with the safety objectives and risks of the intended operation, particularly to make sure that every stage of the operation is safe.

The UAS operator's description of the activity shall also contain the information specified in points 1 to 5.

1. Type of activities.
2. The operational environment and geographical area, with regard to:

a) overflown population;

b) nature of the terrain;

c) airspace type and volume, including risk buffers; and

d) operational requirements in geographical zones.

3. How the UAS operator plans to carry out the operation based on its complexity, in particular

a) type of planning and execution;

b) personnel competencies and experience;

c) composition of the operation; and

d) required technical means that the UAS operator plans to use to conduct the operation.

4. The technical features of the UAS, including its performance in view of the conditions of the planned operation and, where applicable, its registration number.

5. The competence of the personnel for conducting the operation including their

e) composition;
f) roles;
g) responsibilities;
h) training; and
i) recent experience.

Annex 3. Instructions for applying for an authorisation for a model aircraft club or association

When applying for an authorisation for a model flying club or model flying association, the applicant must send the information listed in points 1 to 5 to the Swedish Transport Agency.

1. Name, business registration number and operator ID (if applicable), full address, telephone number and email address. Name of the person responsible for the activity and contact person.
2. The organisation's operating rules, which shall contain:
   a) information on flight safety rules; and
   b) how the risk of damage to third parties in the air and on the ground has been addressed.
3. Description of
   a) requirement that members must be insured;
   b) the type of operation carried out; and
   c) sites where operations are to take place, with information on the type of land overflown, type of airspace and altitude, as well as the type of infrastructure and buildings closest to the area and the distance to them.
4. Risk analysis with mitigation measures.
5. Any agreement with local air traffic service, for example when the area where operations are to take place is located in a control zone.

Annex 4. Instructions for notification of national open category activities

A notification of operations in the national open category shall be made by the UAS operator and shall contain the following information.

1. Information regarding the UAS operator:
- name
- business registration number and operator ID, if applicable
- full address
- telephone number
- e-mail address
- name of on the person responsible for the activity
- name of the contact person for the activity.

2. An assurance that the operation complies with the operational requirements of the national open category.

3. A commitment by the UAS operator to take the relevant mitigation measures required for the safety of the flight. The measures shall include that the UAS operator ensures that:
- there are instructions for the flight;
- the design of the UAS is suitable for the intended operation;
- participating employees have sufficient competence.

4. A confirmation from the UAS operator that each flight made in the context of the notification is covered by sufficient insurance cover, if required by Union or national law.

Annex 5. Instructions for applying for a special decision for activities in the national specific category

An application for a special decision for activities in the national specific category shall be based on the risk assessment described in Annex 2 and can be made via a form on the Swedish Transport Agency's website. This application shall contain at least the following:

1. The name of the UAS operator, business registration number and, where applicable, operator ID.
2. The name of the person responsible for the activity.
3. Assessment of the operational risk.
4. List of the mitigation measures proposed by the UAS operator, with sufficient information to enable the Swedish Transport Agency to assess whether the mitigation measures are sufficient.
5. Operations manual including a description of the work to promote a good safety culture.
6. Copy of insurance certificate if required by Union or national law.
7. The UAS operator's description of how the relevant competence has been obtained.

General advice
AMC1 UAS.SPEC.030(3)(e) 'Application for an operational authorisation' contains a description of how an operations manual can be drawn up.

Enter the text in specified style in *Annex 6* document.

Annex 6. Instructions for applying for a special decision for activities in the national certified category

An application for a special decision for activities in the national certified category shall be based on the risk assessment described in Annex 2 and be made via a form on the Swedish Transport Agency's website. This application shall contain at least the following:

1. The name of the UAS operator, business registration number and, where applicable, operator ID.
2. The name of the person responsible for the activity.
3. Description of operations.
4. Description of operational risk.
5. Operations manual including a description of the work to promote a good safety culture.
6. Copy of insurance certificate if required by Union or national law.