



AIRSPACE

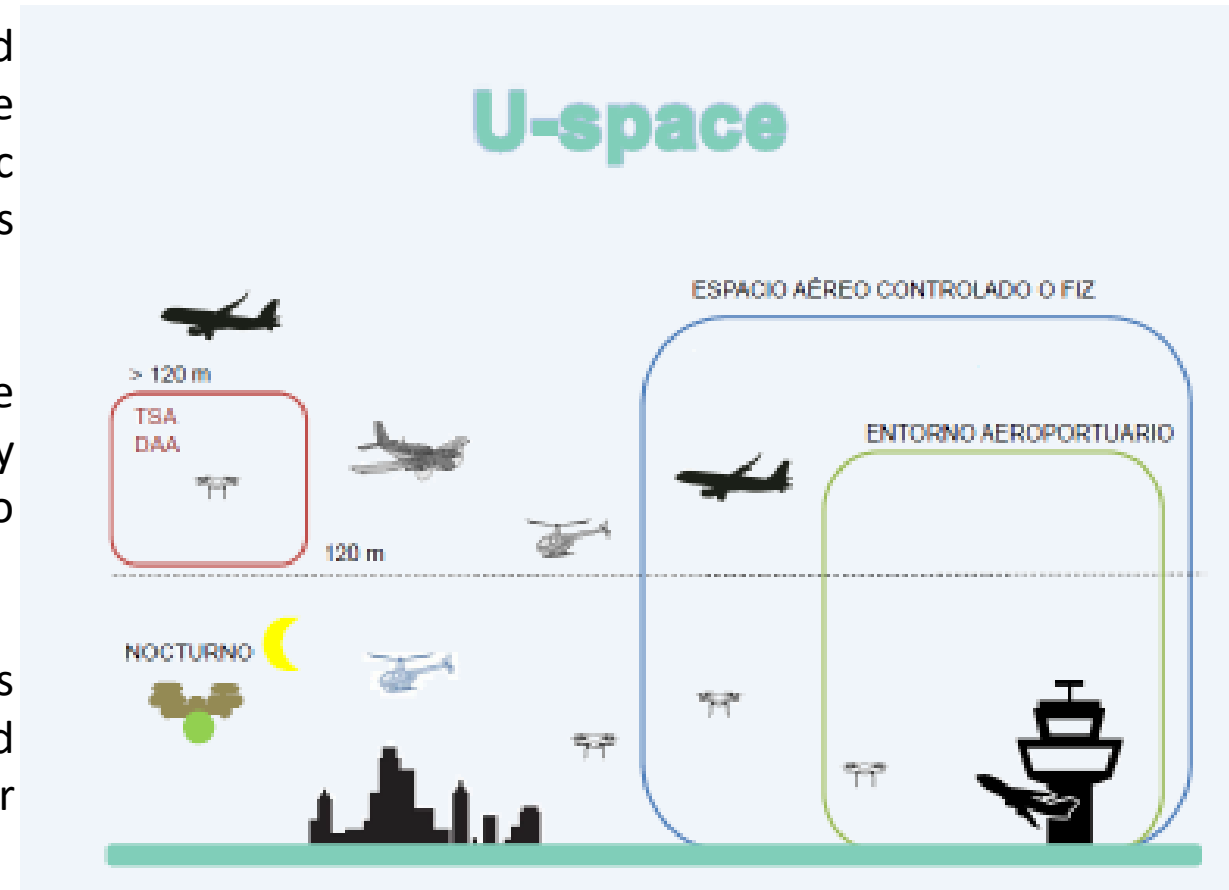
DRONE PILOT COURSE

AIRSPACE

Unmanned aircraft, regardless of their MTOM, can be used within the same airspace as manned aircraft, the Single European Sky ('SES'). Taking into account the specific characteristics of UAS operations, they must be as safe as those of manned aircraft.

The "Uspace" system is being developed, comprising the infrastructure, services and procedures to ensure the safety of UAS operations and support their integration into airspace.

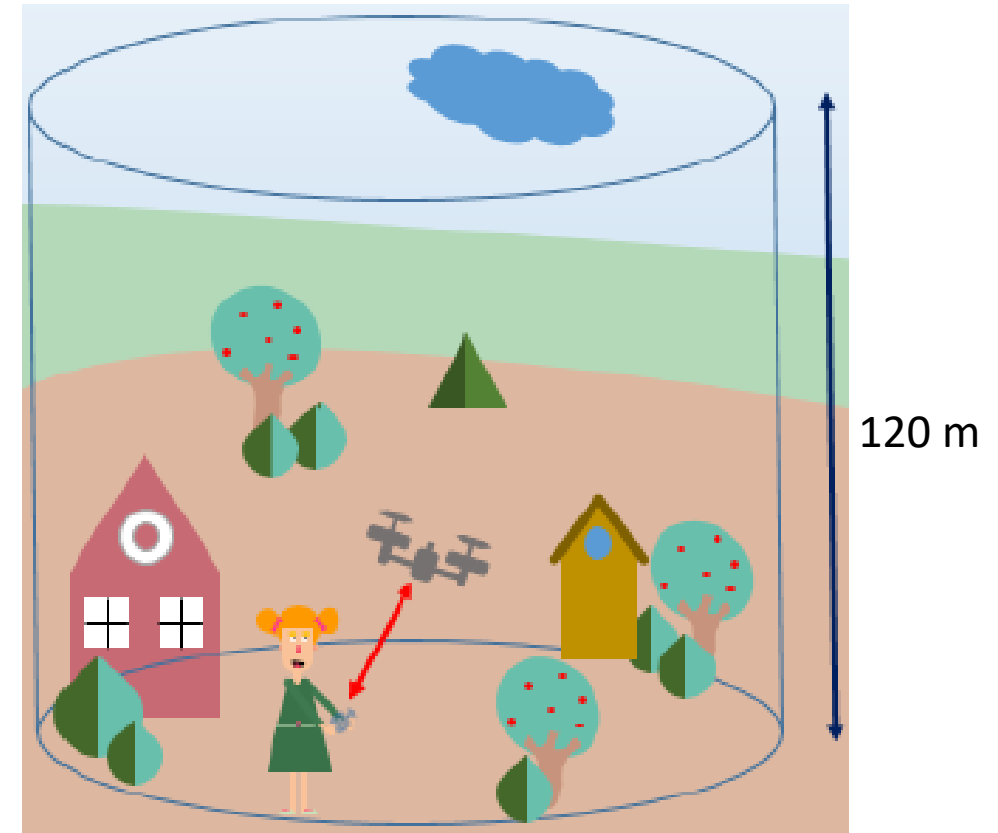
In order to know the airspace restrictions in UAS operations in the A1 and A3 subcategories, it is necessary to obtain and observe updated information on the flight restrictions or conditions published by the Member States.



AIRSPACE

In the open category, a UAS can be flown at a maximum height above the surface of 120 m (400 ft) of the terrain, following the changes in its topography (as shown in the attached image).

The aircraft will not move more than 120 meters from the closest point on the surface, except when flying over an obstacle. When a Member State defines a geographical area with a lower maximum height, the pilot must ensure that the aircraft always complies with the requirements of the geographical area in question.



AIRSPACE - DEFINITIONS

GEO-AWARENESS

A function that, based on data provided by aviation authorities, detects a potential violation of airspace limitations and alerts remote pilots so they can take immediate and effective action to prevent such violation.

UAS GEOGRAPHIC AREA

part of the airspace established by the competent authority that facilitates, restricts or excludes UAS operations.

FL (FLIGHT LEVEL)

Altitude of an aircraft at standard atmospheric pressure, expressed in hundreds of feet (ft). Flight levels are used to ensure safe vertical separation between aircraft.

IFR (Instrumental Flight Rules)

Set of rules and procedures contemplated in the Air Traffic Regulations that regulate the flight of aircraft based on the use of instruments for navigation, which implies that it is not necessary to have contact view with the terrain.

VFR (Visual Flight Rules)

Visual flight rules: Set of rules contained in Regulation (EU) No. 923/2012 of SERA, which establish sufficient conditions for the pilot to be able to direct his aircraft, navigate and maintain safety separation with any obstacle with the sole aid of visual observation.

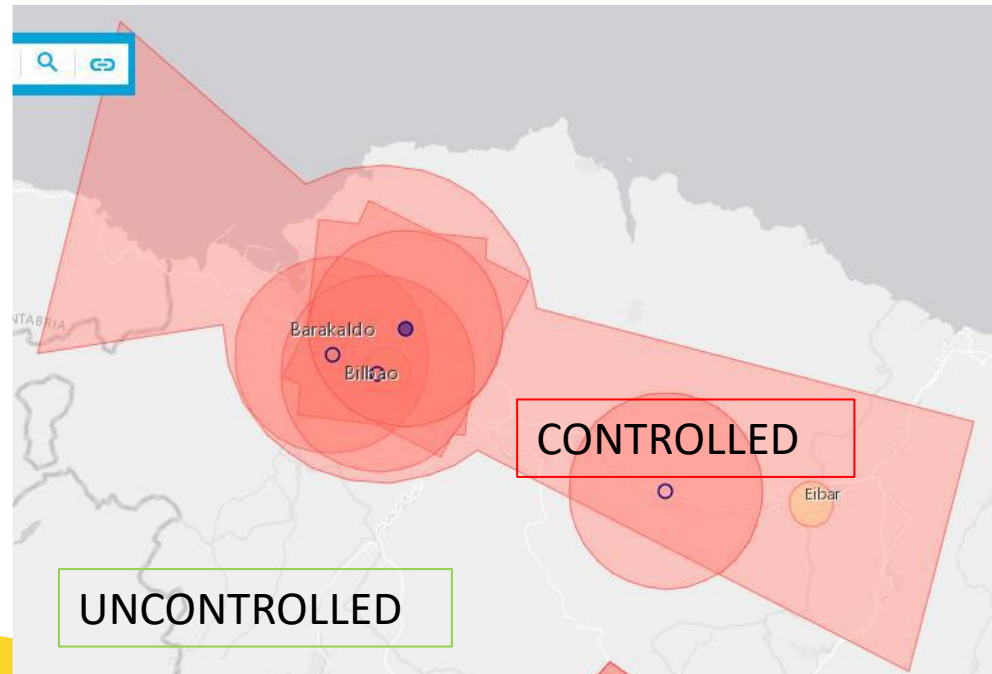
AIRSPACE - TYPE

CONTROLLED

Airspace of defined dimensions within which the air traffic control service ("ATC") is provided to IFR and VFR flights, in accordance with the classification of the airspace.

UNCONTROLLED

Airspace in which air traffic control ("ATC") service is not provided to flights operating in this airspace.



AIRSPACE - STRUCTURE

Space defined in 3 dimensions (volume) created for the purpose of facilitating the provision of air traffic services ("ATS"). It is organized in:

CONTROL ZONES (CTR)

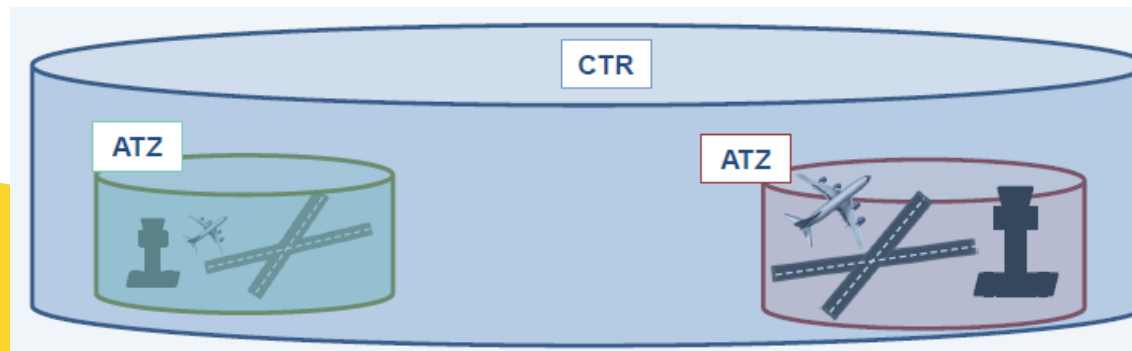
Volume of airspace that extends from the ground to a certain height. Its purpose is to protect and control all movement of aircraft from one or more aerodromes, especially the entrances and exits of IFR flights.

AERODROME TRANSIT ZONES (ATZ)

Volume of airspace around an aerodrome for the protection and control of its traffic, especially that which carries out VFR flights. If the aerodrome accepts IFR operations, there will be a CTR that will encompass the ATZ.

FLIGHT INFORMATION ZONES (FIZ)

Uncontrolled airspace that extends upward from the earth's surface to a specified upper limit.



AIRSPACE - RESTRICTIONS

When the air authority of the Member State considers that a specific part of the airspace presents certain special conditions, it may permanently or temporarily establish restrictions and reservations to the airspace, limiting and even prohibiting the flight of certain aircraft. These zones are classified as:

DANGEROUS (D)

It is that volume in which it is likely that, at some point, some type of activity will take place that could endanger air circulation. In these zones, the pilot has the obligation to inform himself about the activities that have led the authority to declare that area as dangerous, and when they will take place.

RESTRICTED (R)

Is that volume in which only aircraft that meet the access requirements indicated by the competent authority may circulate. State aircraft are excepted.

PROHIBITED (P)

It is that volume in which only aircraft authorized by the Spanish State can circulate.

AIRSPACE - RESTRICTIONS

There are also so-called:

TEMPORARILY SEGREGATED AIRSPACE (TSA)

It is the volume of airspace temporarily delimited for the exclusive use of a specific activity authorized by the competent authority.

TEMPORARILY RESERVED AIRSPACE (TRA)

It is the volume of airspace assigned for the specific use of an assigned user during a given period, and through which ATC could allow other traffic.

AREAS RESTRICTED TO PHOTOGRAPHIC FLIGHT (ZRFV)

Those areas that require prior authorization to carry out photography, filming or any taking of aerial images because they contain or are close to classified objects or restricted access areas.

SENSITIVE FAUNA ZONES (F)

It is that volume of airspace where, for environmental and species protection reasons, the flight of UAS can be restricted or even prohibited.

AIRSPACE – UAS GEOGRAPHIC AREAS

The so-called UAS geographical areas help control risks of:

- Public security
- Personal data protection
- Privacy
- Environment

The Member States may:

- Prohibit some or all operations
- Require particular conditions or authorization
- Allow access only to certain classes of UAS
- Submit operations to specific environmental standards
- Allow access to UAS equipped with certain elements
- Require UAS to be equipped with certain functionalities (remote identification, geo-awareness, etc.).

In addition, based on a risk assessment, exceptions to one or more of the requirements to operate in the "open" category may be created.



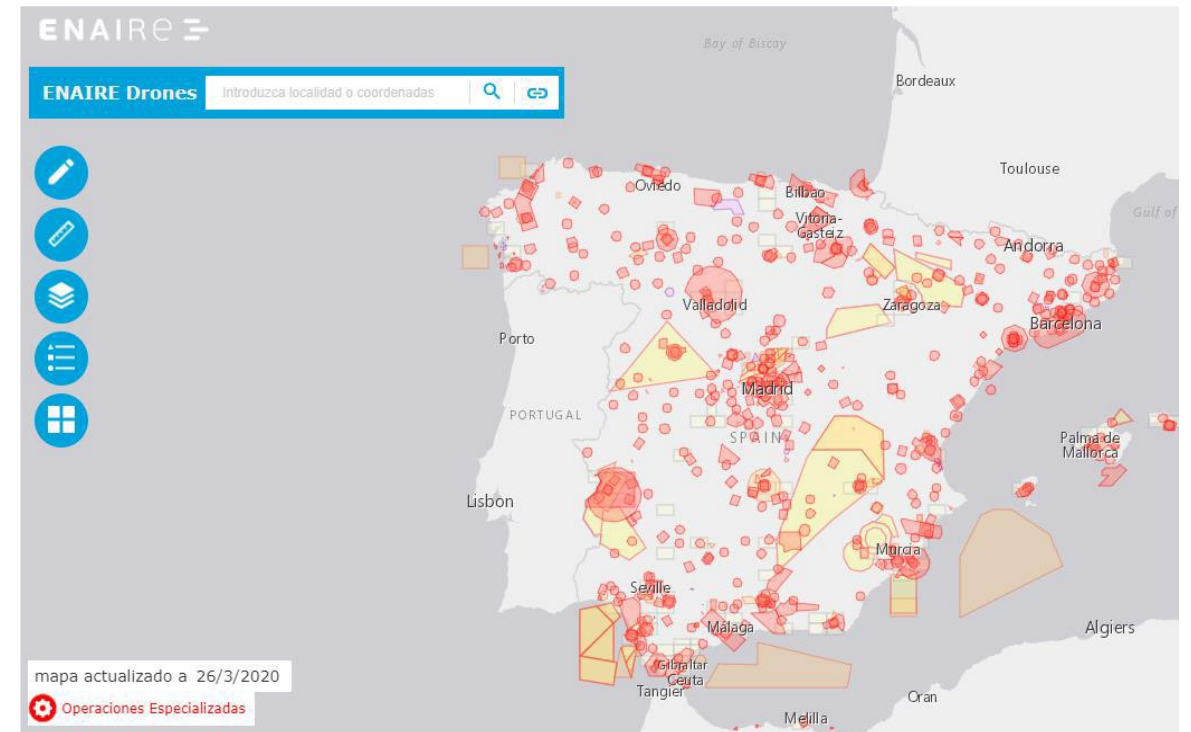
AIRSPACE – UAS GEOGRAPHIC AREAS

The information on these zones and their validity period will be public and available in digital format, in order to establish the geo-awareness function.



This information will be available in the Enaire drones cartographic viewer:

<https://drones.enaire.es/>





Thanks for your attention

DRONE PILOT COURSE