Legal Regulation for the use of drones (UAV-RPAS) in Italy
Comparison to regulations in other alpine countries
Use of drones in conservation areas

Italian law for the use of drones and flying models

"Regolamento ENAC per mezzi aerei e pilotaggio remoto)

An evident difference is in the modality of use

The regulation for flying for leisure purposes is not very complex nor restrictive, while the situation is very different for Professional application. The focus is put on the modality of use, not the typology of machine

Professional application (Data collection)

Collected material (pictures / videos / survey data) will Be used for professional purposes.
In this case the model is legally seen as an aircraft like the ones Able to carry people

Leisure time use (Hobby/ Entertainment/ Sports)

Use is limited to private circumstances.
The object is defined as flying model

An overview of the legal provisions for professional use

Up to 300 gramms weight at departure

Includes multirotor systems with a weight of max. 300g and surface models made from foamed materials
With a max. weight of 2 Kg

Due to the low weight they are **not** considered dangerous

- Appropriate documentation of the model is required
- (handbook as well as "logging" of the individual flights)
- Registration of the flying model through the Italian Flight Agency ENAC
- Minimum age of 18
- Training and licence of the pilot are not required
- All application areas are valuated as "not critical"
- It is allowed to fly above inhabited areas and delicate structures
- Is is prohibited to overfly gatherings of people
- Specific assurances regarding the machine and the use are obligatory

An overview of the legal provisions for professional use

Above 300g until 25 Kg

Not critical zone (zona non critica

Minimum distance to inhabited areas of 150m
Minimum distance to persons of 50 m
Prohibited to overfly delicate structures and gatherings

- Appropriate documentation of the model is required
- (handbook as well as "logging" of the individual flights)
- Registration of the flying model through the Italian Flight
- Agency ENAC for not critical areas
- Minimum age of 18
- Training and licence of the pilot are required ("attestato")
- The aircraft must always be in sight
- Maximum height of flight is 150m
- Maximum distance to the pilot is 500m
- Specific assurances regarding the machine and
- the use are obligatory

Critical zone (zona critica)

It is allowed to overfly inhabited areas and delicate structures
Overflying gatherings is prohibited

- Appropriate documentation of the model is required
- (handbook as well as "logging" of the individual flights)
- Registration of the flying model through the Italian Flight
- Agency ENAC for critical zones
- Minimum age of 18
- Training and licence of the pilot are required for
- critical zones
- The aircraft must stay in sight
- Maximum flight height of 150 m
- Maximum distance to the pilot is 500 m
- Specific assurances regarding the machine are obligatory
- If the departing weight is above 2 Kg an autonomous
- Mechanism for flight breakdown is required
- No redundant systems are required

An overview of the legal provisions for professional use

Above 25 Kg up to 150 Kg

The regulations and obligations are stricter and at the moment even similar to the ones for Manned aviation

- A valid certification of the model has to be handed in at ENAC
- A commercial flying license is mandatory ("licenza")
- Every mission has to be authorised by ENAC
- An areonautic insurance is mandatory
- Minimum age of 18 years

For drones with departing weight above 150 Kg the responsibility goes from the Italian flight agency ENAC to the European EASA

An overview of the legal provisions for leisure time use

For avocational use the maximum departure weight is 25 Kg for all types of Models: surface model, helicopter and multirotor systems

- No registration of the model is required in present
- No obligatory formation of the pilots
- Without pilot licence the maximum flying hight is 70 m
- With an appropriate pilot licence for model crafts it is increased to 150 m
- Flying near Persons without safety barriers is not allowed
- Overflying of people is not allowed
- Use of the models is restricted to non inhabited areas and designated model airports
- Overflying of delicate areas is not allowed (e.g. highways, railways, military areas…)
- Flying close to airports is forbidden
- The user is obligated to have a valid and appropriate liability insurance

If producers do not provide a minimum age of use (min 14 years) for a model, the legal restrictions above do not apply and it can be used freely.

The Austrian Law for the use of drones and flying models

- Unlike the Italian legislation, there is no legal difference between leisure time and professional use of drones in Austria
- The differenciation lies in the final aim of the application: model flying or data collection from the air (eg. pictures or videos). If these are obtained during private use or professional is not of importance.
- In addition, there is a differentiation regarding the eye contact with the drone during the flight – constantly given (VLOS) or not (BVLOS)
- **According to weight and place of action the flight can be classified in 4 different ways (A/B/C/D - see next page)**
- The weight classes are:
  - up to 5 Kg
  - from 5 Kg to 25 Kg
  - from 25 Kg to 150 Kg
- Drones with a maximum weight of 250g are not afflicted by aviation laws up to 30m flight height
- Provisions allow a maximum flight height of 150m and a max. distance from the pilot of 500m with guaranteed vision contact.
- The use of drones is restricted to a min. age of 16
- An appropriated liability insurance with a coverage of 750.000,00 Euro is required.

Category A

Requirements for drones with systems of max 25 Kg
Departure weight for flights above not inhabited areas:

- Filled application form
- Description of the non-manned aircraft
- Description of operational limits
- Certification of insurance
- Official photo identification of the pilot

	Einsatzgebiet			
	I unbebaut	II unbesiedelt	III besiedelt	IV dicht besiedelt
Betriebsmasse bis einschließlich 5 kg	A	A	B	C
Betriebsmasse bis einschließlich 25 kg	A	B	C	D
Betriebsmasse über 25 kg und bis einschließlich 150 kg	B	C	D	D

Categories B – C – D

- In these cases a technical inspection of the drone by the authorities is possible
- Pilot licence and certified physical capability are required
- Systems must be present in redundant form (more than 4 motors in multirotor machines, two flight controller etc.
- Detailed analysis of the security of application and report of operational limits must be provided
- Report of noise measurement is required (not the case for electric machines up to 5 Kg)

German Law for the use of drones and flying models

- In 2017 a new regulation for drones entered in to force which does makes no significant distinction between the professional and private/leisure time use of drones and flying models
- It is different to other countries as the responsibility goes to the federal lands and not to the state itself
- Up to 250g of departure weight there is no obligation for indication, independently of leisure or professional use of drones
- With a minimum of 2 Kg departing weight a certificate of the pilot is required
- The legal minimum age is 14
- For the use of drones with a weight of less than 5 Kg there is no required permission for departure
- This is though the case for drones with a weight of more than 5 Kg and for night flights. The responsible federal flight agency can give these permissions.
- The use of drones by public authorities and organisations with security tasks (Firefighters, action force etc.) is in general is not requiring any permissions

An operating ban for drones and flying models in Germany is in force:

- *Outside range of vision for models below 5 Kg*
- *In and above delicate areas (e.g.. Operations sites of police or action force, gatherings, industrial plants, main buildings of public authorities)*
- ***Above conservation areas***
- *Above certain transport routes*
- *In control zones of airports as well as departure and landing areas*
- *In flight heights above 100 m*
- *Above inhabited properties if the weight is >250 g and/or the model is able to capture, transmit and record acoustic, visive and radio signals.*
  Exception: The legal owner of the property in question gives his explicit consent for the overflight
- *Above 25 Kg*

Exceptions for the bans listed above can be authorized by the federal flight agency with a one-time permission for departure.

Swiss Law for the use of drones and flying models

Switzerland is currently the alpine country with the easiest regulations for the use of drones and flying models:

- As long as the pilot maintains visual contact with his drone he is allowed to fly any machine up to 30 Lg of departure weight
- Above gatherings and 100m around them the use of Drones and flying models is generally not allowed
- In control zones the max. flying height is 150m
- In **hunting areas and conservation areas for water and migratory birds the use of drones** is **prohibited** without exceptions.
- Recording of footage from the air is allowed as long as security provisions for military areas are respected. In addition privacy regulations according to data protection laws must be considered
- For the flight of drones with a departure weight of more than 500 g a liability insurance with coverage of 1M Swiss Franks (about 850.000,00 €) is required.
- Close to airports the use of drones and flying models is restricted. For example, it is not allowed to fly in a radius of 5 Km around the landing/departure slopes
- Cantons and municipalities are allowed to add local regulations for the use of drones and flying models.

In case one or more of the restrictions above can not be respected the Federal Office of Civil Aviation (FOCA) must give a special permission.

Progress of legal decisions regulating the use of drones in the EU

In December 2015 the European commission presented a proposal for collective safety regulations regarding civil aviation. The European council and parliament approved the proposed document.
On 22 **December** 2017, EU ambassadors endorsed the agreement reached previously on the "EASA regulation" which aims also to set a new mandate for the **European Aviation Safety Agency**.
The approval procedure is expected to be completed in spring 2018.
Under the new rules, higher-risk drone operations will require certification.

The objective is to ensure that the regulatory framework for aviation in the EU is ready for the challenges expected beyond 2020.

Why do we need it?

- Although some drones are **as heavy and as fast as a plane**, they can also take the shape of **very small electric 'toys'** that are widely available to consumers.

- It is the smaller drones that create regulatory problems for the **EU, whose competencies are limited to unmanned aircraft above 150 kilograms.**

- Lighter drones are subject to **different and fragmented national safety rules** across the EU. Furthermore, key safeguards are not applied in a coherent way.

- A reform of the current rules is also necessary **as EU air traffic is estimated to increase by 50% in the next 20 years**.

- The European Commission predicts that by 2035 the European drone sector will:
  - directly **employ more than 100,000 people**
  - have an **economic impact exceeding €10 billion per year**, mainly in services

- As the use of drones spreads, the need to balance the advantages and challenges they bring will also increase. For instance, unmanned aircraft can add value when used in gathering and interpreting data in different sectors of the economy. But drones can also pose liabilities in terms of data protection, privacy, noise and CO2 emissions.

- The new rules will provide the basic principles for ensuring **safety, security and privacy and the protection of personal data**. They also aim to **reduce red tape and encourage innovation**.

- There will also be rules on different aspects related to the use of drones, such as:

    - the **noise and emissions** generated by drones
    - **registration of drone operators** depending on the kinetic capacity of the unmanned aircraft under their control

- The new EU-wide measures are expected to bring legal certainty for an industry that includes a large number of small and medium-size enterprises and start-ups. In this sense, the regulation will also eliminate rules which could stifle entrepreneurship.

- It will also will introduce a **risk and performance based approach** to safety. In doing so, it will recognise the different risks involved in the various sectors of civil aviation. For instance, helicopters or light sport aircraft will be subject to simpler and cheaper approval procedures than commercial aircraft.

Use of drones: EASA recommendations

What to do:

- Keep your drone in sight at all times
- Plan your flight and choose an unobstructed site
- Get permission if you want to use your drone for paid work
- Read the manufacturer's instructions carefully

What **not** to do:

- Do not fly in a way that endangers anyone
- Do not fly overhead or within 50 metres of people, property or vehicles
- Do not fly higher than 150 metres from the ground
- Keep away from airports and helipads

Source: http://www.consilium.europa.eu/en/policies/drones/

Use of drones in conservation areas

The Italian law for environmental protection „legge quadro sulle aree protette Nr. 394 from 6 Dezember 1991“ is currently being reviewed. The country has got 25 national parks and numerous regional one, 7 of which in South Tyrol.

Art. 11 includes a ban for non authorized aircrafts („velivoli“) to overfly national parks. The new draft would see this ban explicitly applied also to drones.
Further revision has still to be done

Art. 22 the regulation of protectional measures for regional parks should be included in regional legislation and follow the principles of Art. 11. According to the constitution this is to be done by the regions and the autonomous provinces Bolzano and Trento.

In present, in South Tyrol there are no clear proper rules for the use of drones in conservation areas but provisions for motorised aviation.
Also in other regions the legal documents have mostly been created before the emerging of drones.
However, in most conservation areas a flying ban below 500M is in force which seems not to be applicable for drones as in Italy these are not allowed to fly above 150M without special permit.

In South Tyrol motorized aviation is regulated with following provisions:

- State law from 25.07.1970 N. 16 – Law for environmental protection (definition of protected areas)
- State law from 27.10.1997 N. 151 – Regulation of motorized aviation for environmental purposes
- Governor's decree from 10.04.2015 N. 71 – Provision for traffic of aircrafts in protected areas (regulates time-restricted exceptions from local bans for work and personal transport reasons as long as there is public interest and no environmental restrictions or laws for protection are afflicted. Follows Art. 1 par. 7 of state law from 27.10.1997 N.151

Motorized aviation below 500M of flight height as well as landing and departure in all conservation areas (declared
In State law from 27.10.1997 N. 151) is forbidden (apart exceptions).

The protected areas include the "Stelvio" National Park, 7 regional parks and, according to Natura 2000 and the
European FFH guide line, all areas above 1600m a.s.l. (nearly 60% of surface of South Tyrol – 7.400 square km)

Excepted from the ban are:
Flights by the army and police, scheduled flights, flights by the civil defence and alpine and flight rescue service,
Material transport, certain institutional flights as well as civil services and activities that do not include person
transport (e.g. panorama flights)

Further exceptions for a limited time can be made according to governor's decree from 10.04.2015 N. 71 (e.g. scientific purposes, protocolary or technical reasons, educational flights, Recording of footage from the air for reporting of events, cultural programmes or movies financed by the province). These cases must be reported to the regional government authority (dept. for mobility) and the responsible forestry office. If conservation areas are concerned the dept. for nature, landscape and spatial development must be informed.

The main point of discussion is if by interpretation drones can be included in this regulation even though they did not yet exist at its enactment. In order to display the opinion of the legislator and to get things straight an updated legal provision is needed.

An idea that could consider environmental protection and touristic development would legally distinguish between
leisure time and professional use of drones. Leisure time use should then be prohibited in all conservation areas.

Currently a simple report to the responsible office is enough to be able to fly in conservation areas. However, the
increasing number of flyers tends not to register the flight.

In national parks, e.g. Stelvio, a written permit by the responsible office is needed in order to be able to fly.

A main requirement for the use of drones in such delicate areas is still logic and responsible reasoning as well as respect
for nature and the inhabiting animals.

Proposals for a more correct use of drones in delicate protected areas

Areas above 1600 m a.s.l.:

Aircrafts below 25 Kg
No differentiation between flying models and drones
No restrictions to the flight apart ENAC regulations
No need for permits

Aircrafts above 25 Kg
Permit by the dept. for conservation areas / (report to dept. for mobility)

National parc Stilfser Joch :

Aircrafts above 300 g
Permit by the national park and report to the mobility dept.
State law gives all responsibility to the nationalparks themselves

Regional parks, Natura 2000 areas and UNESCO world natural heritage:

Aircrafts up to 300g
No differentiation between flying models and drones
No restrictions to the flight apart ENAC regulations
No need for permits

Aircrafts between 300g and below 25 kg
Flight is limited to registered drones and pilots who have passed a sensitising course (flying models will only be allowed in designated areas where they were traditionally used)
Report to the office for regional parks and the mobility dept. through the forestry office. The weekly period can also be reported.

Aircrafts with 25kg or more
Flight is limited to registered drones and pilots who have passed a sensitising course. (the category of flying models is limited to max 25 kg according to ENAC regulation)
Report to the office for regional parks and the mobility dept

Thank You for Your attention!