



•ALERT•

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Drones, legal and technological innovation.

From precision farming to food delivery

The national and European legislators have introduced new regulatory instruments aimed at increasing the competitiveness of companies operating in the agri-food sector. In this technological and legal innovation path, drones play a leading role, being useful on the one hand for the development and digitalisation of the agricultural sector given the objectives set by the European Common Agricultural Policy, and on the other, for responding to the ever-increasing demand of food delivery and fast shopping delivery services.

The use of drones is regulated by the rules on the use of aircraft in civil aviation, in particular, Regulation (EU) 2018/1139 “*Common rules in the field of civil aviation and establishing a European Union Aviation Safety Agency*”. The Regulation aims to unify the area of civil aviation safety, ensuring environmental protection, and regulating, inter alia, the rules of drones defined as “*unmanned aircraft systems*” “*UAS*”.

Commission Implementing Regulation (EU) 2019/947, drafted in collaboration with EASA, the European Union Aviation Safety Agency, sets out detailed provisions for the operation of UAS as well as for personnel, including remote pilots and organisations involved in such operations. In 2020, due to the COVID-19 pandemic, the Regulation was amended by Regulation 2020/746 in order to postpone the dates of application of certain measures.



Specifically, Implementing Regulation (EU) 2019/947 defines the rules and procedures applicable to UAS operations to that they are proportionate to the nature and risk of the operation or activity, and tailored to the operation characteristics of the unmanned aircraft concerned and the characteristics of the operational area, such as population density, surface characteristics and the presence of buildings. To this end, by using different criteria, including the level of risk, it identifies three categories of operation:

- “**open**”: includes operations in the lowest risk band, where safety is ensured when the operator meets the relevant requirements for the intended operation. This category is divided into three further *sub*-categories called A1, A2 and A3. As operational risks in the open category are considered low, no authorisation is required to operate a flight;
- “**specific**”: includes riskier operations, for which, in order to ensure safety, the issuance of an operating authorisation by the competent authority is required. The drone operator must obtain it before commencing the operation. In this regard, the drone operator is required to conduct a safety risk assessment, which will determine the requirements necessary for the security of the operation.
- “**certified**”: since the safety risk is high, the certification of the drone operator and the aircraft are a necessary condition for guaranteeing safety, as is the remote pilot’s licence.



The UAS Regulation of ENAC, the Italian Civil Aviation Authority, governs the aspects of national competence. In order to be recognised as a UAS operator, it is necessary to register the UAS on the D-Flight portal, which is also mandatory for the purposes of identification and the attribution of civil and criminal liability, and also to acquire a European identification code, in QR code format, to be affixed to each UAS with which one operates.

The registration of the operator is mandatory:

- for all operators using drones weighing 250g or more, unless they are toys covered by European Directive 2009/48/EC;
- for operators of drones weighing less than 250g with high-speed characteristics (in the event of impact they can transfer kinetic energy exceeding 80joules to the human body) and/or installing a camera.

The UAS operator is required to use or make use of the drone in compliance with the laws in force in terms of safety (maintenance, good conservation, etc.), privacy and insurance obligations. It should also be noted that the figure of the operator may coincide with that of the pilot, without prejudice to the distinct responsibilities. The procedure for becoming a pilot differs according to the category of operation.

With regard to insurance obligations, it is not permitted to carry out operations with a UAS unless insurance has been taken out and is valid to cover liability towards third parties, adequate for the purpose and with a maximum coverage not inferior to the minimum parameters set out in the table of article 7, Regulation (EC) 785/2004 relative to the insurance requirements applicable to air carriers and aircraft operators.

In the agricultural sector drones play a key role, particularly in precision farming, by making production more efficient, reducing environmental impact and circularising production processes. Drones are valuable in timely precision interventions, in water control and in entomological emergencies of a phytosanitary nature, e.g., *Xylella Fastidiosa*, in mapping soil phenomena, for cultural scouting and being able to distribute antagonists in biological or integrated pest control, or alternatively by distributing plant protection products, bringing savings in costs and resources used, compared to traditional techniques.

Pursuant to the regulatory framework of this field, as set out in Directive 2009/128/EC and Legislative Decree 150/2012, field operations are required to promote the sustainable use of phytosanitary products, and to comply with the principles of, the so-called "*integrated pest management*" "IPM", which aims to protect agricultural ecosystems from the risks of dependence on such products. In particular, although under article 13 of the Legislative Decree 150/2012, **aerial application** of plant protection products is prohibited, the legislator has selected a series of conditions whose fulfilment the Regions may authorise the use:

- absence of alternative modality of use or evidence of the clear advantages of aerial spraying over impacts on human health and the environment;
- authorisation of the Ministry of Health for the phytosanitary product at stake;
- achievement by the user of the required training to conduct aerial spraying activity;

- obtaining the necessary certifications for the equipment used; the equipment must also have advanced technology to reduce the possibility of dispersion of sprayed plant protection products into the surrounding environment;
- concerning the proximity to residential areas, distance from these is required or alternatively that specific risk management measures are included in the permit.

Drones are also demonstrating their huge potential in the food sector as a means of transporting food. According to a study published by the Swiss F&B company Saviva Chair, demand for food delivery is growing at a rate of around 65%, as drones, along with other smart machines, play a key role in the speed and accuracy of delivery.

In conclusion, a further element to be taken into account, is the concrete risk that personal data may be collected in the operations carried out through UAS. As provided for in article 29 of the ENAC on UAS Regulation, this circumstance must be communicated by the operator when submitting the documentation to the entity to issue the relevant authorisations referred to above. In fact, the operator will be required to comply with Regulation (EU) 2016/679 and Legislative Decree 196 of June 30, 2003, as amended, known as the "*Personal Data Protection Code*", in the processing and treatment of data collected in the exercise of its business using drones.

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