Mid-Air Collisions in Europe: Why Better Visibility Matters

Paul Windey, November 18, 2026

An analysis of documented collisions involving manned aircraft, free-flight pilots and drones, 2015–2026

This study used different AI tools to collect sources of national and European authorities, as well as data collected from different European flying federations. Methodology and sources are documented.
Copy of the database can be received upon request - Paul @ safesky.app

104 documented collisions in the period 2015 - 2026

Mid-air collisions remain a serious safety concern for European aviation. A consolidated review of accident investigation reports, EASA and national aviation authorities, flying federations and publicly available safety records has identified **104 mid-air collisions across 17 European countries** between 1 January 2015 and 18 November 2026.

These incidents resulted in **82 fatalities and at least 49 injuries**. Of the 104 recorded collisions, 36 had fatal consequences, 28 resulted in non-fatal injuries, and 18 caused material damage without injury. For another 21 collisions, the available information was insufficient to establish the full consequences.

These figures represent documented incidents, not a complete European accident census. Differences in national reporting systems and the limited availability of non-fatal incident reports suggest that many collisions remain unrecorded in the database.

Free-flight pilots are particularly exposed

A significant finding is the involvement of **paragliders, hang gliders and paramotors in 51 of the 104 documented collisions**. These incidents frequently occur in environments where several pilots share limited airspace, including thermalling areas, ridge-soaring sites and popular free-flight destinations.

Because the research specifically examined free-flight federation archives, this proportion must not be interpreted as the actual share of all European collisions involving free-flight pilots.

Nevertheless, the findings highlight the importance of improved traffic awareness for a community in which many aircraft are not equipped with conventional transponders and may be particularly difficult to detect visually.

Drones add another dimension to collision prevention

The database also identifies **eight collisions involving drones or radio-controlled model aircraft**. These include encounters with aeroplanes, helicopters, gliders and paragliders.

As drones increasingly share lower airspace with recreational, commercial and emergency aviation, reliable mutual traffic awareness becomes an important safety objective. Collision prevention must address both traditional aviation and new categories of airspace users.

The limitations of See and Avoid

Visual lookout remains an essential responsibility of every pilot. However, these accidents demonstrate that maintaining adequate separation can become challenging when aircraft are small, difficult to distinguish against the background, or operating in concentrated traffic.

Better training, lookout techniques, awareness of local traffic patterns and respect for right-of-way rules remain fundamental.

Electronic Conspicuity (eConspicuity) offers an additional layer of safety by enabling compatible aircraft and pilots to share and receive position information. Interoperable solutions that bring together technologies such as ADS-B, FLARM, ADS-L, FANET and compatible applications can help pilots become aware of nearby traffic that might otherwise go unnoticed.

Electronic visibility must complement, never replace, visual lookout. Its effectiveness depends on participation, equipment compatibility, reliable reception and the availability of timely traffic information.

A shared responsibility for European aviation

The findings support a coordinated European approach to collision prevention. Aviation authorities, flying federations, instructors, aircraft manufacturers and technology providers all have important roles.

Priorities should include promoting electronic visibility, improving interoperability between different systems, incorporating traffic-awareness technologies into pilot training, and encouraging consistent reporting of collisions and near misses.

Better sharing of anonymised safety data across national borders would also help identify recurring risks and support more effective prevention.

The objective is simple: every airspace user should have the best possible opportunity to see — and be seen by — other traffic.

About the study

The *European Mid-Air Collisions Database 2015–2026* combines 104 individually documented incidents from official investigation reports, EASA and national authorities, national flying federations and other traceable sources, including material from different aéronautical federations.

The review covers 1 January 2015 to 18 November 2026. It includes powered aircraft, gliders, helicopters, microlights, gyroplanes, balloons, paragliders, hang gliders, paramotors, drones and radio-controlled model aircraft.

The database is an evolving research inventory. It is not exhaustive, and its figures must not be used to calculate European accident rates, compare the relative risk of aircraft categories, or infer trends over time without additional exposure and reporting data.

About the author

Paul Windey, holding PPL, UL gyroplane pilot, is co-founder of SafeSky.app.
He is a member of the European Microlight Federation and author of the EMF webpage on eConspicuity: https://emf.aero/econspicuity.