New civil aviation safety rules

SUMMARY
Despite some recent high-profile disasters, flying remains one of the safest forms of transport and the EU's accident rate is lower than in the rest of the world. However, it cannot automatically be assumed that such performance will continue, as global air traffic is forecast to double over the next 20 years. In addition, new technologies, such as unmanned aircraft (drones), are also appearing in European skies, which require adaption of the current regulatory framework.

In December 2015, the European Commission proposed to replace the current Regulation on civil aviation safety and the European Union Aviation Safety Agency (EASA). The new proposal would introduce risk- and performance-based rules, close some safety gaps and interlinks safety more closely with other domains such as security and the environment. It proposes to strengthen EASA's role and take several measures to use existing resources more efficiently (e.g. sharing aviation inspectors). It also introduces essential requirements for drones. In November 2016, the European Parliament's Committee on Transport and Tourism generally backed the updated rules, in particular the idea of regulating drones at EU level. The report constitutes Parliament’s position for negotiations with the Council, which adopted its general approach for the negotiations with the Parliament on 1 December 2016.


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<th>Committee responsible:</th>
<th>Transport and Tourism (TRAN)</th>
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<td>Rapporteur:</td>
<td>Marian-Jean Marinescu (EPP, Romania)</td>
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<td>Next steps expected:</td>
<td>Trilogue negotiations</td>
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Introduction
On 7 December 2015, the European Commission presented a proposal for a regulation on civil aviation safety and EASA, which would repeal the 2008 regulation on the same topic. The legislative proposal is part of the new aviation strategy for Europe, which outlines the Commission's planned activity in this field in the coming years.

The aim of the proposed regulation is to enable EU aviation safety rules to meet future challenges, and continue to ensure safe, secure and environmentally friendly air transport. The Commission also proposes to create an EU framework for the safe integration of drones in European airspace. The initiative aims to contribute to a competitive European aviation industry and aeronautical manufacturing. It also seeks to make safety rules more proportionate and flexible, and use existing resources more efficiently.

Context
Despite some recent disasters, flying remains one of the safest forms of transport, and the EU has an excellent safety record. As illustrated in Figure 1, the fatal accident rate in the countries of the European Union (EU) and the European Free Trade Association (EFTA) is much lower than in the rest of the world, and has been practically stable since 2010. In the past decade, the average rate of fatal accidents in the EU and EFTA has been 1.8 per 10 million flights, compared to 1.9 in North America, 6.3 in Asia, 15.5 in the Middle East and 38.3 in Africa. However, it cannot be automatically assumed that the EU's good performance will continue as a matter of course, as global air traffic is forecast to double over the next 20 years. If no action is taken, the accident rate may rise.

New technologies, such as drones, are appearing in European skies. Drone technology has developed rapidly in recent years, and is now in civil use. It is estimated that, in about 10 years, 10% of the global civil aviation fleet could be unmanned. Thousands of enterprises, mostly SMEs, in the EU already develop, manufacture and use drones in infrastructure maintenance and monitoring, aerial mapping, filming, farming and many other industries. However, the full potential of drones is still not exploited, as they are...
not yet integrated in operations among manned aircraft in non-segregated airspace, i.e., airspace open to all civil air transport.

The new civil aviation safety rules come at difficult economic times, when some parts of the aviation system (such as smaller or regional airports, and some legacy airlines)¹ are struggling to make profits or have gone bankrupt. In addition, EU companies face increasing competition from Middle Eastern and Asian carriers. Some European aviation authorities also struggle with shortages of financial and human resources in dealing with demands from industry for technically complex certification and oversight work.

**Existing situation**

The EU's civil aviation safety policy currently consists of a set of common rules set out in Regulation (EC) 216/2008 (known as EASA's Basic Regulation) and its amending acts. They establish the main functions of the EU aviation system, such as rule-making, certification and oversight. Detailed rules are laid down in implementing rules adopted by the European Commission on the basis of technical opinions by EASA. The rules apply both to the industry and to civil aviation authorities, and are enforced through audit-type checks. Their objective is to prevent accidents from happening and foster a culture of responsibility. They are compliant with the international standards and recommended practices of the International Civil Aviation Organization (ICAO). The rules cover the safety aspects of various components of air transport, such as:

- airworthiness² and environmental protection of aircraft,
- aircrew,
- air operations,
- aerodromes,³
- air traffic management and air navigation services, and air traffic controllers.

Unmanned aircraft (drones) are partially covered, namely only those with an operating mass over 150 kg. The Basic Regulation does not define what is meant by 'unmanned aircraft'. State (e.g. military, customs, police and firefighting), home-built or historic aircraft and small aerodromes are exempted from common rules.

The Basic Regulation requires certification of most civil aviation products, personnel and organisations. For example, aircraft need an airworthiness certificate. Member States are obliged to recognise these certificates without any further technical requirements or evaluation. Those states which do not respect the rules can be penalised. The Commission can limit or suspend certificates or impose financial penalties.

The Basic Regulation also sets EASA's mandate. It gives the **Agency** specific regulatory and executive tasks in the field of civil aviation safety and environmental protection. The Agency is tasked with preparation of draft rules, providing technical, scientific and administrative support, conducting standardisation inspections and investigations, and certifying aviation products.

The Basic Regulation regulates the Agency's legal status, structure, functioning and budget. According to the regulation, the Agency is an independent body of the EU with its own legal personality. It is led by an Executive Director and by a Management Board made up of one representative from each EU Member State, as well as from Iceland, Liechtenstein, Norway and Switzerland, and one representative of the European Commission. Its revenues come from fees (paid for certificates issued by the Agency)
and charges (for publications, training and other services provided by the Agency), as well as from contributions from the EU, third countries and EASA member states.

In addition, the EU has adopted a number of other aviation safety-related regulations, e.g. on accident and incident investigation and prevention, occurrence reporting, analysis and follow-up, and banning of unsafe operators. Safety aspects of air traffic management (ATM) and air navigation services (ANS) are regulated by the Single European Sky Regulations.

Responsibility for the implementation of EU aviation safety rules is shared between the Commission, EASA and EU Member States. In addition, in the area of ATM and ANS, the EU works with the intergovernmental European Organisation for the Safety of Air Navigation (Eurocontrol). Specialist bodies also contribute to the EU aviation safety system. For example, the SESAR Joint Undertaking contributes to the safety of air traffic management.

**The changes the proposal would bring**

The Commission introduces risk- and performance-based rules in the proposed regulation, which set objectives but leave some flexibility as to the means for achieving them. It also promotes taking non-binding measures (such as safety promotion actions) whenever this is possible. The Commission hopes that this approach will stimulate innovation and allow required safety levels to be achieved more cost-effectively.

The proposal revises the scope of the common rules, by excluding small, single occupancy hot-air balloons, adjusting the weight limits for sailplanes, and adding light electric aircraft. It gives Member States the opportunity to apply certain provisions of the regulation to state aircraft. The proposal adds essential safety requirements for ground-handling services and makes several changes to take into account the compromise reached within the Council on the Single European Sky 2+ proposal: a reform that aims to deal with the growth of air traffic, increase security, reduce costs, delays and the impact of air traffic on the environment.

The Commission's proposal also modifies, removes and adds some definitions. It removes, for example, definitions of 'complex motor powered aircraft' and 'commercial operation' and adds the definition of 'unmanned aircraft'. The latter is defined as an 'aircraft operated or designed to be operated without a pilot on board'.

A new chapter on aviation safety management is introduced, establishing the European Aviation Safety Programme, covering the whole aviation safety system, which the Commission would be responsible for adopting. Furthermore, the European Plan for Aviation Safety, identifying and addressing all risks in the system would be adopted and updated, at least annually, by EASA. The plan does not set any binding targets for safety, however, although Member States too would be required to adopt national plans.

The Commission proposes several measures to improve information and data gathering, sharing and analysis. In particular, it proposes the creation of an electronic repository of information relevant for certification, oversight and enforcement, which would be managed by EASA.

In order to help national authorities that lack sufficient human resources to carry out certification and oversight work, the Commission proposes to pool and share aviation inspectors and experts, and to allow, on a voluntary basis, the transfer of responsibility for certification, oversight and enforcement from Member States to EASA or to another
Member State. Furthermore, the Commission proposes that individual Member States would no longer have to approve wet-leasing arrangements\(^7\) that do not involve third-country operators.

The regulation extends EASA’s competences, e.g. in the field of security (including cyber-security) and the environment. It also suggests some changes to EASA’s structure (e.g. creation of an Executive Board to assist the Management Board and the Executive Director); two additional sources of revenue (grants and air navigation charges for ATM/ANS tasks); and enabling rapid adjustment of staffing levels linked to fees and charges to respond to changes in market demand. It also suggests that the Agency sign a Headquarters Agreement with the host Member State (Germany); and assist the Member States and the Commission in international relations, as regards the harmonisation of rules and the mutual recognition of certificates. The Agency is also called upon to assist the Commission in identifying research themes in areas covered by the regulation, and to help to prepare and implement EU research programmes.

The proposal introduces essential requirements\(^8\) for unmanned aircraft (drones). The rules are meant to be proportionate to the risk of the particular operation or type of operation. They state that the drone must be safely controllable and manoeuvrable. It should be designed to fit its function and take into account privacy and protection of personal data by design and by default. Identification of the drone and of the nature and purpose of the operation should also be possible. The Commission suggests that the drone operator be responsible for its operation and should have knowledge and skills proportionate to operating the drone safely. The Commission calls upon organisations involved in drone design, production, maintenance, operations, related services and training, to establish a safety occurrence reporting system.

**Preparation of the proposal**

In preparing the regulation, both the Commission and EASA held stakeholder consultations and a number of meetings with Member States and aviation stakeholders. In addition, the Commission carried out an impact assessment.

According to these consultations, stakeholders generally consider the safety levels in the EU to be very high. However, they are worried about the efficiency and proportionality of the system. The vast majority think that existing rules are too detailed, difficult to understand, prescriptive and do not differentiate sufficiently between the risks involved in different types of activities. Many believe that current safety levels could be achieved with lower costs. In particular, rules for light aircraft are considered too burdensome and not sufficiently differentiated from rules for commercial air transport. The aircraft manufacturing industry is also concerned about the long-term availability of resources at EASA for product certification.

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**EU-US key figures**

Many stakeholders consider current use of human and financial resources in the EU as inefficient. In comparison, the United States manage an aviation market which is almost twice the size of the EU market, with a slightly smaller budget and only 29 % more aviation safety staff:

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<th>EU (2013)</th>
<th>USA (2012)</th>
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<tr>
<td><strong>Budget</strong></td>
<td>€1.13 billion</td>
<td>€1.0 billion</td>
</tr>
<tr>
<td><strong>Total aviation safety staff</strong></td>
<td>5 600</td>
<td>7 238</td>
</tr>
<tr>
<td><strong>Aircraft on register</strong></td>
<td>107 500</td>
<td>199 952</td>
</tr>
<tr>
<td><strong>Active pilots</strong></td>
<td>255 204</td>
<td>496 053</td>
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The Commission carried out a separate stakeholder consultation and impact assessment on drones (remotely piloted aircraft systems). It found that most stakeholders endorsed the need for an EU framework for drones, highlighting the deficiencies of the current system where drones face operational restrictions and fragmented national rules. Currently, some Member States issue specific individual authorisations. This is, according to stakeholders, a costly and burdensome procedure, which hampers cross-border operations. Stakeholders also consider that the current division of competence, where Member States regulate drones with an operating mass of 150 kg or less and the EU drones over 150 kg, is obsolete. Furthermore, the EU has not actually adopted any specific rules on drones.

Stakeholders agreed that drone rules should be proportionate to the risk of the operation, and considered safety and privacy as the most important aspects. The consultation did not point to the need for new rules on security and privacy, but to better application of existing rules.

Parliament's starting position

The European Parliament expressed its initial view on the forthcoming legislative proposal on aviation safety and EASA in a resolution adopted on 11 November 2015. The Parliament wished to increase EASA’s responsibilities to cover the safety aspects of security measures and commercial space transport, as well as drones. It called for a comprehensive safety management system to be set up. Parliament also called for a stronger role for EASA on the international scene, with a budget that considers its new responsibilities. The Commission took most of these points on board, except for entrusting the Agency with the safety aspects of commercial space transport.

Stakeholders' views

When the Commission published its proposal, most commentators welcomed the revision, but they did not agree with all the proposed changes. The European Cockpit Association (ECA), which represents pilots, believed, for example, that Member States should continue to approve intra-European wet-leasing in their country. It feared that the risk of low-level drone operations had been under-estimated and called for further consideration of issues like registration of drones and auto-avoidance systems. Airports Council International (ACI) Europe supported performance-based rules as well as 'better integration between the agency and Member States'. However, it was against extending EASA's competencies in the fields of security and the environment.

More recently, the ECA welcomed the report of Parliament's TRAN Committee, in particular tightened safety rules for drone operations, saying it responds to a 'Joint call to safely integrate drones/UAS in Europe’s airspace', that 16 aviation organisations signed in September 2016. The aviation organisations called inter alia for the registration of all drones, requiring a certificate or licence for commercial operations and for the use of auto-avoidance systems.

The Air Traffic Controllers European Unions Coordination (ATCEUC) declared that some of the TRAN Committee amendments ‘are direct attacks on the rights of workers in air traffic management’, for instance the proposal to introduce a minimum service requirement to ensure the continuity of ATM/ANS provision.

The Airlines for Europe (A4E) thought that changes voted in the TRAN Committee would ‘only increase bureaucracy and costs to passengers without any improvement in safety standards’. In particular, A4E criticised that the committee did not support the
Commission proposal to streamline aircraft leasing arrangements. According to A4E, this ‘will hamper airlines’ ability to provide fast and effective assistance to customers when there are disruptions’. Other areas of concern for A4E include the transfer of air navigation charges to fund EASA, and additional certification obligations related to groundhandling and cabin crew.

**Advisory committees**

The Committee of the Regions (CoR) adopted its [opinion](#) on the proposed updated aviation safety rules (as part of its opinion on the aviation strategy) on 12 October 2016 (rapporteur: Ulrika Carlefall Landergren, ALDE, Sweden). Like the TRAN Committee, the CoR supported the idea of regulating drones at EU level. At the same time, it underlined the need for dialogue between the Agency and relevant players at national, regional and local level. According to the CoR, the harmonised EU rules on drones should also include rules on certification and type-approval, and cover training and qualifications for handling and maintaining drones.

The European Economic and Social Committee (EESC) has not adopted an opinion specifically on the updated aviation safety rules but in its [opinion](#) on the aviation package, adopted on 14 July 2016 (rapporteur: Jacek Krawczyk, employers’ group, Poland), it highlighted the importance of EU influence in the field of drones as well as the safety and security aspects of drone operations.

**National parliaments**

The [subsidarity deadline](#) for national parliaments to submit reasoned opinions on the proposal was 2 March 2016. Italy and Malta submitted reasoned opinions, finding that the Commission proposal does not comply with the principle of subsidiarity, in particular as regards the proposed scope and extent of delegated acts.

Other parliaments have also shared their views on the proposal. Most parliaments supported the proposal to regulate drones at the EU level but called for more requirements. For instance, some parliaments insisted that remote pilots should hold a certificate or a licence for commercial operations. Several parliaments (e.g. the French National Assembly and the German Bundesrat) also rejected the idea of transferring certain competences from Member States’ authorities to the Agency.

**Parliamentary analysis**

The European Parliamentary Research Service (EPRS) and policy departments of the Parliament have produced several publications on aviation safety, EASA and drones.

In October 2016, EPRS updated a short [overview](#) of EASA, explaining its functioning, tasks and objectives. It also presents briefly stakeholders’ and EASA’s views on the revision of its Basic Regulation. Stakeholders and EASA called, for instance, to accommodate, drones, multinational operations, outsourcing and leasing in the current framework and make the present regulatory system more proportionate and less costly.

In September 2016, Policy Department B (structural and cohesion policies) published a [study](#) on ‘Safe integration of drones into airspace’. It outlines the major safety risks associated with the use of drones and identifies the technical solutions that could address these risks. It also examines to what extent existing and proposed aviation regulations can ensure the safety of drone operations.
In February and April 2016, EPRS produced initial appraisals of the Commission impact assessments on the updated aviation safety rules and on drones.

In October 2015, EPRS published a briefing on 'Civil drones in the European Union', which gives an overview of opportunities and challenges related to drones. It explains the current regulation of drones and presents the initial views of the EU institutions and stakeholders on future EU drone rules.

In June 2015, Policy Department C (citizens’ rights and constitutional affairs) published an analysis on 'Privacy and data protection implications of the civil use of drones'. It concludes that a series of pre-conditions still need to be addressed in order to ensure that drones respect citizens' fundamental rights to privacy and data protection, to security and to safety.

In June 2015, EPRS produced an implementation appraisal of EASA's Basic Regulation. It concludes that the forecast surge in passenger traffic and the use of drones requires adjustments to the existing regulatory framework.

### Legislative process

The Commission submitted the proposal on 7 December 2015. It was assigned to the Committee on Transport and Tourism (TRAN).

The TRAN Committee voted on 10 November 2016 on its report (rapporteur: Marian-Jean Marinescu, EPP, Romania) on the updated aviation safety rules, with 32 Members in favour, 11 against and 1 abstention. The report constitutes Parliament’s position for negotiations with the Council on the final wording of the regulation. The Committee also approved a mandate to start these negotiations.

In general, the TRAN Committee welcomed the proposal, in particular the idea of regulating drones at the EU level. However, it added some further requirements, for instance on registering drones, using auto-avoidance systems, licensing drone pilots and informing drone users about their obligations, in a leaflet. It also added some definitions, such as a definition of ‘a remote pilot’, and emphasised that drones have to respect private and family life, as well as safeguard personal data.

Secondly, the Committee emphasised the importance of taking into account socioeconomic factors, when identifying risks to aviation safety and developing mitigating measures, and introduced a requirement of minimum services of ATM/ANS in the event of unforeseen circumstances or service disruption.

Furthermore, the Committee considered that aviation authorities should have sufficient human and financial resources to deal with their tasks. It introduced some additional sources of revenue for the Agency, such as charges paid on the provision of ANS. The Committee agreed that, in some cases, competences could be transferred from a Member State to the Agency, proposed to delete from the name of the Agency the word 'safety' and extend its competencies in the area of aviation security, in particular, cybersecurity. The Committee did not support the changes regarding wet-leasing arrangements (a leasing arrangement whereby one airline operates flights, providing the aircraft and crew, for another airline).

On 1 December 2016, the Transport, Telecommunications and Energy Council agreed on a general approach on updated aviation safety rules, thus enabling negotiations with the Parliament to be started.
The Member States broadly supported adopting EU-wide rules on drones, as well as making rules proportionate and dependent on the risk. They also agreed on the need to strengthen cooperation on security matters related to civil aviation, such as cybersecurity and flights over conflict zones.

However, most Member States did not support changes to the financing of the Agency, in particular the proposed addition of en-route charges as a new source of funding. Similarly, many Member States did not support the creation of a new oversight mechanism, which would allow EASA to take over certain oversight tasks.

References


Endnotes

1 Former or current national airlines already in operation before the liberalisation of air transport in the EU.
2 The capability of an aircraft to fly safely.
3 Areas used for the arrival, departure and surface movement of aircraft. They include airfields and airports.
4 The European public-private partnership that is managing the development phase of the Single European Sky Air Traffic Management Research Programme.
5 A type of glider.
6 For example, regarding airworthiness, operations and aircrew.
7 Leasing arrangements, whereby one airline rents from another airline aircraft, crew, maintenance and insurance.
8 More detailed rules will be prepared by EASA and adopted by the Commission.
9 The weight criterion was initially introduced not to regulate drones but to avoid regulating model aircraft.
10 Unmanned aerial vehicle.

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