



# Development of International Aviation Rules and Standards

**a summary from a European perspective**

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## Summary

Civil aviation is trans-boundary, both by nature as well as literally. Because of this, a substantial need follows for a common set of harmonized rules, which in principle should apply regardless of where in the world the aviation activity is carried out. EU's initiative to create a common legislation within this area has been extremely positive for aviation safety not only in Europe, but on an international level as well.

It has been a long ride for civil aviation in Europe to reach today's organization and level of safety. Reaching this level has brought strong confidence to authorities and the public about how safe it is to fly. The number of accidents has fallen over the years and so has the number of fatalities. EU has over the years since 2003 taken over responsibility through EASA for the development of common regulations within all fields of aviation safety.

The whole system is based upon the principle of shared responsibility between national authorities and EASA. However, all over Europe Flight Safety Foundation has seen a development going the wrong way. Recently the Foundation pointed out that aviation authorities lack competent personnel, especially operations inspectors. There is a need for governments to address this problem by giving the national CAAs the funds needed and the necessary flexibility to attract skilled pilots and other personnel to fill the open positions. Only in a tight co-operation with national CAAs will EASA be able to keep up today's level of flight safety.

Flight safety internationally will benefit from the European co-operation that brings virtually all of Europe into one level playing field. The only exceptions are Belarus and Russia which are still some distance away from participation in this co-operation. The European regulations are harmonized with the American and Canadian through a trustful collaboration with the respective national authorities. These stand as an example to the rest of the world's aviation.



**AND AEROSTATIC  
ASCENSION  
OF M. THEDLISON**

NEW YORK: G. P. PUTNAM'S SONS, 1883

### The start

The first tentative sign of international cooperation regarding aviation legislation was seen as early as in 1889, i.e. 14 years before the first motorized flight. Congres International d'Aéronautique was hosted in Paris where the need for common aviation laws was discussed – at that time related to balloons.

Throughout the 1900s a series of international meetings and conventions on the topic was held. However, nothing specific resulted until the so-called Paris Convention (La Convention portant réglementation de la navigation aérienne, October 13, 1919). In the wake of this convention, a permanent liaison body – CINA (La Commission Internationale de Navigation Aérienne) – was established within the League of Nations. Most European countries ratified this convention.

The U.S. was negative to – and did not ratify – the Paris Convention. Instead, the U.S adopted the Havana Convention of 1928, thus a more or less uniform set of rules was applied throughout the American continent. The regulatory division between Europe and the U.S. had no practical significance. At the time, the flights took place on each side of the Atlantic, with no crossings.

Several international aviation conventions and gatherings were held during the interwar period. A common feature was that they largely dealt with private law matters. In this context, the Warsaw Convention of November 12, 1929, was a milestone. It was ratified by 57 countries and laid the foundation for international rules that, to a considerable extent, are still leading today with respect to transportation of passengers and goods.





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### ICAO

As the result of a British initiative, an aviation conference was held in Chicago in 1944 with delegates from 52 countries. The result was the Convention on International Civil Aviation of December 7, 1944. It was later called the Chicago Convention and replaced both the 1919 Paris Convention and the 1928 Havana Convention. The countries also adopted the International Air Service Transit Agreement and the International Air Transport Agreement (both also adopted in Chicago December 7, 1944). The International Civil Aviation Organization - ICAO established in 1944, replaced CINA and became operational in 1947. That same year, ICAO was adopted as a body within United Nations.

In the succeeding years, ICAO has initiated, conducted and supervised much of the rule harmonization as seen within aviation up until today. Through the thematically divided 18 annexes in the Chicago Convention “standards and recommended practices” (SARPs) were developed that provide guidelines for what each country’s aviation regulations shall/should look like. However, it’s somewhat controversial to what extent the Convention states are legally bound by the Convention and its annexes. Therefore ICAO’s SARPs provide some scope for different applications. Individual states also have the opportunity to report deviation from the SARPs. Such deviations are published together with the annexes. Although the ICAO-annexes form a very important contribution to promoting legislation harmonization on an international basis, they are not thus not able to secure full harmonization.





## The European development

Historically, Europe has at all times provided a high level of flight safety. Accident statistics also show that Europe has been doing well for a long time. Europe started early developing own rules for flight safety. ECAC, JAA, Eurocontrol and GASR specified the annexes through their own rules that the states committed themselves to implement and follow. The problem was, however, that the states were not bound by the rules. Although the organizations were backed by international organizations such as Eurocontrol, there was a certain amount of freedom in the implementation of the rules, making them ineffective.

EU observed this and recognized the need for binding rules. Through the Regulation (EC) 1592/2002 EU established the European Aviation Safety Agency (EASA) and gave it the responsibility for developing and managing common EU rules for the airworthiness and certification, and for technical maintenance of aircraft etc., as well as for environmental issues. The Agency, with its headoffice based in Cologne, is a separate legal entity, with its own organization and management. However EASA remains an Agency of the European Union and must therefore comply with all EU and European Commission rules and procedures with regard to staffing, finance, procurement etc. It is funded partly out of fees and charges, set by EU regulation, and partly from a Community subsidy agreed under the EU's budgetary procedures. It is active since September 28, 2003.

EASA Regulation (1592/2002 - Basic Regulation) came first, but was followed by more detailed Implementing Rules including Regulation (EC) 1702/2003 (on certification/airworthiness) and Regulation (EC) 2042/2003 (maintenance).

Already at the establishment of EASA it was the explicit intention that the agency would gradually extend its remit to FCL and OPS. This ambition is to a large extent ideologically driven, based on the concept of a "total system approach". An acceptable level of safety requires that all the subsystems within aviation (such as airports, traffic management, construction and maintenance of aircraft, air operations, personnel etc.) function as optimally as possible. Based on this principle, safety is best addressed if a central body is responsible for developing rules for each of the subsystems. Thus, rules can be developed that not only provide safety within each separate part, but rules can also promote and optimize air safety by protecting the interfaces between all the parts of the "aviation supply chain". It also provides the opportunity to look at the entire chain as a unified object of control.

The first expansion of EASA's remit ("first extension") was formalized by the regulation (EC) 216/2008 that terminated and replaced the original basic regulation (1592/2002). Several of (the material) decisions of the 1592-regulation were, however, continued in the 216-regulation. The novelty of the 216-regulation is primarily that it expands the EASA remit to include air operations (OPS), certification of flight crew (FCL), requirements for aviation organizations (OR), requirements for government supervisory authorities (AR) and requirements for third country operators (TCO).



The 216-regulation provides a rule structure where we find Substantive Requirements and Essential Requirements (ER) that are adopted by the EU (Council and Parliament) at the top of the hierarchy. At the level underneath you find more specific provisions – Implementing Rules (IR)- that are adopted by the European Commission. At the third and lowest level are Acceptable Means of Compliance (AMC) and Guidance Material (GM) that are determined by EASA and are so-called “soft-law” rather than “hard law”.

Related to the 216-regulation one finds the topical Substantive Requirements and Essential Requirements for EASA’s remit included in the 216-regulation chapter II, as well as in annex I, annex II and annex IV. The more detailed IR’s within these areas are adopted as separate European Commission Regulations. Largely, the IR’s are structured after what they target. In the end, EASA will through AMC’s give more detailed descriptions of how regulatory requirements can be met, as well as publish GM with a guidance on how the formal rules should be interpreted.

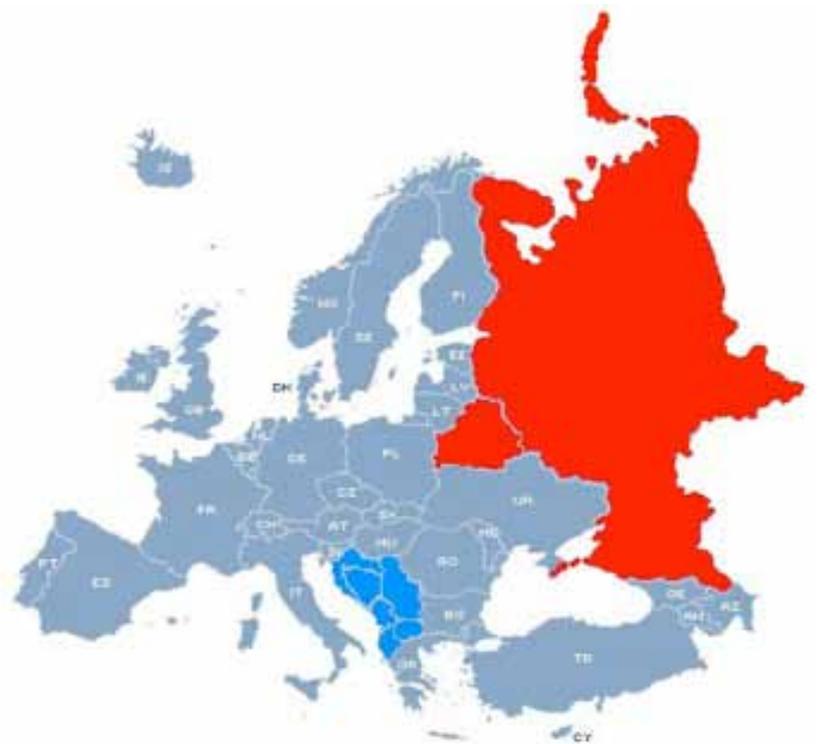


## The final step into EASA

The expansion of EASA's remit took a third step through the regulation (EC) 1108/2009. The regulation changes the basic regulation 216/2008, and extends EASA's remit to include airports (aerodromes), ATM (air traffic management) and ANS (air navigation services).

Dealing with ATM and ANS, EASA has found a constructive way to cooperate with Eurocontrol, which will persist as an important and extremely knowledgeable organization within the air navigation services domain.

For flight safety, the development taking place in Europe has been positive. From a fragmented world with JAA – Joint Aviation Authorities, ECAC – European Civil Aviation Conference, Eurocontrol and GASR – Group of Aerodrome Safety Regulators it is now EASA that has primary legal responsibility for aviation safety. Today, EASA has the responsibility for everything relating to aviation safety across all domains, though of course it maintains a constructive relationship with Eurocontrol and ECAC.



## Having all on board

The biggest concern associated with EASA's expansion of responsibilities was linked to the fact that EU had a relatively limited number of member states. The states that were not, and still are not, members of the union, were also to a certain extent those who really need to be a part of this collaboration. Today, ECAC has 44 member states, while EU still has only 27+4.

Four countries have become full members of EASA, but without the right to vote:

- Iceland
- Liechtenstein
- Norway
- Switzerland

Iceland, Norway and Switzerland have become members after an active process towards EU/EASA. Iceland, Liechtenstein and Norway have also joined the EEA- Agreement with the EU, while Switzerland has a bilateral agreement.

Moreover, 7 countries have been given an observer status in the EASA management board:

- Albania
- Bosnia and Herzegovina
- Kosovo (in practice UN organization UNIMIK)
- Croatia
- Macedonia (FYROM - Former Yugoslav Republic of Macedonia)
- Montenegro
- Serbia

These seven countries have signed the so-called ECAA Agreement with EU. The attached table gives an overview of the European countries' involvement in the various international aviation governmental organizations

A new scheme has been introduced as well, that allows all countries to participate in the work done by the working groups responsible for the early stages of development of new regulations. EASA is probably the only EU agency where such access has been allowed. The European Commission actively participates in the EASA Management Board, and would obviously have stopped this if they felt that it threatened the main principle that only member states can participate in the EU legislative processes. It is important to remember that historically the European Commission has argued fiercely for the principle that non-members are not allowed to participate in the EU legislation.

If disputes arise later in the legislative process about the proposals developed in EASA, the proposal will go back to the study group for further processing. This will ensure adequate participation from everyone wanting to participate.



## Belarus and Russia still on the sideline

Today, Belarus is practically the only nation standing outside of the European collaboration. It is not likely that this will change in the foreseeable future. Russia is not a member of ECAC, but ten years ago ECAC and Russia signed a protocol of intention to start a co-operation. Practically nothing has happened in the last ten years. Quite recently at the EU-Russia summit the contact was reestablished and it might be that regular contact could be the result. It has to be acknowledged though, that Russia's interest in implementing EU-regulations was and is rather limited. It is at last partly up to Russia to make any further move.. The country holds a membership in the European Council and therefore has the opportunity to take the next step into ECAC. In the longer term, Russia will be able to participate completely within the European aviation cooperation if the EU-regulations are implemented.

## Co-operation is positive for all

This is a positive development for flight safety in Europe. Although formally the EU will decide on behalf of everyone during a transitional period, the current organization gives every country in Europe the opportunity to participate and influence the decisional process. It is also important to bear in mind the fact that air safety is not a matter of politics. It is a discipline treated by experts where everyone has the same goal of ensuring that aviation will be as safe as possible. EU's role is to secure the obligations undertaken by the individual countries that guarantee them free access to European airspace and airports in terms of the technical and operational level.

However, examples from the recent past show that aviation safety – a non political issue – can and has been made political for reasons like pleasing the unions or achieving benefits in another, political, area. EASA could very well take upon itself the role as the watchdog to prevent that in future. Flight safety is best off without political interference.

The European collaboration has been extended to include collaboration with the U.S. and Canada. The regulatory harmonization has come a long way since USA followed the Havana Convention. Through regular contact a harmonization of the rules on both sides of the Atlantic is taking place.

European aviation is safer than ever thanks to the cooperation in Europe among other things, with EASA in the center. For the Netherlands the EASA collaboration is an important safety guarantee, but it still requires an active participation and a strong national aviation authority. EASA will not and should never try to fill the role of the national aviation authorities completely. It is the national authorities who must ensure that there is enough aviation expertise within the countries, and that there are sufficient resources to perform an active supervision of all actors within the industry.



## The importance of national authorities

The Flight Safety Foundation recently raised the problem of filling the positions in the national CAAs with competent personnel. This is a problem which is well known, but few are willing to discuss. Many of the major regulators in Europe are desperately short of operations inspectors. It is not unusual to see staffing levels of 20 to 30 percent of what is required. Governments across Europe are trying to shrink their budgets and the flexibility to use economic incentives to fill the vacant positions are rather limited. This could bring the situation from desperate to dangerous.

The problem is that it is hard to find someone who is qualified for the inspector job and who is not already flying for an airline that pays a lot more money. Yet these inspectors are vital. Without them, the papers will move through the bureaucracy and fees are paid, but the operators can do pretty much as they please. When there is a shortage of operations inspectors, airplanes tend to crash. It is a lesson that has been learned over and over again; the International Civil Aviation Organization (ICAO) has the statistics that prove this correlation.

Europe has a network of solid and responsible carriers that will continue their safety programs even without adequate supervision because it is the right thing to do. However, it can be predicted that these carriers will suffer economically. The rule-making apparatus of Europe is still fully complete, so the expensive paperwork will continue to flow. But the actual implementation of new rules will go largely unmonitored. Unscrupulous operators will eventually discover they can do anything they want if the paperwork looks good. They could be willing to compromise safety any time it saves them money and use the savings to win an edge in the marketplace. The demand for lower expenses may hurt aviation safety.

A country like the Netherlands, with a long history of international aviation and the home ground of one of the larger European airlines, should work actively to ensure that the European countries with weaker authorities implement measures strengthening their ability to lead an active supervision of the aviation industry. In order to do so they need sufficient resources and expertise. This will contribute to making these actors' aviation, including the part to and from the Netherlands, safer.



Concerning the Dutch CAA it is likewise important to ensure that the resources are adequate to perform an active supervision of the national aviation industry.

It is important to ensure that EASA as an organization develops and continually improves collaboration and cooperation with the member states, benefiting all parties. EASA must also ensure that the organization does not grow out of proportion and that work can be done in an efficient manner within an acceptable budget. It is also important always to do a cost/benefit analysis before new regulations are developed.

Europe has the best possibility to move towards an even brighter future in aviation safety if governments stand firm and maintain a high level of oversight of the civil aviation.

*Next page: European country membership of aviation safety organizations*



Non-member	
Member	
Attached	
Observer	

	Eurocontrol	EU	EASA	ECAC	ICAO
Albania					
Andorra					
Armenia					
Aserbajdsjan					
Austria					
Belarus					
Belgium					
Bosnia Herzegovina					
Bulgaria					
Croatia					
Cyprus					
Czech republic					
Denmark					
Estonia					
Finland					
France					
Georgia					
Germany					
Greece					
Hungary					
Iceland					
Ireland					
Italy					
Kosovo					
Latvia					
Liechtenstein					
Lithuania					
Luxemburg					
Macedonia (FYROM)					
Malta					
Moldova					
Monaco					
Montenegro					
Netherlands					
Norway					
Poland					
Portugal					
Romania					
Russia					
San Marino					
Serbia					
Slovakia					
Slovenia					
Spain					
Sweden					
Switzerland					
Turkey					
Ukraine					
United Kingdom					

50 countries      39 countries      31 countries      31 countries      44 countries      48 countries  
 EU+Switzerland+EEA      7 observers