Air Cargo Security

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ABSTRACT  Homeland security is all activities to protect, guard and protect people, communities of people, infrastructure and property against asymmetric threats of military or non-military, and those generated by geo-physical, weather-related or other natural and threatening human life, liberty, property and activities of the people and communities, infrastructure and socio-economic activities, and other values at a level of intensity and scope significantly different from the usual state. Internal security for both, citizen safety and public security, border security, energy, transport and supply systems vital resources and critical infrastructure protection. It includes, in terms of structural, societal security and ensuring legal status, countering terrorism and organized crime, security, banking and financial activities, information systems and the communications, environmental protection and disaster. After the attacks of September 11, 2001, the Commission adopted Regulation (EC) no. 2320/2002 of December 16, 2002, to impose rules, measures and procedures unique to air safety. Regulation covers, inter alia, the following areas: passenger safety checks, safety zones at airports, control staff, safe configuration in the cockpit, training and air-ground communication. Regulation requires Member States to introduce national security programs for civil air traffic. In September 2005 the Commission submitted a proposal for revision of the Regulation [COM (2005) 429]. In early 2008, the European Parliament and Council have reached agreement on the new Regulation (EC) no. 300/2008 of 11 March 2008, which regulate, among other things, safety during flight, such as access to the cockpit, carrying of weapons or appointing safety attendants (sky marshals).

KEY WORDS  Aviation security, internal security, critical infrastructure, the Single, single sky, air Schengen space, sky marshals

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1.Introduction
Over time, major transport companies have taken additional control measures to ensure greater security during transport. On the other hand, using vehicles as weapons, to destroy the lives of passengers and individuals are the target buildings, revealed another aspect of the vulnerability of transport systems. Before September 2001, infrastructure and transport equipment were considered as possible targets of terrorist attacks for the following reasons: they are relatively affordable, can draw particular attention to the public through media, is an attack on national symbols (such as, for example: the national airline) and, not least, can affect many people just by a single action. By the particular airline, was seen as necessary to complete the development of standards, not only able to guarantee its effectiveness, but also a higher level of security for passengers and freight.
2. Content

**International Conventions**

- Warsaw Convention on the Unification of Certain Rules relating to air transport, adopted in 1929;

- Convention on International Civil Aviation was adopted in 1924, Chicago, USA

  Given the evolution of air traffic in 1955 and made several changes and additions 1929 Convention, the Protocol signed at The Hague on 28 September 1955 and the Convention supplementary to the Warsaw Convention done at Guadalajara (1961).

  The most important conventions in the field of prevention and combating of terrorism, aviation are:

  - CONVENTION Tokyo, relating to offenses and other Acts Committed on Board Aircraft of 14 September 1963 defining the concept of "capture the aircraft", but provides no firm sanction perpetrators, obliges states to restore control of the aircraft but master or legitimate, to return the aircraft and its cargo.

  Convention applies to offenses and acts which, whether or not they are offenses, may compromise safety or aircraft, persons or property, but jeopardize good order and discipline on board.

  Romania ratified by Decree 627 of 21 November 1963, the Tokyo Convention, having, however, reservations about its provisions, the differences on the Convention, to be submitted to arbitration or International Court of Justice only with the consent of the parties dispute for each case.

  - Hague Convention provides for suppression of unlawful seizure of aircraft and was concluded on December 16, 1970.

  Under the Convention, unlawful seizure of aircraft, the offense created and imposed, in all cases, authors extradition between signatory States in terms of bilateral treaties concluded in this respect and in their absence, under national rules.

  Convention does not apply to military aircraft, customs, or police, and when taking off and landing site is located within the state of registration. In Romania, was ratified by Decree no. 143 of April 19, 1972.

  - Montreal Convention, signed in September 23, 1971, regards the suppression of unlawful acts that threaten civil aviation security, including in this category, violence against a person onboard. Romania has ratified the Montreal Convention by Decree no. 66 of 30 May 1976.

**Traffic and Safety Regulation of Air Transport Flight**

At European level have been launched and adopted several projects related to aviation security regulations and traffic, as Galileo (satellite navigation system) and SEZAR (creating a new generation of air traffic management) and to achieve a "single European airspace."

**Legal**

Article 80 (2) of the EC Treaty of Lisbon Treaty, Article 100 (2) of the Treaty on European Union.
Objectives

Create an “unique space for air traffic”, requires a high performance air system, allowing safe performance, free of obstacles and efficient air transport in the Community. This requirement assumes a high level of flight safety, optimal use of European airspace capacity and a high uniform level of safety, air traffic.

In the late 90’s increased pressure on the Community to optimize existing air transportation system. The reasons were, among others, the constant increase in air traffic, fragmentation of European airspace, vulnerabilities related to airport capacity, delays increasingly larger and military uses a considerable part of the airspace.

Therefore it was necessary first of all:
> Increase the safety standard;
> Improve the overall efficiency of air traffic;
> Optimization of airspace capacity.

The International Framing

At December 13, 1960, five European countries signed the International Convention on Cooperation for the Safety of Air Navigation. Under the Convention, was established in 1981 European Organisation for the Safety of Air Navigation, which includes the Permanent Commission and the Agency for air traffic services.

The term "EUROCONTROL" means both the Convention and organization. The task of this organization is to develop long-term objectives, coordination of national measures required training and promotion. In addition, the organization verifies changes to regional plans to be submitted to the International Civil Aviation Organization (ICAO). In addition, EUROCONTROL route set and collect fees, on behalf of Parties to the Convention.

On October 8, 2001, the European Community signed a protocol on its accession to EUROCONTROL. Community membership is intended to ensure consistency between the two institutions and improve the regulatory framework for air traffic management.

Single European Airspace

On October 10, 2001, the Commission proposed an action plan for achieving the single European airspace. The relevant legislative procedures, the Council of Ministers and European Parliament have agreed on such a package called "single sky".

Currently, it is considered that this package is the most important reform of the EU air traffic policy. The package includes a framework regulation, which sets out general objectives and three detailed regulations for organizing and use of airspace, air navigation service provision and ensure interoperability of European flight safety.

The objective was to achieve, by the end of 2004, an integrated European air space, to be administered according to principles and uniform regulations.

The Framework Regulation (EC) no. 549/2004 of March 10, defined objectives. These include optimizing the use of airspace management at Community level of air traffic, airspace blocks formation of larger and more functionally efficient and increase flexibility in the use of airspace for civil and military.
Regulation (EC) no. 550/2004 of 10 March 2004 on air navigation services, is designed to ensure the application of common standards for flight services and lays down rules for certification of organizations providing air services.

Regulation (EC) no. 551/2004 of 10 March 2004 on the organization and use of airspace, establish procedures to manage, plan and manage air traffic.

By this regulation, the upper airspace is redesigned according to functional criteria and practical, so that blocks of airspace would not coincide with the borders of Member States. Regulation (EC) no. 552/2004 of 10 March 2004 on the interoperability of different systems and network interoperability governing European air traffic management.

**European Agency for Safety Aviation**

By Regulation (EC) no. 1592/2002 of 15 July 2002 was created the European Agency for Aviation Safety (EASA). EASA is an executive agency of the European Union, based in Cologne - Germany. The responsibility of the EASA which includes:

- Adoption of safety regulations on products, people and equipment;
- Inspections and checks to ensure compliance.

In addition, EASA is responsible for the issue of air navigation capability for approval and examination activities and to assist the Commission in legislative activities of air traffic. Regulation (EC) no. 216/2008, EASA has extended skills in flight operation, licensing pilots and aircraft safety in third countries, according to the Chicago Convention.

**Galileo and Sesar**

Commission presented the first satellite navigation system Galileo, in February 1999 and became operational in October 2011. Galileo is a European initiative to build a global satellite navigation system next generation offering high-precision global positioning, under civilian control. Modern and efficient infrastructure satellite Galileo will enhance Europe's technological independence.

The purpose of this program is to equip the EU with independent technology can be applied in a wide range of activities, transport being one of them. Galileo, which was ratified by Regulation (EC) no. 876/2002 of May 21, 2002, as a community project (approved by the European Community and European Space Agency (ESA)).

Appearing as a technological component of European air space unique SESAR program aims to create a new generation of air traffic management.

Single European Sky initiative, aims at reorganizing European airspace in order to reduce the fragmentation of air traffic control and to increase efficiency and capacity of air traffic management system. Currently, airspace is divided according to national boundaries and each state has its own rules and organizational arrangements. Fragmentation of European airspace inevitably compromises efficiency and punctuality.

SESAR project to be realized in three stages:
- Definition phase (2005-2007);
- Development phase (2008-2013);
- Stage of implementation (2014-2020).
Technical and Administrative Procedures in Civil Air Navigation (EU-OPS)

To ensure a high level of safety, the Commission adopted Regulation (EEC) no.3922/91 of December 16, 1991, aimed at harmonizing technical requirements and administrative procedures in civil aviation.

In early 2006, Council and European Parliament have reached agreement on a revision of the Regulation. It introduces the legislation, technical regulations and administrative procedures (JAR-OPS) developed by Aviation Authorities (JAA), as so-called "EU-OPS".

Regulation contains detailed provisions for a variety of areas such as schedules, work and rest periods, instruments and equipment, communication and navigation equipment, transport of dangerous goods, cabin staff and regulations.

Aircraft Safety of Third Countries

Directive 2004/36/EC of 21 April 2004 a procedure for checking safety standards unit of the aircraft from third countries. When an aircraft from a third landing at an airport in the Community, it can be inspected for safety, even when there are concrete reasons for suspicion. Companies warned the flight safety deficiencies will be placed under the control intensified. If it is found safety deficiencies can be issued ban. To ensure more efficient monitoring of the safety standard, the information that a Member State obtained during inspections will be submitted to the Commission and other Member States.

License to EU Air Traffic Controller

By means Directive 2006/23/EC of 5 April 2006 were introduced Community standards to licensed air traffic controller. In addition, regulations were harmonized with the training and authorization requirements for air traffic controllers. This aims to ensure mobility in the EU air traffic controllers.

Air Traffic Safety


Regulation covers, inter alia, the following areas:
> Safety checks for passenger safety areas at airports;
> Control personnel;
> Configuring safe cockpit;
> Training and air-ground communication.

Regulation requires Member States to introduce national security programs for civil air traffic.

In early 2008, the European Parliament and Council have reached agreement on the new Regulation (EC) no. 300/2008 of 11 March 2008, which regulate, among other things, safety during flight, such as access to the cockpit, carrying of weapons, or appointing safety attendants (sky marshals).
**Procedures in Case of Accident**

Directive 94/56/EC of 21 November 1994 establishing the fundamental principles governing the investigation of accidents and incidents in civil aviation, is designed to provide appropriate legal authorities. Warsaw Convention, governing the liability of companies and flight accident refers only to international air traffic. On October 9, 1997 the Community adopted Regulation (EC) no. 2027/97. This is true in case of accident the airline community, occurred in domestic or international flights and from which people suffer.

The liability limits are higher than those specified in the Warsaw Convention. This Regulation amended by Regulation (EC) no. 889/2002 of 13 May 2002. In terms of airline liability in case of accident, legislation has been adapted so as to meet fully the Montreal Convention of 28 May 1999. Thus, certain rules of international air traffic has been given a uniform application.

**Commission Proposals**

Single European airspace II (SES II)

In June 2008, the Commission submitted the second package to achieve the single European airspace [COM (2008) 389]. It consists of four elements:

First, is proposing various amendments to the original rules for the single European airspace [COM (2008) 388]. These include especially the performance objectives required for organizations providing air navigation services, a European network management function and binding deadlines for Member States to improve performance on "functional airspace blocks". Another central concern SESAR program. This will initiate the second phase of SESAR (2008-2013 development phase). Thirdly, the Commission proposes extending the competence of the European Agency for Aviation Safety (EASA) on airports, air transport management and air navigation systems security [COM (2008) 390].

Fourth, the Commission proposes to address the problem of airport capacity and inadequate infrastructure. Required as the time from the airport, allocated to aircraft operators, to be better correlated with air traffic management measures and establish a monitoring center airport capacity.

**The major elements of SES II**

Functional airspace blocks (Functional Airspace Blocks - FAB) To achieve maximum capacity and efficiency of air traffic management network in the Single European Sky to maintain a high level of safety, the upper airspace shall be reconfigured into functional airspace blocks.

Currently, Europe Aviation is very fragmented, the idea of a "Schengen space air" is still far from reality. Of the nine functional blocks, only the United Kingdom and Ireland have signed an agreement to that effect. Fragmentation is due in large part, the question of sovereignty, considering many Member States as domestic airspace.

Also, the compromise achieved is established as the deadline for the operationalization to mid-2012, two months ahead as originally proposed by the European Commission.

**Role of the European Parliament**

Parliament has given great attention permanently air traffic. Parliament favored most draft up a single authority control. However, Parliament has expressly requested and held up a single European airspace (see, for example, that of July 6, 2000). The legislative procedures associated
Parliament succeeded - despite initial opposition expressed by Member States - to be improved cooperation between the civil and military forces and promoting cooperation between national air traffic management. In the legislative procedure for the safety of aircraft from third countries, Parliament was able to impose maintenance, for Member States the option to conduct unannounced inspections on a non-discriminatory basis, even without any reasonable doubt.

In addition, it could stop the approach of the Council to restrict the Commission's authority to adopt measures applicable at Community level against foreign operators not complying with safety standards. When a Member gives notice that a particular airline banned airports, the Commission is now able to extend the ban throughout the EU. For harmonization of technical regulations and administrative procedures in civil air navigation, EP Commission supported the project. During the legislative procedure, the EP pushed for the imposition of regulations related to the practice of forwarding services providers, as well as minimum requirements imposed by cabin staff.

Parliament believes that new technologies and promote interoperability initiatives at Community level in research and technological development (eg Galileo), for smart air systems should be treated as outstanding priorities. In its Resolution of 3 October 2001 on the Galileo program, Parliament emphasized technical and industrial significance of Galileo for flights into space and telecommunications industry in Europe. In negotiations on the Regulation (EC) no. 300/2008 on airspace security, Parliament imposed among other things, severe rules for appointment of sky marshals in aircraft.

3. Conclusions

Aviation security has improved significantly last year, the death toll in aircraft accidents registered a decrease of 40%, according to a study by British company Ascend, which estimates that 2011 was the safest year for commercial aviation. According to Ascend, in 2011 there were 25 air disasters that have caused the deaths of 497 passengers and crew members, compared with 28 disasters that have caused the deaths of 828 people in 2010. The accident rate was an accident last year at 1.52 million flights, compared to an accident to 1.3 million flights in 2010. Based on these figures, 2011 was the safest year beyond 2009, there has been an accident on 1.51 million flights. The accident rate for 2007-2011 is 1.4 million accident flight, said Ascend.

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