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## The Impact of Terrorist Acts on the Security of Civilian Air Navigation

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**Abstract:** Ensuring the security of civil aviation is one of the major priorities of public international law. Terrorist attacks are one of the main threats to the complex process of ensuring the security of civilian air navigation. The causes and effects of these illegal actions are one of the issues discussed in this article. We also aim to analyze the specific characteristics of terrorist acts and their classification in order to highlight their evolution and the impact on the security of civil air navigation. The evolution of legal regulations on preventing and combating the effects of terrorist acts and the relationship between international legal regulations and the national regulatory framework of the Republic of Moldova are the topics to be analyzed in this research.

**Keywords:** civil air navigation security; terrorist acts; national legislation; Republic of Moldova

Terrorism is one of the most dangerous social phenomena in the world and, at the same time, one of the greatest threats to world security. The most developed and richest democratic countries and their allies are especially susceptible to any kind of terrorist attacks. For a balanced development, the systems of such countries require a stable market of natural resources, especially energy-related ones, as well as the predictable behavior of resource-rich countries.

Terrorism, through its forms of manifestation, designates acts of an antihuman nature that provoke, in a certain social environment, intimidating acts foreshadowing an inevitable evil, in all aspects. Terrorist attacks are usually carried out with means that can cause a common danger and that harm, through the produced effects (moral, media, victims, material destruction), the interests of some social groups, some states or even humanity (Simileanu, 2008, p. 27).

Terrorism, as a phenomenon, and terrorist groups, formed at the network level or acting as independent entities, are one of the worst threats of this beginning of the century to many nations of the planet, in relation to such fragile security internationally. Analysts predict a growing development of terrorist groups operating as a national liberation movement or grafting on its action. (Alexe, 2015, p. 71)

Counter-terrorism experts believe that when people realized how much their behavior was determined by threats, they created the concept of terrorism. The terrorists were and are ready to dedicate their lives to the problem and thus completely ignore the health and lives of their victims. The continuous

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development of civilization offers them convenient targets where potential victims are in large human settlements. The latter include, inter alia, passenger ships.

The brutal actions of the Jewish groups, called Sicarii, which targeted the Roman occupation army in 70 AD., are considered to be the first acts of terrorism to find their place in historical documents. From that moment in history, terrorism, as well as the methods and forms of terrorist activity, have continued to develop with the progress of civilization. However, these activities were invariably highlighted by the brutality and insistence on promoting the predominant cause of terrorists. (Glen, 2015, p. 60)

It should be noted that the emergence of terrorism almost coincided with the rise of aviation as a mean of transport. The first recorded case of aviation terrorism dates back to 1930, when Peruvian rebels hijacked a plane to distribute propaganda leaflets. However, this practice has not become a habit for the next four decades, mainly due to the influence of global factors. (Губаев, 2002, p. 11)

The inclusion of a criminal offense in the rule of law outlaws its perpetrator, will generate stronger unanimity and will therefore allow for better international cooperation in its repression. Thus, the terms terrorism or terrorist act are not used in these conventions governing civil aviation. Only in the 1991 Montreal Convention is the term “terrorism” used, but without giving a definition. (Poincignon, 2004, p. 87)

According to the International Civil Aviation Organization (ICAO), the hijacking of a Macao aircraft by terrorists in 1948 is the first case of post-war hijacking. However, other sources refer to the year 1947 when a Romanian aircraft was hijacked. Plane hijackings were rare between 1940 and 1950. However, they occurred sporadically, mainly as part of attempts to escape from communist countries in Central and Eastern Europe. For example, a series of hijackings took place in the early second half of the twentieth century in Cuba, where dissidents took planes to flee Fidel Castro’s regime in the United States.

The situation changed dramatically in the following years, when pro-Cuba rebels, left-wing Americans, and ordinary criminals trying to escape prosecution began hijacking planes from the United States to Cuba. The first of these events took place on November 1<sup>st</sup>, 1958, when four pro-Castro Cuban citizens confiscated a flight from Miami to Havana. The flight ended tragically. The aircraft crashed in northern Cuba while searching for an airfield controlled by Cuban rebels. In 1969, the matter of hijacking between the United States and Cuba was so acute that a bilateral agreement was signed to repress hijacking. (Wolniak, 2019, p. 296)

The policy the Western Europe countries, particularly the United Kingdom, pursued in the Middle East region, through the two world wars until the time when Israel was established as a country, together with the clash of interests of three religions on the territory of Palestine, namely Islam, Christianity and Judaism have proven to be a beneficial circumstance for the existence and advancement of the phenomenon of contemporary terrorism. (Sweet, 2009, pp. 76-79)

For many centuries, Palestine was under the control of Jews, Romans, Christians, and Turks in the interests of the British, and after the expiration of the British mandate, it belonged to Israel and Jordan after 1948 and was finally subjugated to Israel in 1967. Consequently, the Middle East region, including Palestine, where Palestinians of Arab origin are fighting for independence, may be recognized as an active and constant source of cross-border, supranational and especially Islamic terrorism that the whole world is facing so far.

Since the early 1930s, the list of the most frequent objects of terrorist attacks can be extended by adding planes. Since the night of July 22<sup>nd</sup> – 23<sup>rd</sup>, 1968, when three terrorists from the Popular Front for the

Liberation of Palestine took control of an Israeli airliner, El Al, planes have become one of the most common targets of terrorist attacks. At the same time, terrorists have broadened the spectrum of aviation-related targets to include airports and their infrastructure, as well as airline offices. (Wilkinson & Jenkins, 1999, pp. 11-16)

Although this operation was the twelfth hijacking of a civilian aircraft in 1968, it was qualitatively different. For the first time, a plane was hijacked not for criminal or personal reasons, but for the specific purpose of putting political pressure on the enemy and using the incident as a propaganda message to draw the attention of the world community to a political cause. The deliberate creation of a crisis situation and the immediate threat to the lives of the hostages contributed to the formation of a favorable political and psychological context to force the enemy to enter into direct negotiations and to meet the requirements.

The incident had another aspect. Namely, it pointed out to various terrorist organizations that hijacking aircraft is an effective way to achieve political goals by putting pressure on state authorities (Wolniak, Skotnicka-Zasadzień, Zasadzień, 2017, pp. 223-231).

The number of reasons considered by terrorists to be convenient for planning and launching aviation terrorism has also increased. Moreover, the methods applied and the types of attacks have been constantly developed. The growing and constant threat of aviation terrorism has forced international society and some countries to take separate political, strategic and tactical measures to offset the effects of aviation terrorism. Scientists and the results of their research have played a significant role in creating the organizational efficiency of the fight against terrorism.

Although the European Union has gained a leading role in the field of air transport and, in particular, in market liberalization, it has been particularly absent in terms of security. Several reasons can be put forward in this regard. Firstly, due to the growing cooperation between the police and similar agencies in charge of the airport facilities security (police, customs, gendarmerie), the fight against illegal acts regarding air transport has not become a priority for the Commission. (Poincignon, 2004, p. 87)

The security of air transport is therefore a symbolic matter of the highest order, given the high visibility of disasters and airstrikes, as well as the often-high number of casualties. We therefore note that aviation security, which is perceived as a major component of internal security by the Member States and the institutions of the European Union, is at the forefront of the European Union's counter-terrorism policy (Simon, 2000).

The hijacking of Palestinian terrorist groups culminated on September 6<sup>th</sup>, 1970, when four New York planes were hijacked at the same time. The terrorists were successful with three planes. A Swiss DC-8 and an American Boeing 707 were directed to Dawson's Field runway near the Jordanian city of Zarka, and a Pan Am' Boeing 747 was forced to land at Cairo Airport in Egypt because of its size.

The deliberate hijacking of an El Al Israeli flight was, however, thwarted after co-operation between crew, flight attendants and passengers led to the liquidation of Patrick Arguello and the capture of his accomplice, Leila Khaled. The plane landed at London's Heathrow Airport, where Khaled was handed over to police. In September, most of the 366 hostages held at Dawson's Field were released after being transferred to Amman. Only 56 hostages, mostly of Jewish descent, remained in captivity. On September 30<sup>th</sup>, 1970, after many days of negotiations, the terrorists released the rest of the hostages thanks to an agreement by which Khaled and several other FPEP prisoners were to be released. (Avihai, 2009, pp. 70-79)

In the case of airports, it is revealed that the elements of an airport's infrastructure and people coming to airports are the most vulnerable to acts of aviation terrorism. In this sense, they are targeted: passengers and relatives or friends who meet them, customers of stores located in the airport, etc. Air navigation services play three key roles in air traffic management:

- airspace management;
- air traffic flow management;
- provision of air traffic services (area control, proximity and airport).

When terrorists take direct or indirect control over people, machines or software that allow aircraft users to meet planned departures and arrivals, with possible minor limitations and deviations from agreed security levels, it can lead to difficult situations to assess but with security coveted by terrorists. (Glen 2015, p. 67)

Aviation terrorism is a subject that attracts the attention of researchers around the world, which is expressed in publications dedicated to this subject. (Wilkinson & Jenkins, 1999, pp. 11-16) Their analysis leads to the conclusion that the description and explanation of the concept of aviation terrorism is based on facts, i.e. when, where, how and under what circumstances the acts of aviation terrorism take place. In addition, expert studies show how the international community can protect itself against this type of terrorism through specific legal and organizational measures.

As a result, there is a fairly extensive empirical database on aviation terrorism. However, in order to create response systems, the database must be constantly supplemented with new knowledge characterized by classification, typological and semantic order. Due to the gathered facts, the order should follow an indisputable deductive reasoning based on historical generalization acting as an axiom of reality, all to a much greater extent than has been achieved so far. Such an attitude facilitates the creation of modern structures that counteract acts of aviation terrorism.

In such organizations, the main actors, reacting to certain types of aviation terrorism, will take structured measures in time and space that will create a scenario in accordance with the conditions established by certain types of aviation terrorism risks. The literature presents a definition of terrorism from many vital points of view for every researcher and expert-practitioner. As a result, there are many ways to understand current terrorism, including aviation terrorism, which aims at explaining its nature, both in science and in practice. I believe that in the near future the dynamics of the phenomenon will prevent the effective elaboration of an unambiguous definition of terrorism. (Glen, 2015, p. 62)

It is no coincidence that the late 1960s and early 1970s were marked by a sharp rise in the number of terrorist attacks targeting air transport, most of which followed the typical pattern:

- armed hijacking of an airliner;
- diversion to a secure airport;
- issuing requests of a political nature under threat of hostage-taking.

Another, more aggressive form of aviation terrorism is the planes bombing. Thus, bombs of various sizes were planted and detonated not only on-board aircraft but also inside the airport. The explosives commonly used in these bombs included SEMTEX, C-4 and RDX - all readily available on the black market. In the 1970s, SEMTEX was exported on a large scale from Czechoslovakia to countries such as Libya and Syria (Wolniak, 2019, p. 298).

The first bomb attack on an aircraft was the bombing of a Swiss Air airliner heading from Tel Aviv to Zurich on February 21<sup>st</sup>, 1970. It was organized by the FPEP (Palestine Liberation Front). In the 1970s, bombings organized by Arab terrorist groups targeted Israeli carrier El Al. However, since 1974, thanks to US support for Israel's anti-Palestinian policy, terrorists have also begun targeting American aircraft. (Ghobrial & Irvin, 2004, pp. 67-82)

Later, in the 1980s, the dangerous trend of further expansion of aviation terrorism as an instrument of political pressure and propaganda came to an end. Several factors contributed to this, including:

- Rapid use and improvement of airport security technology, making it more difficult for terrorists to illegally bring weapons and ammunition on aircraft board;
- Establishment and effective use of special anti-terrorist groups (such as those deployed to rescue hostages in Mogadishu, Entebbe, etc.);
- Adoption by some states of countermeasures against the leaders of terrorist structures, as revenge and retaliation for acts of aviation terrorism already committed;
- Changes in public consciousness, namely an unambiguous understanding of air piracy as a terrorist act, not an "act of freedom". (Араслы, 2005, p. 97)

Shortly, aviation terrorism can be understood as a part of terrorism in which the subject or object of the attack may be organizations, devices and persons involved in aviation activity or who are beneficiaries of such activity. Aviation terrorism, understood in this way, distinguishes aviation from the general understanding of terrorism, as a specific subject or target of the terrorist attack. Thus, the target of an attack is the most convenient criterion for ordering the phenomenon of aviation terrorism. (Glen, 2015, p. 64)

Indeed, the symbolic nature of both the economic power and the sovereignty of the transport aircraft will make it a prime target in the 1960s and 1970s.

But the legal arsenal that will develop in response to these actions, if it adapts to changes in the forms of this violence, will ignore the political motivations to focus on the outcome. Considering acts of "air piracy" in this way (this journalistic terminology dedicated to the late 1960s clearly illustrates the more criminal than political nature of the action) is in fact subject to a double motivation. The first, of a democratic nature, is invoked by Western states for which only acts, not opinions, can be sanctioned. (Poincignon, 2004, p. 87)

Aviation terrorism is such a complex phenomenon that in order to conceive it, it is necessary to divide it into smaller parts, which are easier to analyze.

Thus, the first level of systematization allows us to distinguish, and at the same time to detect, the activities of aviation terrorism targeting the equipment used in the aviation activity and the personnel that operate it, as well as the use of the aviation potential for launching attacks on non-performing aviation activity.

On the other hand, the detailed analysis presents two important qualities of aviation terrorism. The first is based on the fact that terrorists focus mainly on airlines and airports, as well as air navigation service agencies. The second feature is that other objects may be the target of attack in aviation terrorism. (Merrari, 1999, pp. 11-26)

An analysis of the current dynamics and trends of international terrorism in general and its many individual aspects makes it possible to highlight the following categories of the existing system of threats to civil aviation:

- hijacking of aircraft for the purpose of detaining/exchanging hostages;
- confiscation of the aircraft for the purpose of travel/transport;
- hijacking an aircraft for destruction;
- direct action against the aircraft from the outside;
- direct action against civil aviation ground infrastructure;
- peripheral categories of actions. (Араслы, 2005, p. 101)

The outcome of the division helps to understand the rule applied in terrorist activities, including aviation terrorism, according to which terrorists avoid repeating scenarios that have already been used. (Араслы, 2005, p. 24) Thus, the planned systems for combating aviation terrorism must be open and flexible, able to adapt quickly to the existing situation, in which the object of the aviation terrorist attack will include objects of aviation activity other than air companies, airports or air navigation service agencies.

The classification made by the author Andrzej Glen on aviation terrorism systematizes terrorist activities into 94 types of aviation terrorism acts. For example, when it comes to airline personnel, there are four types of attacks:

- attacking airline personnel with small arms in an aircraft;
- attacking airline personnel with small arms at an airport;
- throwing grenades at aircraft personnel in the aircraft;
- throwing grenades at airport staff at an airport.

However, it should be noted that the list of terrorist attacks on aviation personnel is still open. It should be the subject of ongoing analysis of current and future terrorist attacks. (Glen, 2015, p. 70)

Complementary to the direct action of intergovernmental organizations, the elaboration of Conventions aimed at repressing acts that undermine the security of air transport is an important step in international counter-terrorism cooperation.

The Convention on Offences and Certain Other Acts on Board Aircraft, signed in Tokyo on September 14<sup>th</sup>, 1963<sup>1</sup>, is widely applicable to acts that may compromise the safety of aircraft, persons, cargo on board, order and discipline on board. It provides that both the state of the place where the act was committed and the state of registration of an aircraft have jurisdiction over the crimes committed on board and may therefore serve as a basis for extradition. The Convention for the Suppression of Unlawful Seizure of Aircraft, signed in The Hague on December 16<sup>th</sup>, 1970<sup>2</sup>, complements it. It defines the act of unlawful seizure of an aircraft, which the Contracting States undertake to punish with severe penalties. It also contains detailed provisions on the competence of States to be informed about committed offenses, at the stage of criminal prosecution, at the trial or extradition of offenders. The Convention for the Suppression of Unlawful Acts against the Safety of Civil Aviation, signed in Montreal on September 23<sup>rd</sup>, 1971<sup>3</sup>, expands the scope of the Hague Convention with regard to the offenses in question.

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<sup>1</sup> The Convention on Offences and Certain Other Acts Committed on Board Aircraft, (Tokyo Convention), concluded at Tokyo on 14 September 1963. <https://treaties.un.org/doc/db/terrorism/conv1-english.pdf>

<sup>2</sup> Convention for the Suppression of Unlawful Seizure of Aircraft, The Hague, 16 December 1970 <https://treaties.un.org/doc/db/Terrorism/Conv2-english.pdf>

<sup>3</sup> Convention for the Suppression of Unlawful Acts Against the Safety of Civil Aviation, 23 September 1971 <https://treaties.un.org/doc/Publication/UNTS/Volume%20974/volume-974-I-14118-english.pdf>

The definition of illegal act is extended to offenses committed against passengers and crew, as well as to the destruction of the aircraft, and applies not only to the aircraft in flight but also to the ground before and after the flight and allows ground intervention.

As in the case of the Hague Convention, the offense and the attempted offense are put on an equal footing. In addition to this Convention, the Protocol for the Suppression of Unlawful Acts of Violence at Airports Serving International Civil Aviation, signed in Montreal on February 24<sup>th</sup>, 1988<sup>1</sup>, extends the concept of security to airport facilities.

Not falling into the category of instruments of judicial cooperation, but nevertheless generally cited among the major conventions on civil aviation security, the Convention on the Marking of Plastic Explosives for the Purpose of Detection, signed in Montreal on March 1<sup>st</sup>, 1991<sup>2</sup>, aims at facilitating the detection of chemical marking explosives and at prohibiting the circulation of unmarked explosives. The latest normative act that directly addresses the subject under analysis is the Beijing Convention of September 14<sup>th</sup>, 2010, which entered into force in 2018<sup>3</sup>.

Thus, we can easily conclude that the international regulatory system is sufficiently complex and able to cope with the challenges posed by the phenomenon of aviation terrorism on civil aviation security. However, the presence of international legislation enabling states to work together and intervene to prevent and combat the negative effects of terrorism on civil aviation security is proving insufficient and incapable of ruling out the recurrence of such tragedies.

The results of technical and scientific progress are proving to be directly applicable in the aviation industry and contribute significantly to increasing the capacity of States, responsible international structures and aviation companies to ensure the security of civil aviation. The international normative provisions in accordance with the requirements imposed by everyday life, the direct implementation of high performance technical achievements and the continuous cooperation between the concerned actors based on the principles and rigors established by international regulations, would be, subject to exclusion or reduction of the human factor, the algorithm guaranteeing the avoidance of terrorist attacks or preventing and combating their negative effects on civil aviation security.

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<sup>2</sup> Convention on the Marking of Plastic Explosives for the Purpose of Detection, done at Montreal on 1 March 1991. [https://www.icao.int/secretariat/legal/Administrative%20Packages/mex\\_en.pdf](https://www.icao.int/secretariat/legal/Administrative%20Packages/mex_en.pdf)

<sup>3</sup> *Convention on the Suppression of Unlawful Acts Relating to International Civil Aviation*. Beijing. 10 September, 2010 [https://www.icao.int/secretariat/legal/List%20of%20Parties/Beijing\\_Conv\\_EN.pdf](https://www.icao.int/secretariat/legal/List%20of%20Parties/Beijing_Conv_EN.pdf)

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