

PREVENTING TERRORISM IN THE SKY: A LEGAL STUDY

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ABSTRACT

Since the Palestine Liberation Organization (PLO) kidnapping of airliners in 1968, aircraft has been a focus for domestic and transnational terrorism. Originally, these acts were designed to free captives held by a number of countries or they were for rescue to fund further political pretensions and terrorism. In some cases, it had been purely for profit as a felonious act. Still, with the 1988 bombing of Pan Am Flight 103 over Lockerbie, Scotland, direct attacks on aircraft as surrogate targets for an adversary surfaced. The most remarkable aviation terrorism was held on September 11, 2001. Therefore, only over 50 times, aviation has become a frequent terrain for terrorism. The author aims to highlight the type of air terrorism, the recent attack on aviation, the legal framework to combat air terrorism, the role of the ICAO (the International Civil Aviation Organization), and its present status to combat terrorism in the sky.

Keywords: Aviation Terrorism, Terrorism in the sky, Combatting Aviation Terrorism.

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INTRODUCTION

Aviation Terrorism should be considered a crime against the world. Historically, transportation systems have attracted terrorist attacks. The offense of unlawful hindrance against aviation security should be considered the world's most notorious form of acts of terrorism in the world. Although mortal history has been accompanied by a large number of acts of terror and violence against transnational air navigation with colorful pretensions and provocations, the current age is called the age of terrorism because a similar intimidating miracle has abecedarian differences with its precursor in terms of pretensions, provocation, and geographical compass. In recent decades, the security of civil aeronautics has been covered by a new surge of terrorist attacks and other unlawful acts against aviation businesses with different provocation and purposes. For a similar reason, the strengthening of aviation security under the authority of the International Civil Aviation Organization (ICAO) against vivid forms of threats and offenses has been one of the hardest debates among politicians and legal observers. This article deals with approaches to strengthen the protection of aircraft security. It should be noted that the development of aeronautics-related security depends on compromising what could be done and what is demanded to be done among countries. It should be determined how the transnational society undertakes to borrow vivid forms of legal and specialized measures to make and discipline oppressively the contended lawbreaker and what should be done to develop the transnational legal and governance regarding aviation security.

OBJECTIVE

The author aims to conclude the article to find out the time terrorism in aircraft comes into the front, the reasons behind it, and legal and structural solutions to aviation terrorism.

OPERATIONAL CHRONOLOGY OF TERRORISM IN TRANSPORT AVIATION

During the decade and a half of September 11, 2001, four hijacked planes were destroyed in terrorist attacks and the Pentagon was severely damaged, leaving aviation a major target for

terrorists.¹ It should be noted that the appearance of terrorism has practically agreed with the growth of aircraft as a means of transportation. The first registered case of air terrorism dates back to 1930 when Peruvian rebels seized a plane to spread propaganda.² However, the practice did not become commonplace over the next four decades, mainly due to the effects of World War II³, such as the recent start of aviation terrorism, as we now see, on July 22, 1968, when three gunmen fired oil from Rome on behalf of the Palestinian Liberation Front (PFLP). Israel hijacked a passenger plane on a flight to Abib and demanded an exchange of hostages for the weapons of their captives in Israel.⁴ This operation, although it was the twelfth incident of civilian aircraft capture in 1968, differed qualitatively in its content and maximum goals.

This was the first time that an aircraft was ever hijacked, not for criminal motives or personal reasons, but for the specific purpose of using a political event as a propaganda message to politically pressure an adversary and bring it to the attention of the world. This deliberately created a crisis and an immediate threat to the lives of the hostages that contributed to the formation of a favorable political and psychological context for forcing the adversary to negotiate directly (which could be a matter of recognition) and complied with the demands. It is no coincidence that the late 1960s and therefore early 1970s were characterized by an explosive increase in terrorist activities conducted in aviation, most of which followed a general pattern: armed seizure of aircraft; Hijacking at a safe airport; And issuing demands of a political nature amid threats to execute hostages.⁵

Later, by the 1980s, the harmful trend toward the further spread of aviation terrorism as a tool of political pressure and propaganda came to an end. Several factors were contributing to this⁶, including; Installation and rapid improvement in the technical means of airport security made it difficult for terrorists to secretly carry weapons and ammunition onboard planes, and the implementation of countermeasures by some states has already retaliated and retaliated against

¹ Syed Yusuf Saadat, *International cooperation for counter-terrorism: a strategic perspective*, 15 *Journal Of Policing, Intelligence And Counter-Terrorism* 1–11 (2020), <https://www.tandfonline.com/doi/full/10.1080/18335330.2020.1732451> (last visited Dec 4, 2021)

² J. Aras, *World War Four: The Handbook On Non-Government Paramilitary Systems* 6 (Baku: Sada publishing house) (2002), <https://procon.bg/article/world-war-four-handbook-non-government-paramilitary-systems> (last visited Feb 8, 2022)

³ Philip Baum, *Violence In The Skies: A History Of Aircraft Hijacking And Bombing*. (Summersdale Publishers) (2017)

⁴ O. Gubarey, *Secrets Of Air Terrorism* 11 (Moscow: Veche) (2002)

⁵ Bryan Labrecque & Rodger Bates, *Terrorism and General Aviation*, 9 *The Journal Of Public And Professional Sociology* (2017), <https://digitalcommons.kennesaw.edu/cgi/viewcontent.cgi?article=1127&context=jpps> (last visited Feb 2, 2022)

⁶ Bruce Hoffman, *Inside Terrorism* 77 (Columbia University Press) (2017), <http://cup.columbia.edu/book/inside-terrorism/9780231174770> (last visited Feb 8, 2022)

the terrorists of the aircraft against the leaders of the terrorist structures; Changes public awareness, such as the notion of hijacking as clearly an act of terrorism.⁷

Although the trend of aviation terrorism has stalled, the trend of politically motivated hijackings by pilots has not disappeared.⁸ Since the mid-1980s, a qualitatively different kind of terrorism has appeared in the field of aviation. This new phenomenon was also transformed and supported by the shift in the media sector, which accelerated the growth of its significance. The hijacking of the TWA Boeing 7227 by Lebanese Hezbollah terrorists in July 1985, followed by a two-week hostage drama, the transfer of the hijacked plane to various airports in the Middle East, the killing of one of the passengers, and interviews with released hostages were broadcast live on US television.⁹ As an immediate result, after the episode aired, more than 850,000 Americans refused to go abroad for fear of committing acts of terrorism; Another 200,000 have decided to spend their holidays in their homeland. As a drastic effect, 50% of reserved American travel to Italy and 30% to Greece were canceled, which also severely damaged the economies of those countries.¹⁰ This example is an example of the change in the dynamics of air terrorism, as it took on two more dimensions beyond an attack on a branch of transport: economic and psychological warfare.¹¹ Since that time the aircraft had attracted terrorist attention and measures had been taken to reduce terrorist attacks, with security at the airport greatly increased.¹²

AVIATION TERRORISM

⁷ Omi Hodwitz, *Threats to Aviation: Modeling Effectiveness*, 15 JOURNAL OF APPLIED SECURITY RESEARCH 1–23 (2020), <https://www.tandfonline.com/doi/full/10.1080/19361610.2019.1710093> (last visited Dec 4, 2021)

⁸ Jangir Arasly, *Terrorism and Civil Aviation Security: Problems and Trends*, 04 CONNECTIONS: THE QUARTERLY JOURNAL 75–89 (2005), <https://isij.eu/article/terrorism-and-civil-aviation-security-problems-and-trends> (last visited Feb 7, 2022)

⁹ Ibid.

¹⁰ Jangir Arasly, *Partnership for Peace Consortium of Defense Academies and Security Studies Institutes Terrorism and Civil Aviation Security: Problems and Trends*, 4 SOURCE: CONNECTIONS 75–90 (2005), https://www.jstor.org/stable/26323156?seq=1#metadata_info_tab_contents (last visited Feb 2, 2022)

¹¹ Radosław Wolniak, *Aviation terrorism and its impact on the aviation industry*, 2019 SCIENTIFIC PAPERS OF SILESIAN UNIVERSITY OF TECHNOLOGY. ORGANIZATION AND MANAGEMENT SERIES 295–304 (2019), <https://www.polsl.pl/Wydzialy/ROZ/ZN/Documents/zeszyt%20134/Wolniak%201.pdf> (last visited Feb 7, 2022)

¹² *Supra note 6*, 182.

Definition: Aviation terrorism can be defined as a political act against civil aviation carried out by non-state actors who systematically target civilians and intentionally use violence to create terror and coerce authorities, at times by making demands.¹³

Reasons: The academic and professional literature reveals seven fundamental reasons explaining why terrorists have targeted civil aviation. Namely, such attacks: Project a global reach, even if local; Generate the rapid transmission of data, increasing audience and impact; Depreciate the embodiment of state power that airlines and airports symbolize; cause powerful economic consequences beyond civil aviation; Have a high lethal potential, and a high probability of affecting nationals of several countries; Impede interconnectivity, disrupting global air transport; and Provide the capacity to instantly make a strong statement to world leaders.¹⁴ Many terrorists claim that violence is the best alternative to other forms of political protest and propaganda, for financial reasons such as providing for their families.¹⁵ Other people join the terrorist group because they are otherwise outsiders and have no place in society. The main threat to aviation in the face of internal terrorism is rising together.

The motives of malicious and intentional civil aviation criminal activities can be seeking revenge, sabotage, or espionage, and self-interested profiteers that are aware that their access to their materials, systems, networks, and infrastructure is effective for terrorists.¹⁶ They can provide terrorists with access to information on a few agencies or significant buildings that could help in an attack like the layout of an airport. Terrorists can also hire insiders to work for them or gain access to facilities, systems, and data to become insiders.¹⁷

Types Of Terrorist Activities

Category of actions	Object of actions	Aim of actions
Hijacking for retention	Passengers	Achieving political, propaganda, and emotional results; Not directly linked to damage

¹³ Bryan Labrecque & Rodger Bates, *Terrorism and General Aviation*, 3336763 THE JOURNAL OF PUBLIC AND PROFESSIONAL SOCIOLOGY (2017), <https://digitalcommons.kennesaw.edu/cgi/viewcontent.cgi?article=1127&context=jpps> (last visited Feb 2, 2022)

¹⁴ Ibid.

¹⁵ Gerard Meurant, *Airport, Aircraft, And Airline Security* (Elsevier 2) (2013)

¹⁶ Mark G. Stewart & John Mueller, *Terrorism Risks and Cost-Benefit Analysis of Aviation Security*, 33 RISK ANALYSIS 893–908 (2012), https://www.researchgate.net/publication/232085535_Terrorism_Risks_and_Cost-Benefit_Analysis_of_Aviation_Security (last visited Feb 7, 2022)

¹⁷ ICAO SAFETY REPORT, 2018 (2018), <https://www.icao.int/safety/Pages/GASP.aspx>

Hijacking for movement	Aircraft	Transferring terrorists from one geographical location to another
Hijacking for annihilation	Passengers and Aircraft	Inflicting material, political, and psychological damage
Direct action against aircraft	Passengers and Aircraft	Inflicting material, political, and psychological damage
Direct action against ground infrastructure	Ground infrastructure (and, more rarely, aircraft or passengers)	Inflicting material, political, and psychological damage
Peripheral categories	Aircraft (and, more rarely, passengers, crew, ground infrastructure)	Various

A. Hijacking for Retention: Aircraft passengers are the first object of activity in this department. Realize political, propaganda, and psychological influences (demonstrations of power and presence; pressure on state structures and public opinion; maximum attention; compliance with conditions and demands).¹⁸

B. Hijacking for Movement: The aircraft, as a means of transportation, is the primary target of this class of activities, with passengers serving as another component to increase the guarantee of the safety of terrorists. The purpose is to ensure that the movement of terrorists from a region is restricted to a geographical point for a slightly different reason.¹⁹

C. Hijacking for Annihilation/Destruction: One of the primary objects of this section of operations is to use an aircraft as an aircraft to hit a pre-selected target; Passengers act as a factor, ensuring that an additional level of overall damage will result from the final attack. The aim is to directly damage the elements together, including political and psychological damage to the opposition.²⁰

¹⁸ *Supra note 8*

¹⁹ *Ibid.*

²⁰ *Ibid.*

D. Direct Actions against Aircraft: Both airlines and passengers/crew on board are targets of this category of attack, whose aim is to destroy an aircraft within the air and annihilate people to incur material, political, and psychological damage. In practice, terrorists prefer to use Improvised Explosive Devices (IED) and Man-Portable Air Defense Systems (MANPADS) similar to shoulder Rocket Propelled Grenade Launchers (RPG), Anti-Tank Guided Missiles (ATGM), heavy and light machine- ordnance, anti-material gun rifles, and assault rifles.²¹

E. Direct Actions against Ground Infrastructure: Both the aircraft and the passenger/passenger crew are targeted in this section of the attack, which aims to destroy an aircraft in the air and destroy people with material, political and psychological damage inc. Such as shoulder rocket-propelled grenade launchers (RPGs), anti-tank guided missiles (ATGMs), heavy and light machine guns, anti-metal sniper rifles, and assault rifles. The target of this department's terrorist attack is the ground infrastructure supporting civil aviation. The purpose is to inflict material, political and psychological damage and to ensure the veracity of the war. Stable technical infrastructure (passenger and cargo terminals, hangars, fuel tanks, traffic radar, and other facilities), and aircraft at the bottom remain risky targets for attack or capture purposes. This element of the terrorist threat structure is widespread.²²

F. Peripheral Categories: This section does not relate to activities that are particularly terrorist, but to their parameters (criminal character) or to actions that are consistent with terrorism in their immediate and long-term consequences. The targets of the operations of this department are primarily aircraft, and rarely passengers, crew, and consequently the supporting ground infrastructure of civilian aircraft. Its goals are different from instant or indirect threats to the aircraft's board, and they are motivated differently. This includes the use of civil aviation by figures of international terrorism for transportation (that is, for indirect support of terrorist activity); use of civil aviation by figures of transnational organized crime as means of carrying out illegal activities; forcible actions on board airliners based on deviant social or psychic behavior of individual passengers or groups of passengers.²³

²¹ Ibid.

²² Ibid.

²³ Ibid.

CASE STUDIES OF AVIATION TERRORISM

Out of the 1,363 recorded aviation terrorist attacks within the GTD, alongside other cases not yet recorded, there are several distinct attacks. The distinctions include sort of attack, weapons used, perpetrators, security failures, number of deaths, and indicators and warnings of the attacks or of insider threat involvement. The most significant and impactful of these attacks include, but are not limited to, the Dawson's Field Hijackings, the Lockerbie bombing, the 9/11 attacks, the Underwear Bomber plot, the United Parcel Service (UPS) Cargo Planes Ink Cartridge plot, the German co-pilot hijacking suicide, and the Ataturk Airport Bombings. These attacks and plots heavily impacted aviation security and supplied insight into the threat of insiders in aviation.

A. Dawson's Field Hijackings: On 6 September 1970, members of the Popular Front for the Liberation of Palestine (PFLP) hijacked four civilian aircraft departing to New York City from multiple airports in Europe. The hijackers took their total of 310 hostages, crew and passengers included, to an abandoned airport in a Jordanian desert. The PFLP demanded the release of captured PFLP militants held in the U.K., Switzerland, and Germany.²⁴

B. Lockerbie Bombing: On 21 December 1988, approximately 38 minutes after takeoff from London, Pan Am Flight 103 exploded 31,000 feet over Lockerbie, Scotland. All 250 people on board the New York-bound plane and 11 people on the ground died. U.S. and British officials found fragments of a circuit board and a timer, indicating that it was a bombing, not a mechanical failure. The perpetrators are unknown. However, a Scottish court found a Libyan man, Adbel Basser Ali al Megrahi, guilty. Khalifa Fhimah was acquitted. Al Megrahi was the Libyan intelligence aviation security chief and was seen bringing a suitcase very similar to the one found holding the explosive device to the Malta airport where the flight departed from. Fhimah was also the former Libyan Arab Airlines station manager at the Malta airport, indicating that he likely abused his access and privileges and aided Al Megrahi. The security failure, in this case, was poor checked baggage screening, specifically for employees.²⁵

²⁴ Ke Krull, *The Threat Among Us: Insiders Intensify Aviation Terrorism* (US Department of Energy) (2016), https://www.pnnl.gov/main/publications/external/technical_reports/PNNL-25689.pdf (last visited Feb 8, 2022)

²⁵ Ibid.

C. FedEx Flight 705: On 7 April 1994, a lone wolf named Auburn Calloway attempted to hijack a FedEx cargo plane bound for Memphis. The crew members were severely injured by a spear gun and a hammer that Calloway brought on board with him hidden in a guitar case. There were no fatalities. Although there were no direct indicators or warnings of this aviation attack. The attempted hijacking was planned to end in a suicide crash that would appear as an accident.²⁶

D. 9/11 Attacks: On 11 September 2001, 19 al-Qaeda terrorists hijacked four commercial passenger jet airliners, crashing two into the Twin Towers at the World Trade Center in New York City and another into the Pentagon in Virginia. The fourth plane never reached its intended target, crashing in Pennsylvania, likely due to passengers and crew overpowering the hijackers. Including those on board the flights and in the targeted buildings, 2,997 people were killed. This is the largest loss of life due to a terrorist attack on U.S. soil. The 9/11 attacks are symbolic because the Twin Towers were widely considered symbols of America's power and influence and the Pentagon is the U.S. Department of Defense's headquarters.²⁷

E. Underwear Bomber Plot: On 25 December 2009, al-Qaeda member Umar Farouk Abdulmutallab boarded a plane in the Netherlands bound for Detroit. He attempted to detonate plastic explosives hidden in his underwear while on the Northwest Airlines flight. After remaining in the aircraft's restroom for over 20 minutes, Abdulmutallab returned to his seat. Moments later, he attempted to detonate the bomb, however, the explosives failed, starting a fire in Abdulmutallab's underwear. A passenger extinguished the fire and the plane made an emergency landing. No casualties occurred.²⁸

F. UPS Cargo Planes Ink Cartridge Plot: On 29 October 2010, British authorities foiled a plot to bomb a UPS cargo plane over the U.S. AQAP claimed responsibility for the explosives hidden in ink cartridges onboard aircraft departing from the U.K. and Dubai. A mobile device connected to the detonator was set to go off at 8:30 a.m. Eastern Standard time. The ink cartridges were addressed to a synagogue in Chicago, although it is unknown if that was the target. Saudi intelligence claimed that there would be an aircraft attack relatively soon on a

²⁶ Ibid, 10.

²⁷ Ibid.

²⁸ Ibid.

plane inbound to the U.S. The flaws in this instance were technological. The bombs were more sophisticated than what the explosive detection technology could detect at the time.²⁹

G. German Co-pilot Hijacking Suicide: On 24 March 2015, a German wings Airlines co-pilot, Andres Lubitz locked the pilot out of the cockpit when he left for the restroom and hijacked the plane mid-flight. He crashed the aircraft into the French Alps, killing all 150 passengers and crew. He acted as a lone wolf, with no terrorist organization connections.³⁰

H. Ataturk Airport Bombings: On 28 June 2016, two ISIS terrorists entered the Ataturk Airport in Istanbul shooting guns and eventually detonating suicide vests. The terrorists attacked large crowds in unsecured portions of the airport, killing 42 and injuring 239. Although not directly claimed by ISIS, the attack has many hallmarks of those in Brussels and Paris due to the target and method, specifically the weapons and explosions.³¹

I. Malaysia: A Final Example: In June 2016, Malaysia's Immigration Department fired 15 of its officials after uncovering a security breach that likely began in 2010. As many as 100 people were involved in allowing certain passengers to travel unchecked through the country's main international airport. Malaysian officials are classifying this breach as sabotage due to the abuse of privileges on a computer system that checks travelers' passports against databases that include lists of lost and stolen passports. With the system going offline, passport control officers have to manually screen passengers, likely permitting countless individuals with stolen and forged passports through security undetected. Officials believe that the malicious insiders were working online and receiving instructions from a criminal group overseas. The culprits were granted access to the system and could move the cursor without someone physically operating it. This finding reveals that internal involvement is increasing and passport security is getting more vulnerable. This is another tactic that terrorists can use to exploit and inflict violence on aviation.³²

PRIOR CONVENTION TO COMBAT TERRORISM IN THE SKY

²⁹ Ibid.

³⁰ Ibid, 11.

³¹ Ibid.

³² Ibid.

A. Tokyo Convention(The Convention on Offences and Certain Other Acts. Committed Onboard Aircraft)

The Tokyo Convention is the first multilateral agreement adopted by the international community to combat hijacking. Indeed, its significant contribution to aviation security is outside the realm of counter-terrorism.³³

Article 1 para 1 states that the state where the aircraft is registered can exercise jurisdiction over the crime committed on board.³⁴ Mr. Boyle, the Chief of the United States Delegation to the Tokyo Conference adopting the treaty, described the article as "probably the most important aspect of this conference." The Tokyo Convention is not only a recognition of the state's ability to enforce liability and law on aircraft registered in this state but also a commitment of the parties under Article 2, Article 2 to establish such a right.

At the Tokyo Convention, Article 4 of the General Power of the State states that a treaty which is not a registered state, except in cases where there is an effect of crime in that territory," cannot agree with the state aircraft. Except it is a multilateral international treaty that requires the exercise of jurisdiction by its national or permanent resident, against its protection, against its protection, in violation of the rules of the air, or in an offense to ensure compliance with any obligation of such state.

On the other hand, since the terms of Article 4 of the Tokyo Convention limit a state's freedom to exercise territorial jurisdiction following its laws, and therefore deviate from Articles 11 to 13 of the Chicago Convention, it must be explained how it may be considered compatible with later terms. When the commander of an aircraft believes that there is a reasonable basis for believing that a person has boarded the aircraft committed or is to commit an offense or law referred to this Act, it is necessary to take reasonable action against such person.

B. The Hague Convention (The Convention for the Suppression of Unlawful Seizure of Aircraft)

The Hague Convention not only criminalizes a law as a crime of hijacking but also promises to make the crime punishable by severe punishment.

³³ Hedayatollah Shenasaee & Faramarz Shirvani, *The ICAO Role to Improve Aviation Security against Acts of Unlawful Interference*, International Journal Of Social Science And Humanities Research 237-245 (2017), <https://researchpublish.com/issue/IJSSHR/Issue-3-July-2017-September-2017/3> (last visited Jan 18, 2022)

³⁴ Article 1 THE TOKYO CONVENTION (1963), <https://www.mcgill.ca/iasl/files/iasl/tokyo1963.pdf> (last visited Feb 8, 2022)

Article 1 of The Hague Convention denotes that any person who is on board an aircraft in flight illegally, by force or intimidation, or in any other way intimidating, arresting, or controlling the aircraft, or attempting to perform any such act, or a colleague of a person who commits a crime by attempting or attempting to perform such an act (hereinafter referred to as a "crime").³⁵ The most notable contribution of the Hague Convention was the establishment of legal principles widely regarded as "extradition or litigation". If the treaty state in which the accused offender is found does not redeem any text, it will be bound, without exception, whether the offense occurred in its territory, the purpose of the trial being to submit the case to its appropriate authority.

The Hague Convention was the only global convention, namely, the Single Convention on Narcotic Drugs, which included the concept of disposing of the obligation to prosecute excess disrespect. The United States proposed in the draft convention that "there should be a clear statement that hijacking was not considered a political crime and should be treated as any other serious, common and criminal offense." Another contribution of the Hague Convention, which is not often discussed in the academic literature but is important to the ICAO's Security Order, establishes a reporting requirement under Article 11.

C. The Montreal Convention (The Convention for the Suppression of Unlawful Acts Against the Safety of Civil Aviation)

Even before the conclusion of The Hague Convention, it was realized that hijacking was not the only crime against the protection of civilian aircraft; Vandalism, often through explosive countries on board planes, has become a growing concern. As a result, the Montreal Convention was adopted in 1971.³⁶

The goal of the Montreal Convention is clearly stated in its title: Suppression of Illegal Work Against the Protection of Civil Aviation The parties working illegally against the protection of civil aviation and the urgent need to take appropriate action to prevent such illegal work.

Cracking down on illegal activities is not the end in itself, one of the ways to increase the world's confidence in the safety of civil aviation. Offenses listed under the Montreal Convention include acts of violence against an occupant of an aircraft, destroying an aircraft in service, enabling the aircraft to fly, placing or damaging a service aircraft in any way, by

³⁵ THE HAGUE CONVENTION (1970), <https://www.mcgill.ca/iasl/files/iasl/hague1970.pdf> (last visited Feb 8, 2022)

³⁶ THE MONTREAL CONVENTION (1971), <https://treaties.un.org/doc/Publication/UNTS/Volume%20974/volume-974-I-14118-english.pdf> (last visited Feb 8, 2022)

any means, advice, or substance. This may destroy the aircraft, destroy or damage facilities on the aircraft or interfere with their operation and communicate intentional information.

Article 1, Article 1 (e) requires that the law must "endanger the safety of aircraft." As a result, the act of communicating fraudulently that an aircraft would be bombed would not be considered a crime unless it led to the actual consequences of endangering the aircraft. Article 1(b) and paragraph 1 of sub-paragraphs (paragraph 1) of the Montreal Convention consider certain situations where offenses do not contain the element of "endangering the safety of aircraft" in the Actus Reus. This happens when the aircraft is in service subject to crime, but not on the aircraft.

D. The Montreal Supplementary Protocol (The Protocol for The Suppression of Unlawful Acts of Violence at Airports Serving International Civil Aviation)

As the basis of the argument, the Hague and Montreal Conventions have been explicitly addressed. The act of destroying or damaging facilities on the air and communicating false information has already been discussed as the purpose of such criminalization is to "protect the aircraft". For the protection of airports, it was considered part of checks and balances.³⁷

The Montreal Supplementary Protocol was adopted in 1988, extending the application to cover two additional offenses of the Montreal Convention, namely, acts of violence against persons at airports and acts of destroying or seriously damaging airports or facilities that are not in air service or disrupting airport services. For any crime to be committed, it is a matter of law and order against the primary focus is aviation safety.

E. The Mex Convention (The Convention on the Identification of Plastic Explosives)

Another major effort of the ICAO to prevent illegal interference was the adoption of the Convention on the Identification of Plastic Explosives in Montreal 1991 (Max Convention).³⁸ Unlike the Hague Convention, the Montreal Convention, and its complementary protocols, which criminalize certain actions, the Max Convention has moved from an oppressor to a deterrent. The importance of preventive measures has long been recognized. Criminal law can bring criminals to justice but does not cure the damage caused by their criminal activities. With this in mind, the ICAO has adopted a focused approach to prevention from day one.

³⁷ THE MONTREAL SUPPLEMENTARY PROTOCOL (1988), <https://www.mcgill.ca/iasl/files/iasl/montreal1988.pdf> (last visited Feb 8, 2022)

³⁸ THE MEX CONVENTION (CONVENTION ON THE MAKING OF PLASTIC EXPLOSIVES) (1991), https://www.icao.int/secretariat/legal/Administrative%20Packages/mex_en.pdf (last visited Feb 8, 2022)

From a legislative point of view, the Max Convention introduces a lot of innovative features that guarantee further discussion. The subject matter of the Convention has gone beyond the traditional theoretical expertise of the ICAO, as the impact of plastic explosives is not limited to the civil aviation sector. The Convention represents a concerted effort by states to restrict their freedom of action in the interests of general protection. Control of plastic explosives by touching key elements of state sovereignty is closely involved in the military and police activities of the state. It does not restrict or prohibit the production of plastic explosives per irrigation. It simply prohibits the production of unmarked plastic explosives. The purpose is to prevent these explosives from being used illegally against the protection of aircraft or the protection of other public facilities.

Related to the functions of the ICAO Assembly and the implementation of the Council's governance. Given the mandatory requirement that large international airports be equipped with devices to detect explosives identified under the convention, this measure could be even more beneficial to aircraft safety.

TECHNOLOGIES TO COUNTER AVIATION TERRORISM

A. Advanced Imaging Technology (AIT): AIT machines deployed by TSA use almost non-ionizing electromagnetic waves employed by wireless data transmitters to detect hidden objects in a passenger's body without physical contact. As the passenger enters the EIT machine and stays stationary, the transmitters generate millimeter waves that are either absorbed, scattered or they are reflected through the clothing, leaving the person's skin and any potential threat off and then back to the receivers. The total time interval of this technique for an automatic decision from the start of the scan is less than six seconds.³⁹

B. Advanced Technology X-ray (AT-2): Advanced Technology-2, or AT-2, is the first technology for systems to carry portable items. These-2 systems are equipped with multiple fixed X-ray sources that are currently determined as equivalent potentials, approximately 140 kilovolts (kV). Electromagnetic radiation or photons from these X-ray sources enter the portable items inside the tunnel and therefore decrease in intensity through gravity, which includes absorption, refraction, and scattering. Detectors on the other side of the tunnel measure

³⁹ Steve Karoly, *Technologies to counter aviation security threats*, 1898 AIP CONFERENCE PROCEEDINGS 1–8 (2017), <https://aip.scitation.org/doi/abs/10.1063/1.5009231> (last visited Feb 2, 2022)

the level of emotion.⁴⁰ Identification algorithms then support a trained library of specific threat topics that can be identified for this threat. A variety of materials, including threat items, will be available to operators in a specific color to help identify threats.⁴¹

C. Explosives Trace Detection (ETD): A technology called ion mobility spectrometry (IMS) to detect monogram explosive particles is used by TSA ETDs. This technique separates and identifies ionized molecules and supports their movement within the IMS. When a person or bag goes through secondary screening, the TSA officer will collect a swab recruiting sample, then the sample will be sorted as a disperser. The disrober applies heat to the sample, causing the cut explosives to transform and transform into a gas.⁴²

D. Detection System (EDS): Explosive Detection Systems (EDS) are employed to screen baggage tested by TSA. The EDS uses computerized tomography (CT) technology on the tested baggage screen that was dropped off at the check-in counter before the aircraft was loaded. City machines use many X-ray images to provide cross-sectional images of the birds inside the bag.⁴³

THE MEASURES TAKEN BY THE CIVIL AVIATION SYSTEM TO HANDLE RECENT TERROR ATTACKS

In the days following the terrorist attacks in Paris in November 2015, the European Parliament began assessing risks in the aviation industry centered on the emerging terrorist threat. Issues raised within the hazard assessment framework include: the threat of cargo planes and commercial flights, illegal smuggling of weapons and explosives, return aircraft from conflict zones, and commercial aircraft flying into conflict zones.⁴⁴

⁴⁰ *Making Borders More Secure, News and Features on the IcaoTraveller*, 112 ICAO TRIP MAGAZINE (2017), https://www.icao.int/publications/journalsreports/2017/TRIP_Vol12_No2.pdf (last visited Feb 1, 2022)

⁴¹ *Supra note 39*, at 5.

⁴² *Supra note 39*, at 6.

⁴³ *Supra note 39*, at 7.

⁴⁴ *Brussels Airport Tightens Security, Opens 18 Automated Border Control Gates*, SPUTNIK INTERNATIONAL, Jan. 14, 2016, <https://sputniknews.com/20160114/airport-security-gates-terrorism-1033143474.html> (last visited Feb 8, 2022)

The issue has been raised in the wake of the EU's response to the Paris attacks, where steps have been taken to increase the use of new technology instead of manual security checks,⁴⁵ with the latest screening machines set up to detect explosives.⁴⁶ In December 2015, an Air France flight from Mauritius to Paris was forced to land for fear of being bombed. An investigation into the incident found a fake bomb on the plane.⁴⁷ Though the attack didn't occur actually, the incident could destroy the safety of the passengers; or the actual flight.

In recent years, especially in the face of the growing threat of terrorism and organized crime, law enforcement agencies have begun using PNR data with greater frequency and efficiency.⁴⁸ This type of data includes flight date and route, contact details, travel agent, payment details, seat number, and passenger luggage. Although airlines have been required to transfer their passengers' entry information to EU countries since the train attack on Madrid in 2004, it appears that they refrain from providing PNR data to non-EU countries subject to EU data protection laws. Provide adequate protection for.⁴⁹

The terrorist attacks on Brussels Airport in March 2001 and Istanbul Ataturk Airport on June 29, 2016, served as another step in the fight against radical Islamic terrorist organizations against the West, with both psychological and economic implications. Brussels Airport suffered an economic blow when the departure area was completely damaged, an inescapable fact that has affected the airport's ability to operate at full capacity to this day.⁵⁰

Another incident that points to the advantage that somebody could inflict increased aircraft infrastructural damage at the time, although it had been not conducted as terrorism, occurred in June 2016 when a person threw a device at a world airport check-in desk. In Shanghai, four passengers were injured. In preliminary investigations, the investigators found that the attacker filled a bottle with fireworks and gunpowder powder from the fireworks.⁵¹ A special committee

⁴⁵ *Commission presents a new Aviation Strategy for Europe*, EUROPEAN COMMISSION, Dec. 7, 2015, https://ec.europa.eu/commission/presscorner/detail/en/IP_15_6144 (last visited Feb 8, 2022)

⁴⁶ Colin Freeman, *Airline security "cannot screen for hoax bombs", experts warn*, THE TELEGRAPH, Dec. 17, 2021, **Error! Hyperlink reference not valid.** (last visited Dec 17, 2021)

⁴⁷ *European Agenda on Security - State of Play*, EUROPEAN COMMISSION, BRUSSELS, Nov. 17, 2015, https://ec.europa.eu/commission/presscorner/detail/en/MEMO_15_6115 (last visited Feb 8, 2022)

⁴⁸ Javier Argomaniz & Peter Lehr, *Political Resilience and EU Responses to Aviation Terrorism*, 39 STUDIES IN CONFLICT & TERRORISM 363–379 (2016), <https://research-repository.st-andrews.ac.uk/handle/10023/11390> (last visited Jan 8, 2022)

⁴⁹ Bryan Labrecque & Rodger Bates, *Terrorism and General Aviation*, 9 THE JOURNAL OF PUBLIC AND PROFESSIONAL SOCIOLOGY (2017), <https://digitalcommons.kennesaw.edu/cgi/viewcontent.cgi?article=1127&context=jpps> (last visited Feb 2, 2022)

⁵⁰ Luc. Citrinot, *Belgium reshapes after Brussels attack*, 28 IHS JANE'S AIRPORT REVIEW (2016), <https://www.proquest.com/docview/1778916998> (last visited Feb 8, 2022)

⁵¹ Stevan Jiang & Paul Armstrong, *Man hurls explosive device at Shanghai airport, then attempts suicide*, CNN, Jun. 13, 2016, <http://edition.cnn.com/2016/06/12/Asia/shanghai-airport-explosion/> (last visited Dec 27, 2021)

of the European Union released a report a few months before the Brussels attack revealed the existence of security gaps at Brussels airport, but no steps have been taken to correct them. Belgium's transport minister, Jacqueline Gallant, has since resigned.⁵²

Another topic of headline-making is screening airport staff. In November 2015, French media reported that several non-governmental organizations at Charles de Gaulle Airport in Paris were under investigation for hiring staff under the surveillance of French law enforcement authorities. These employees, who had access to sensitive sites inside the airport, were nationalized as national "Fish-S", which was an indicator of a significant threat to national security. In December 2015, the security clearances of more than 700 employees working in the sensitive area of Paris airport were revoked on suspicion that they had been subjected to extremist procedures.⁵³ Airport personnel has been thoroughly and rigorously tested since the deadly terrorist attacks in France and Belgium. Authorities searched more than 4,000 lockers at Charles de Gaulle Airport and Oli Airport in Paris.⁵⁴

Additionally, Brussels Airport Police claimed that at least 50 Islamic State supporters attached to the airport as baggage handlers, cleaners, and catering staff, most of whom have tags that allow them direct access to the plane. A stern letter sent by the police said that a warning was sent to the agencies about these employees but nothing was done about the matter.⁵⁵ It is important to note the initiative of US Congressman John Cuttack to provide a platform for TSA to assess risks at airports around the world and to provide a platform for high-risk airports to deal with these threats.⁵⁶ There are threats to traveling American travelers.⁵⁷

⁵² Joseph S. Szyliowicz, *Aviation Security: Promise or Reality?*, 27 *STUDIES IN CONFLICT & TERRORISM* 47–63 (2004), https://www.researchgate.net/publication/261667175_Aviation_Security_Promise_or_Reality (last visited Feb 7, 2022)

⁵³ Karina Guthrie, *South Pacific Civil Aviation Safety and Security Through Regionalism: New Initiatives for the Pacific Aviation Safety Office*, 5 *JOURNAL OF POLICING, INTELLIGENCE AND COUNTER-TERRORISM* 58–73 (2010), <https://www.tandfonline.com/doi/abs/10.1080/1057610X.2016.1117334?journalCode=uter20> (last visited Jan 30, 2022)

⁵⁴ Lizzie Dearden, *Paris attacks: 70 staff have security clearance revoked for suspected "radicalization" at French airports*, *THE INDEPENDENT*, Dec. 15, 2015, <https://www.independent.co.uk/news/world/europe/paris-attacks-70-staff-have-security-clearance-revoked-for-suspected-radicalisation-at-french-airports-a6773691.html> (last visited Feb 8, 2022)

⁵⁵ John Stevens, *At least fifty ISIS supporters are working as baggage handlers, cleaners and catering staff at Brussels airport, claim police*, *DAILY MAIL*, Apr. 1, 2016, <http://www.dailymail.co.uk/news/article-3517493/At-FIFTY-ISISsupportersworking-baggagehandlers-cleaners-catering-staff-Brusselsairportclaimpolice.htmlhttp://edition.cnn.com/2016/06/12/asia/shanghai-airportexplosion/> (last visited Dec 7, 2021)

⁵⁶ Jhon Katko, *Katko Legislation To Strengthen Security At International Airports With Direct Flights To United States Passes House*, *Washington: Federal Information & News Dispatch*, Apr. 27, 2016, <https://www.proquest.com/other-sources/katko-legislation-strengthen-security-at/docview/1784843088/se-2> (last visited Feb 8, 2022)

⁵⁷ Janene Pieters, *U.S. Pressing Netherlands on tighter airport security*, *NEW YORK TIMES*, Dec. 1, 2015, <http://www.nytimes.nl/2015/12/01/u-s-pressingnetherlandson-tighter-airport-security/65> (last visited Dec 7, 2021)

In conclusion, despite recent changes in Europe and therefore the USA in response to recent terrorist attacks against the aviation industry, passenger records got to be mentioned, and thus efforts to market international cooperation with the appliance of biometric approvals, emphasizing regular safety surveillance of transport infrastructure workers. In light of the growing competition between terrorist organizations and security officials, it is clear that a broader approach is needed, which integrates the promotion of capabilities at different levels in the application of advanced technology to individual security levels.

MAJOR PARTIES INVOLVED

A. International Civil Aviation Organization (ICAO, 1947): United Nations specialized agency for civil aviation. Since its inception, the company has focused on establishing and working tirelessly to improve the safety of international civil aviation. Technical, administrative, and business matters were common areas on which member countries could compromise. Protection became an issue only in the 1960s when a series of criminal interventions disrupted the industry. The ISO responded to the problem with two types of action: legal and technical. Legally, it proposed the creation of a Legal and Regulatory Framework (LRF) aimed at coordinating a legal response to international civil aviation safety concerns. Five conventions and two protocols were promoted to deal with a series of illegal acts and terrorist attacks against civilian aircraft.⁵⁸

B. European Civil Aviation Conference (ECAC, 1955): Its actual purpose is to review and coordinate the aviation policies of Europe. The ECAC has developed effective and safe European air transportation measures, as agreed by its member countries, through regulated civil aviation policies and practices.⁵⁹

C. League of Arab States (LAS), Organization of the Islamic Conference (OIC): The measures adopted by the international authorities to stop the recently adopted terrorism are extended to the maximum and complementary to the agreements adopted. They also serve as a reminder of the need to recognize regional characteristics in global decision-making on terrorism.⁶⁰

⁵⁸ ABOUT ICAO ICAO.INT, <https://www.icao.int/about-icao/Pages/default.aspx> (last visited Feb 8, 2022)

⁵⁹ ABOUT ECAC WWW.ECAC-CEAC.ORG, <https://www.ecac-ceac.org/about-ecac> (last visited Feb 8, 2022)

⁶⁰ LEAGUE OF ARAB STATES ARAB.ORG, <https://arab.org/directory/league-of-arab-states/> (last visited Feb 8, 2022)

D. Other important organizations working to prevent terrorism in civil aviation:

International Air Transport Association (IATA, 19445)⁶¹, Airport Council International (ACI)⁶², International Space Industry Association (ISIA, 1972), Civil Air Navigation Services Organization (CANSO, 1996) are working to minimize cyber-terrorism in aviation.

FINDINGS AND RECOMMENDATIONS

The author has dared to consider issues related to the fight against terrorism from the point of view of aviation and make some recommendations for the measures that should be taken. These actions can also be sorted into the following functional categories:

A. Improvement of the air transport security system: This will include strict procedures regarding passenger registration and examination to prohibit the acquisition of air tickets and registration of passengers and the prohibition of rules that may pose the slightest threat to the safety of passengers and individuals on board. These include enhancing the technical standards of control and security, creating exclusive security zones around airports, and improving the overall training of security service personnel.⁶³

B. Introduction of protective measures against aviation terrorism: This would include creating a database of potentially dangerous passengers; Stricter prescreening for members of extremist political organizations, religious communities, criminal groups, who are already or are likely to be drunk, who are skilled in hand-to-hand combat, etc.; And more thorough monitoring of flight crews and technical personnel employed by the airline.⁶⁴

C. Joint Efforts And Interactions Between Civil Aviation And State Security Services: It will involve a close relationship between airlines and civil aviation authorities and therefore

⁶¹ IATA WWW.IATA.ORG, <https://www.iata.org/> (last visited Feb 8, 2022)

⁶² ACI WORLD: THE VOICE OF THE WORLD'S AIRPORTS ACI WORLD, <https://aci.aero/> (last visited Feb 8, 2022)

⁶³ Richard Westcott, *Securing airports from attacks: Is it mission impossible?*, BBC NEWS, Jun. 29, 2016, <https://www.bbc.com/news/world-europe-36664582> (last visited Feb 8, 2022)

⁶⁴ EITAN AZANI ET AL., Trends In Aviation Terrorism (International Institute for Counter-Terrorism) (2016), <https://www.ict.org.il/Article/1757/trends-in-aviation-terrorism#gsc.tab=0> (last visited Jan 1, 2022)

the military, special and secret services, enforcement, immigration, and customs agencies within the framework of the fight against international terrorism and organized crime.⁶⁵

POSSIBLE SOLUTIONS AND APPROACHES

Today, security measures concerning aviation promise to be much more effective, especially in developed countries. The rate of terrorist attacks on civil aviation reduced greatly after the 2001 9/11 attacks, due to the continuous technical developments, effective regulations, and cooperation between certain nations.⁶⁶ However, the efficiency of aviation security may differ regarding various countries as they cannot afford to instill such equipment and crew, or they put less emphasis on security screening as the threat of terror attacks is much lower in certain territories, thus leaving aviation exposed to unlawful interferences.

A globally standardizing aviation security is a goal of ICAO and other organizations, yet without total international collaboration, this aim could not be achieved. Also, new techniques, such as facial recognition technology and biometric scanners that detect suspicious travelers are being tested in the US. It will be a vital solution to fasten scanning and will be beneficial to both the enormous number of passengers and the crews.⁶⁷ However, one should also consider bombs that cannot be detected by machines, such as liquid explosives which might look similar to honey at a molecular level.

New suggestions to improve aviation security should not only focus on a meticulous safety check but also on methods ideal for today's aviation. Improvements should also concentrate on finding a solution to new generation threats, such as cyber terrorism. As ICAO Secretary-General stated a common goal is to "work more effectively together to establish and promote a robust cyber security culture and strategy for benefit of all actors in our industry".⁶⁸

As one of the main reasons terrorists choose to attack airports and aircraft is the great damage these attacks cause and thus receiving their media coverage, simply providing them with less media exposure might reduce the number of attacks. Similarly, introducing stricter international regulations on how to deal with criminals regarding an aviation attack could

⁶⁵Joyce A Hunter & Inc Ebrary, *Anger In The Air: Combating The Air Rage Phenomenon* (Ashgate Pub) (2009)

⁶⁶ DAVID MCA BAKER, *Tourism And Terrorism: Terrorists' Threats To Commercial Aviation Safety And Security* 163–181 (Korstanje, Maximiliano E & H. Seraphin ed., Emerald Publishing Limited) (2020), <https://doi.org/10.1108/978183867905720201012> (last visited Feb 2, 2022)

⁶⁷ Atef Ghobrial & Wes A. Irvin, *Combating Air Terrorism: Some Implications to the Aviation Industry*, 9 *Journal Of Air Transportation* 67–86 (2003)

⁶⁸ Amy Sterling Casil, *Coping with Terrorism* 22 (New York: Rosen) (2004)

quicken persecution and fear of potential terrorists.⁶⁹ This issue can only be solved on a global level. Every nation's cooperation is essential.⁷⁰

CONCLUSION

The awareness of the public about terrorist threats at airports, international bus and train terminals, and other vulnerable areas must be considered as another task of the ICAO before commissioning the act. For such reason, many practical measures have been designed in recent decades to restrict the geographical scope of terrorism in the whole world, namely, checking documents in international terminals, passengers double-checked documents, electronic surveillance of passports, using eligible persons without revealing their identity to the public, alarming people in a good manner before and during the incidents, training armed and security personals to work to gather when they encounter with a terrorist attack, educating the public how to react in an emergency, using media to support the people during the incidents, prevention from the use of media (television, radio, internet) as a symbolic weapon by terrorists to spread fear in the public.⁷¹

In addition, the ICAO has played a key role in dealing effectively with aviation terrorism after the commissioning of the act. Indeed, the second stage to face the unlawful act is related to the commission of acts that include different types of measures such as the introduction of terrorism as a crime against humanity and economic sanctions. It should be noted that terrorism cannot be eliminated without knowing the causes of terrorism at national and international levels. Some authors believe "terrorism is usually a by-product of political discord between nations".

⁶⁹ Jennifer Zellan, *Aviation Security: Current Issues And Developments* 150 (New York: Nova Publisher) (2003)

⁷⁰ *Terrorism And Civil Aviation Security* (Horizon Intelligence) (2016), <https://www.hozint.com/2016/10/terrorism-and-civil-aviation-security/> (last visited Feb 1, 2022)

⁷¹ TIMO HELLENBERG ET AL., *Securing Air Traffic Case CBRN Terrorism* (Aleksanteri Institute University of Helsinki) (2011), <https://isig.it/wp-content/uploads/2011/01/SecuringAirTraffic.pdf> (last visited Feb 3, 2022)