Committee: Disarmament and International Security Committee

Topic: Methods of Ensuring Aviation Security

Student officer: Maria Siniolaki

Position: Deputy Chair

PERSONAL INTRODUCTION

Dear delegates,

My name is Maria Siniolaki and it is my honor to be serving as the Co-Chair of the Disarmament and International Security in the 7th CSMUN Conference. I attend the 11th grade at Arsakeio School of Psychiko and this will be my 10th MUN conference. It is a great privilege for me to have the opportunity to serve as a Student Officer in this year's conference, which will be my second time serving as a student officer.

As a student officer, it is my duty to guide you through this topic and answer any questions that you may have. I sincerely hope that you will find this study guide helpful and a valuable introduction to the topic. But since this topic is an issue of significant importance, you are all encouraged to conduct your own research so that you are fully informed concerning your delegation's policy. If you come up with any questions, do not hesitate to contact me at my email: msiniolaki@gmail.com

I am looking forward to meeting all of you at the conference!

Best Regards,

Maria Siniolaki

INTRODUCTION

Over the years, the civil aviation industry has become one of the central axes of commerce and also permits the interconnection of all countries. The prestige this industry has acquired is increasingly attracting criminals and terrorists who seek to use civil aviation in order to pressure nations and promote different interests. Apart from that, aviation has been a method for several crime organizations to achieve their goals, such as smuggling illegal

products in foreign countries. We can understand the intention and purpose of each action better by analyzing several past incidents and to get a better picture and perspective of the whole issue. Multiple terrorist and crime organizations, such as Al Qaeda, Al-Shabaab, ISIS, Medellin Cartel, and many others have threatened the aviation security for years and have put the economy and international security into danger. Thus, it is an issue of great importance that the UN has to address.

Aviation security faces numerous challenges, such as Improvised Explosive Devices (IEDs), illegal trafficking, cyber-attacks, and more. New threats to aviation security keep appearing, due to the use of technological advancements by both terrorist groups and crime organizations. Therefore, efforts to protect the aviation industry should not be left behind, and we must ensure the safety and reliability in the industry. With that being said, it is crucial to analyze the topic more thoroughly and consider how the issue can be limited in every way possible.

DEFINITION OF KEY TERMS

Aircraft hijack

Aircraft hijacking refers to unlawful seizure of an aircraft by an individual or a group. [1]

Insider threat

An insider threat is most simply defined as a security threat that originates from within the organization being attacked or targeted, often an employee or officer of an organization or enterprise.[2]

Drug cartel

Drug cartel, an illicit consortium of independent organizations formed to limit competition and control the production and distribution of illegal drugs. [3]

IED

Improvised explosive device (IED), a homemade bomb, constructed from military or nonmilitary components that is frequently employed by guerrillas, insurgents, and other non-state actors as a crude but effective weapon against a conventional military force.[4]

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[1] US Legal, Inc. "Aircraft Hijacking Law and Legal Definition." *Aircraft Hijacking Law and Legal Definition | USLegal, Inc.*, http://definitions.uslegal.com/a/aircraft-hijacking/.

[2] "Insider Threat Definition." *Digital Guardian*, 10 Sept. 2018, www.digitalguardian.com/blog/what-insider-threat-insider-threat-definition.

[3] Samuels, Richard J. "Drug Cartel." *Encyclopædia Britannica*, Encyclopædia Britannica, Inc., 8 June 2017, www.britannica.com/topic/drug-cartel.

[4] Mansoor, Peter. "Improvised Explosive Device." *Encyclopædia Britannica*, Encyclopædia Britannica, Inc., 30 Aug. 2018, www.britannica.com/technology/improvised-explosive-device.

BACKGROUND INFORMATION

History of aviation security

It has been proven throughout the years that aviation is vulnerable to unlawful interference and attack. Reliability and speed at long-distance travel, as well as the achievement of air travel, have as a result the appearance of a form of malice as well as a set of solutions to it, known as aviation security. The first aircraft hijacking was recorded in 1931, when Peruvian revolutionaries hijacked a Pan American mail-plane in order to drop leaflets over Peru's capital, Lima. For several decades most security incidents were aircraft hijackings, usually by individuals seeking political asylum. The response to this form of interference, was the introduction of magnetic screening devices aimed at detecting guns or other metallic weapons.

In the 1980s, the situation changed since bombings of aircraft became a common phenomenon by terrorist organizations. With the bombing of Pan American 103, followed by the attack of TWA 843, radical organizations wanted to call attention to their causes by the destruction of aircraft in flight. This development, as well as the enhancement of electronic systems in security, lead in the modern era of aviation security. Prior to 1988, no regulatory guidance was available, and the technical approaches to ensuring aviation security were sporadic. In the late 1980s, several governmental documents were forged, producing the first appearances of electronic security, a response to aviation terrorism. By 2001, every airport had adopted the most basic security measures, including control between public and sterile areas, delineation of security zones, magnetic and radiographic screening of departing passengers and luggage, etc. A new chapter was opened in aviation security by the attacks on the United States on September 11, 2001. The global picture for the issue was altered in 2001, as both regulatory influences and heightened awareness were combined in order to create new security technologies. The introduction of new technologies continues since the problem of aviation security is not yet resolved and new threats arise.

Current threats to aviation security

Aircraft hijackings are not as frequent as they were some decades ago, and they are not such a big challenge to aviation security, as throughout the years several measures have been taken in order to address this problem. On the other hand, IEDs remain to be a significant threat to aviation. Since IEDs are made out of common household products, they are easy to mold and can fit anywhere, which makes them extremely dangerous when they are well-concealed. The two incidents of the bomber of 2009 and the cargo plane bomb plots of 2010 are examples of the role IEDs play in aviation. In the first incident, Umar Farouk AbdulMutallab smuggled a bomb on a commercial flight on the 25th of December 2009. Even though the mechanism failed, he was sentenced to life in prison, and later on, it was revealed that it was an Al Qaeda plot.

As far as the second incident is concerned, in 2010 two packages, each containing a bomb were found on separate cargo planes. They were bound from Yemen to the United States and were discovered at stopovers, one in the UK and one in Dubai, located in the United Arab Emirates. Since the two attempts, the international community has concerns about more creative concealment techniques and the use of a new generation of IEDs that will be even more difficult to detect. Another challenge for aviation security is cyber-attacks.

With our increasing reliance on technology, cybersecurity must be a priority. Threats to computer systems on the ground, at the airport might cause loss of power, failure of systems, and a breakdown in communication between networks. Cyber-attacks to aircraft might also cause disruptions to navigations systems, losing on-board aircraft control and loss of communication with the ground. The fact that cyber-attacks are inexpensive to carry out makes them even more dangerous as they can cause a broad range of disruptions.

Lastly, not a new concept, the insider threats are receiving rising attention today. The insider threat can be ex-employees, current employees, contracted workers, or partners. As they carry inside knowledge of the aviation industry, insider threats are capable of exploitation, tampering, fraud, espionage, theft as well as sabotage. The most common scenarios are airport

employees going between secure and insecure areas to smuggle drugs and/or weapons, contract workers with airside access placing explosives on an airplane, former workers providing intelligence to a terrorist organization.

Aviation terrorism

The act of terrorism in aviation is not a new concept. The use of aviation for such purposes began in 1931 when Peruvian Revolutionaries forced a pilot to fly over Lima. Hundreds of these types of acts have taken place. To this day, aviation is being used as a tool for terrorist organizations. One characteristic example is TWA flight 847. In order to get a better insight of this event by clicking here. This type of warfare enables small groups to attack larger organizations. For 17 days, this radical group had media outlets all around the world at their fingertips. In the political perspective, the terrorists achieved their goals as Israel released Lebanese prisoners, which was their original aim.

Another example is the Pan Am Flight 103 in London that was headed for New York City, where the aircraft exploded at Lockerbie, Scotland. After the explosion, the aircraft debris killed 11 people on the ground. At the time, this was the most significant aviation terrorist attack committed.

The most common example of terrorist aviation is the events of September 11, 2001. The objective of the Al Qaeda terrorists was not only to kill innocent people but also to hinder the economy, impair the federal government, and strike fear. The hijacking of TWA Flight 847, the bombs in Pan Am Flight 103, as well as the events of September 11, 2001, are good examples of terrorist groups using aviation in order to create terror. These groups accomplished their religious, political, and ideological goals through this type of warfare. All these attacks show us that terrorist organizations consider aviation to be an attractive target.

The motivation of such groups to attack public transportation targets, and the aviation industry, in particular, is connected with the psychological effect of these types of attacks. This kind of attack creates fear and anxiety among the population and can paralyze the transportation on a national level and sometimes on an international one, which ultimately also

affects the economy of a country. Terrorist organizations all over the world, led by the Islamic State and Al Qaeda, continue to show the motivation to carry out several attacks against the aviation industry. Great efforts are being made by terrorist organizations to carry out such attacks against the aviation industry.

Furthermore, recent terror attacks reveal several attempts by terrorist organizations to make use of personnel employed by the aviation industry to execute an attack. Such organizations

The FedEx mail plane after the failed bombing attempt by Al Qaeda in 2010

choose to recruit airport employees to transfer material to secure areas or to carry out the attack themselves. This issue has significant impacts, as there is the potential to recruit a large number of airport employees by terrorist organizations, especially in the European continent. Another trend emerging from events taking place in conflict zones is tied with the technological knowledge and experience that radical organizations accumulate. For instance, new threats appear such as drones, simulators, laser, as well as cyberspace capabilities. Thus, it is clear that aviation terrorism is a combination of multiple threats to aviation security such as attacks on aircraft, hijackings and bombings, insider threats, as well as cyber-attacks.

Illegal trafficking

As estimated in 2005, the global trade of illegal drugs was over 400 billion dollars, since drug trafficking is the most widespread and organized crime operation and civil aviation plays a significant role in the transportation of illegal drugs for cartels. Drug smuggling aircraft and pilots walk through local, fixed-based operators every day. For instance, Colombian trafficking organizations are estimated to transport over 65% of processed cocaine on private aircraft, while the remaining percentage is smuggled via commercial airline carriers.

The speed and mobility of air transport has made this kind of shipment quite common amongst drug cartels. In order to serve their purposes, individual pilots are contracted or recruited for such smuggling, and as traffickers try to move as much product as possible, the aircraft selected represent the balance between useful load, cargo capacity, and range. Thus, commercial aviation is playing huge roles in the problem. Since demand remains high for drugs,

the issue concerns not only the aviation industry but also international governments across the globe. Since drug cartels recruit not only pilots for private aircraft flights but also airport employees to have access to secure zones and transport their products, this endangers aviation security and cancels all attempts by international parts to address the problem of illegal drug trafficking.

Recently, it has been quite common among organized crime operators to use the technical knowledge of their recruits in order to trespass screenings and other kinds of control at airports. Similarly, with drug smuggling, illegal arms trafficking is a widespread phenomenon in the aviation industry. Both illicit activities have a tremendous economic and social impact on the international community, and by ensuring aviation security, we can partly tackle the problem of drugs and arms trafficking.

Illegal drug smuggling through air

TIMELINE

Date	Description of event
February 21, 1931	The first recorded aircraft hijacking by Peruvian revolutionaries, in Arequipa, Peru
December 21, 1988	The Pan Am flight bombing over Lockerbie, Scotland killing all on board and 11 people on the ground
December 1988	The first x-ray scanners of luggage are used in airports after the Pan Am flight 103 incident
November 27, 1989	A Colombian flight suffered an explosion after takeoff from Bogota, killing 107 people aboard and another 3 on the ground. The bombing was planned by Pablo Escobar, leader of the Medellin Cartel, in order to assassinate presidential candidate César Gaviria Trujillo
July 30, 1992	The TWA 843 crash: an aborted takeoff from New York to San Francisco
September 11, 2001	The events on the 11th of September: a series of four attacks by Al Qaeda against the United States killing 2,996 people, injuring more than 6,000 others, and causing over $10 billion in infrastructure damage
August 9, 2006	Al-Qaeda terrorists fail to detonate liquid explosives on airliners travelling from the United Kingdom to the United States
December 25, 2009	Northwest Airlines Flight 253: a failed Al Qaeda bombing attempt against an aircraft flying from Amsterdam to Detroit

October 29, 2010	The cargo planes bomb plot: failed Al Qaeda bombing attempt on a FedEx and UPS cargo plane travelling to the United States
October 31, 2015	An Airbus A321 flying from Egypt to Saint Petersburg broke-up over the Sinai, killing everyone on board and ISIS claimed responsibility
February 2, 2016	Daallo Airlines Flight 159: an explosion occurred right after taking off from Mogadishu and militant group Al-Shabaab claimed responsibility
September 22, 2016	Resolution 2309 is signed: calls for the cooperation among States and counter terrorism organizations as well as the provision of passenger information to the authorities
February 8, 2019	Airport employees face charges for smuggling 20 tons of cocaine over 18 years in Puerto Rico

MAJOR COUNTRIES AND ORGANIZATIONS INVOLVED

ITSA (International Transport Safety Association)

ITSA is an international network of independent safety investigation authorities. ITSA covers every mode of transportation, including aviation, road transport, marine, etc. ITSA has contributed significantly to the safety of the traveling public and has brought together many safety investigation agencies of several states. Today, this organization is composed of safety investigation authorities from 16 different countries. More specifically, regarding aviation security, ITSA has contributed by sharing information and essential safety recommendations as well as by carrying out safety investigations. In this way, a state can identify areas of concern and lead to action. Thus, ITSA contributes to establishing and maintaining a safe and efficient aviation system.

ICAO (International Civil Aviation Organization)

The ICAO is a UN specialized agency, which was established in 1944 to manage the administration of the Convention on International Civil Aviation. ICAO works with the 193 member states as well as industry groups in order to reach a consensus on international civil aviation policies to support a safe, secure, efficient, and economically sustainable civil aviation sector. These policies are used by ICAO member states to ensure that their civil aviation operations conform to global norms. ICAO also produces comprehensive plans to coordinate strategic progress for safety and air navigation, thus plays a vital role in ensuring aviation security.

Al Qaeda

In 1988, Osama bin Laden, along with several Arab volunteers, founded a militant Sunni Islamist organization known as Al Qaeda. The organization has been identified as a terrorist group by the United Nations Security Council. Al Qaeda is an organization that, through the years, has threatened aviation security in several ways. Based on US Department of Homeland Security reports, Al Qaeda is using airlines to smuggle drugs and weapons

The attacks on 11th September by Al Qaeda

from South America to various countries in West Africa. The drugs eventually are smuggled to Europe for distribution and sale, while the weapons are used in conflicts in Africa. Apart from this, Al Qaeda's most significant attack was the September 11 events. Two commercial airliners were flown into the twin towers of the World Trade Center, a third into the Pentagon, and a fourth crashed in a field in Stonycreek Township. Al Qaeda recruits airport employees in order to serve its purpose. Thus, it remains one of the biggest threats to aviation security.

United States of America

The economic prosperity and security of the United States depend on the secure operation of its aviation system, legitimate commercial interests, and its international partners. Terrorists and criminals have long viewed aviation as a target for attack. The events of September 11, 2001, and several other terrorist attacks against the state are reminders of the threats facing aviation that mean to harm the country. The U.S. is working to enhanced security measures at all last-point-of-departure airports. Other measures taken by the state are the enhancement of overall passenger screening, the conduct of heightened screening of personal electronic devices, and the improvement of security protocols around aircraft and in passenger areas. As a result, the U.S. has one of the strongest aviation security systems around the world and keeps improving it in order to prevent future attacks or other illicit activities.

European Union

Over the last 30 years, the European Union has created the world's largest and most successful example of regional market integration in air transport. EU aviation has been developed through dramatic changes in the economic and regulatory landscape of air transport in Europe. The aviation security in the EU has been strengthened over the last years in order to prevent similar attacks that have happened in foreign countries, such as the U.S. Even though it is not yet a target of radicals or terrorist organizations, the EU has to deal with the problem of drug trafficking in many member states. Thus, since 2002, the EU has established common rules in the field of civil aviation security in order to be protected from unlawful interference. All member states have to ensure that they designate an authority competent for aviation security, set up a national quality control program, and set up a national civil aviation security program.

UN INVOLVEMENT: RELEVANT RESOLUTIONS AND TREATIES

Resolution 2309, voted on 2016

On the 22nd of September 2016 the Security Council voted the aforementioned resolution in the 7775th meeting. In the resolution the Council calls for cooperation and information-sharing among States as well as a requirement that the aviation industry provides passenger information to the authorities in order to track the movement of identified individuals by the counter-terrorism committees. In addition, it underlines law-enforcement, international cooperation on border control, and criminal justice. Moreover, it encourages close cooperation between ICAO and the Counter-Terrorism Executive Directorate (CTED) on ensuring aviation security.

POSSIBLE SOLUTIONS

Acknowledging the importance of the issue, all countries must act preventively and take the appropriate measures in every aspect of the topic. Since technology plays a significant role in our lives, it is crucial that we profit from technological advancements and integrate them into aviation security. There are many methods that have not yet been applied by the aviation industry. Such measures are the introduction of advanced internet protocol (IP) video cameras in all airports, the use of shortwave radar for anomaly detection, as well as the deployment of explosive trace detection technologies for screening of inbound air cargo. All these measures can eliminate the threat of IEDs as well as reduce illegal trade through aviation.

As far as aviation terrorism is concerned, along with international cooperation among states and counter-terrorism organizations in order to collect data regarding individuals, the verification of passengers' identity before the checkpoint at airports but at the time of the booking could prevent possible attacks. Additionally, another method to crosscheck passengers' identity is the use of biometric technologies, which is the use of one individual's characteristics, such as hand geometry, fingerprints, face recognition, and retina. In this way, we are able to establish and authenticate identity.

Other than that, it is of significant importance to eliminate insider threats as they can be a part of both terrorist attacks and illicit arms and/or drug trade. The identification of an insider is quite challenging as it depends on other employees to report an individual and bring them to management's attention. That's why measures aiming to identify activities of concern as well as to identify any suspicious behavior patterns that could help to detect a potential insider need to be strengthened. In order to achieve that, stricter supervision and reevaluation of the airport employees are necessary. Additionally, individuals considered as insider threats should be reported to the authorities at the earliest opportunity in order to be prosecuted. Thus, relevant illegal activities could be prevented, along with possible attacks against states, since insider threats might have connections with terrorist and/or criminal organizations.

Lastly, it is of utmost importance for all member states to put into force relevant treaties and resolutions as there are numerous documents aiming to solve the issue which are not yet into action. For instance, the Beijing Convention, also known as the Convention on the Suppression of Unlawful Acts Relating to International Civil Aviation, is only signed by 35 states and ratified by 26. The Convention includes articles that criminalize the transportation of nuclear, chemical, and biological weapons, as well as the use of the aircraft itself as a weapon. There are several similar conventions, treaties and resolutions that are not ratified by states even though they propose effective and feasible solutions to this crucial issue.

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