



International Civil Aviation Committee (ICAO)

Study Guide



Matúš Duraňa, Lucia Posluchová

Table of contents

1. Letter from chairs
2. Airspace sovereignty, its history, importance and conventions adopted in history due to the issue
 - a. Introduction
 - b. The origin of the concept of sovereignty in context of UN
 - c. Sovereignty on the airspace level and property of the airspace
3. International contracts and agreements concerning airspace security
4. Technical measures already imposed to establish airspace security
 - a. Airport security
 - b. Air traffic control (ATC)
 - c. Visual flight rules (VFR)
 - d. Instrument flight rules (IFR)
 - e. Classification of controlled airspace
 - f. Prohibited areas
5. Current problems
 - a. Disappearance of Malaysian airplane
 - b. Shutdown of Malaysian airplane in 2014
 - c. Do the drones menace airspace security?
6. Sources and useful links
7. Position papers
8. Resolution

1. Letter from chairs

Dear delegates,

we are very pleased to welcome you in ICAO committee at ZAMUN 2015! We hope you are already excited for the conference even if you have never participated in such an event.

As you can read the description of our committee on ZAMUN official webpage, the topic for this conference concerns airspace security. You might have thought the issue is boring and vague and that was one of the main reasons why we wrote for you this study guide. You will find here some useful information about what the airspace actually is, which measures were imposed and which treaties were signed in order to control its security and finally its problems we are nowadays dealing with.

We strongly encourage you to read attentively a whole document for being well prepared for the conference. It will be extremely necessary for further fruitful debates and for negotiations of the resolution as well. If you underestimate the preparation, you might have serious problem to join the discussion, so the participation will be consequently pointless for you. To support your activity, there are also useful links for additional research at the end of the study guide.

For all delegates, we urge you to read Rules of procedure which you can download here: <http://www.zamun.sk/rules-of-procedure/>.

Shortly you will obtain an invitation to join the committee group on Facebook, where you can easily contact us in the case of any kind of problems. Moreover, all other useful information about the conference, links for the research and your position paper as well will be published there.

We wish you now a lot of success and well spend time with preparation and pleasant journey to Žilina. We are very excited to meet you all!

Best regards,

Your magnificent chairs Matúš Ďuraňa and Lucia Posluchová

2. Airspace sovereignty, its history, importance and conventions adopted in history due to the issue

a. Introduction

The history of aviation has extended over more than two thousand years, since first attempts of human being to fly and cover a distance by air. The idea of air transportation has always fascinated humankind and reaching of that goal is considered as one of the biggest success in man's history. However, our first historical reaching of airspace brought many new questions to be answered.

Primarily, the term "airspace" appeared in general vocabulary for the first time and was defined as the portion of the atmosphere controlled by a country above its territory, including its territorial waters or, more generally, any specific three-dimensional portion of the atmosphere. Since this point of the history, a country has may take responsibility for parts of international airspace – generally those over the oceans.

As the airspace was once reached by human being, it was inevitable to establish certain rules in order to prevent international conflicts and maintain airspace security all over the world. World's leaders faced a demanding task, to determine airspace propriety and authorise rights of countries to the intervention under certain conditions. Apart from diplomatic negotiations, various types of airspace were shaped and we needed to classify them.

Fundamental right of a state called "air sovereignty" was established in order to regulate and control airspace on international and national level. In fact, all aviation relations are based on this term and it substantially increases the importance of its definition, developed and by years of negotiations and discussions. Air sovereignty, its borders and principles undergo changes until nowadays, regarding current geopolitical situation and specific circumstances.

b. The origin of the concept of sovereignty in context of UN

Since the United Nations Organisation was founded in 1945, the traditional idea of sovereignty has experienced a profound modification and limitation. However, some basic principles have been already explained in earlier declarations, for instance, in its preamble and in Article 1 the Charter of the United Nations sets out its aim to prevent wars, to maintain international peace and security and respect for human rights. It furthermore aims to promote justice and welfare and to enable the necessary collective measures and international co-operation. The essential concept of sovereignty remains stable over years due to their enduring character.

Sovereignty is the basis for the doctrines of responsibility, nationality and jurisdiction. Article 2(2) of the Charter of the United Nations recognizes that all States are equal and sovereign because they are all politically independent.

For instance, the *Friendly Relations Declaration (1970)* certifies the right of countries to equality in law as the fundamental convention of the sovereignty.

„All States enjoy sovereign equality. They have equal rights and duties and are equal members of the international community, notwithstanding differences of an economic, social political or other nature. In particular, sovereign equality includes the following elements:

- (a) States are juridically equal;
- (b) Each State enjoys the rights inherent in full sovereignty;
- (c) Each State has the duty to respect the personality of other States;
- (d) The territorial integrity and political independence of the State are inviolable;
- (e) Each State has the duty to comply fully and in good faith with its international obligations and to live in peace with other States. “

(UN General Assembly Resolution 2625 (XXV), 24 October 1970)

a. Sovereignty on the airspace leveland property of the airspace

Historically, there have been always numerous disputes concerning the question of airspace sovereignty. In general, we distinguish two different points of view on the issue. The first one proclaims that airspace above the territory belongs exclusively to the owner of the territory. However, this conception is not applicable anymore for current world, because it opposes modern needs of international transport industry. The other theory of the airspace propriety believes in the freedom of the air which does not depend on the owner of the land.

Compromises between those two opinions allowed us to adopt first convention resolving the question of airspace propriety and its using. Under both of them, the Chicago Convention¹ and the Paris Convention²each State has complete and exclusive sovereignty over the airspace above its territory. Air sovereignty is a fundamental right of a state to regulate its airspace use and enforce its own aviation law. Those conventions also defined the airspace territory.The crucial document discussing topic of the airspace security and sovereignty related, Convention on International Civil Aviation (the Chicago Convention), was signed on December 7, 1944 in Chicago, Illinois, United States., by 52 signatory states. One of the main points of the document was establishment of the International Civil Aviation Organization (ICAO), a specialized agency of the United Nations.

This convention was also designed to make arrangements for the immediate establishment of provisional world air routes and services, and also to set up a council to collect, record and study data concerning international aviation and make recommendations for its improvement. Since those early days there have been several additional measures.

While national sovereignty cannot be delegated, the responsibility for the provision of air traffic services can be delegated. And, we are reminded by Assembly Resolution A37-15 that a State which delegates to another State the responsibility for providing air traffic services within airspace over its territory does so without derogation of its sovereignty.³

1. Chicago Convention: <http://www.icao.int/publications/gages/doc7300.aspx>
2. ParisConvention: http://www.icao.int/secretariat/PostalHistory/1919_the_paris_convention.htm
3. <http://www.icao.int/Meetings/atconf6/Documents/WorkingPapers/ATConf.6.WP.080.1.en.pdf>

The issue of sovereignty is closely connected with responsibility for potential problems in the airspace and with its protection. Regarding current geopolitical situation and recent affairs, the prime question to be posed is if an air invasion or airspace sovereignty threat should be included as interference with national sovereignty, when it could be considered acceptable or at least understandable and if there are certain cases, when a violation of airspace sovereignty could be legitimated. If states aim to draw responsibility and consequences from airspace dangers, they need to distinguish the main issue - a right of a state to the affected airspace.

3. Key International agreements and documents concerning airspace security

The Paris convention	1919	<i>The first international convention to address the political difficulties and intricacies involved in international aerial navigation.</i>
The Chicago Convention	1944	<i>The convention establishes rules of airspace, aircraft registration and safety, and details the rights of the signatories in relation to air travel.</i>
The Tokyo Convention³	1963	<i>The convention on offences and certain other acts committed on board aircraft.</i>
The Hague Convention⁴	1970	<i>The convention for the suppression of unlawful seizure of aircraft.</i>
The Montréal Convention⁵	1972	<i>The convention for the suppression of unlawful acts against the safety of civil aviation.</i>
The Montréal protocol⁶	1988	<i>The convention for the suppression of unlawful acts of violence at airports serving international civil aviation,</i>
The Montréal Convention⁷	1991	<i>A Convention on the marking of plastic explosives for the purpose of detection.</i>

3. The Tokyo Convention: <http://www.un.org/zh/terrorism/pdf/1963E.pdf>

4. The Hague Convention: http://www.hcch.net/index_en.php?act=conventions.text&cid=82

5. The Montréal Convention: <https://treaties.un.org/doc/db/Terrorism/Conv3-english.pdf>

6. The Montréal protocol: <http://www.mcgill.ca/files/iasl/montreal1988.pdf>

7. The Montréal Convention: <http://www.jus.uio.no/lm/air.carriage.unification.convention.montreal.1999/>

4. Technical measures already imposed to establish airspace security

a. Airport security

Under this term, we see all techniques and methods used in protecting passengers, staff and aircraft which use the airports to prevent terrorism, hijacking or any harm and crime on board. ICAO sets minimum standards to be met by Member States in all fields of international civil aviation, including aviation security. States must comply with these baseline standards, but they may also add measures according to national requirements based on risk assessments. As a result, national and regional variations in the type of security controls can emerge.

Since 11th September 2001 states have insisted on strict passenger control to prevent terrorist attack, however one of the major problems we have with the current security regime is that we have also made it so very predictable, this creates a weakness that can be exploited by any a bit more sophisticated terrorist group.

b. Air traffic control (ATC)

ATC is a service provided by ground-based controllers who direct aircraft on the ground and through controlled airspace in order to prevent collisions. In many countries, this service is provided to all private, military, and commercial aircraft operating within its airspace.

The primary method of controlling the immediate airport environment is visual observation from the airport control tower. Controllers may use a radar system called secondary surveillance radar, which includes a map of the area, position of various aircrafts, their speed or altitude as well, for airborne traffic approaching and departing. Moreover, mainly in United States, air traffic controllers are authorized to operate with radars to follow routes of aircraft at high altitudes. En-route controllers also provide air traffic control services to many smaller airports around the country, including clearance off of the ground and clearance for approach to an airport.

ATC operations are conducted either in the English language or the language used by the station on the ground, however English is strictly required.

c. Visual flight rules (VFR)

VFR are a set of regulations under which a pilot operates an aircraft in weather conditions generally clear enough to allow the pilot to see where the aircraft is going. VFR

require a pilot to be able to see outside the cockpit, to control the aircraft's altitude, navigate, and avoid obstacles and other aircraft. Governing agencies establish specific requirements for VFR flight, including minimum visibility and distance from clouds, to ensure that aircraft operating under VFR are visible from enough distance to ensure safety.

In a controlled aerodrome, the air traffic controller can issue a special VFR(SVFR) clearance to an aircraft, which is below the visual meteorological conditions(VMC)¹ minima in his controlled zone, in order to let him reach a new zone where the weather conditions follow the VMC rules.

d. Instrument flight rules (IFR)

IFR are a set of regulations under which a pilot operates under conditions in which flight by outside visual reference is not safe, or flies by reference to instruments in the flight deck, and navigation is accomplished by reference to electronic signals. A pilot may elect to fly in accordance with instrument flight rules in visual meteorological conditions.

Inside air traffic controlled areas, ATC clearance shall be obtained prior to operating a controlled flight. An IFR flight shall maintain continuous voice communication with the appropriate ATC.

The IFR flight operating outside controlled airspace shall maintain an air-ground voice communication watch on the appropriate communication channel and establish two-way communication, as necessary, with the air traffic services unit providing flight information service in this area.

The IFR follows instrument meteorological conditions(IMC).

e. Classification of controlled airspace

On March 12, 1990, ICAO adopted the current airspace classification scheme. The classes are fundamentally defined in terms of flight rules and interactions between aircraft and ATC. Generally speaking, the ICAO airspaces allocate the responsibility for avoiding other aircraft, namely either to ATC or to the aircraft commander.

- **Class A:** All operations must be conducted under IFR. All aircraft are subject to ATC clearance. All flights are separated from each other by ATC.

¹ VMC is aviation flight category in which visual flight rules (VFR) flight is permitted—that is, conditions in which pilots have sufficient visibility to fly the aircraft maintaining visual separation from terrain and other aircraft. ICAO recommends the VMC minima internationally, however they are defined in national regulations which vary from ICAO.

- **Class B:** Operations may be conducted under IFR, SVFR, or VFR. All aircraft are subject to ATC clearance. All flights are separated from each other by ATC.
- **Class C:** Operations may be conducted under IFR, SVFR, or VFR. All aircraft are subject to ATC clearance. Aircraft operating under IFR and SVFR are separated from each other and from flights operating under VFR, but VFR flights are not separated from each other. Flights operating under VFR are given traffic information in respect of other VFR flights.
- **Class D:** Operations may be conducted under IFR, SVFR, or VFR. All flights are subject to ATC clearance (country-specific variations notwithstanding). Aircraft operating under IFR and SVFR are separated from each other, and are given traffic information in respect of VFR flights. Flights operating under VFR are given traffic information in respect of all other flights.
- **Class E:** Operations may be conducted under IFR, SVFR, or VFR. Aircraft operating under IFR and SVFR are separated from each other, and are subject to ATC clearance. Flights under VFR are not subject to ATC clearance. As far as is practical, traffic information is given to all flights in respect of VFR flights.
- **Class F:** Operations may be conducted under IFR or VFR. ATC separation will be provided, so far as practical, to aircraft operating under IFR. Traffic Information may be given as far as is practical in respect of other flights.
- **Class G:** Operations may be conducted under IFR or VFR. ATC separation is not provided. Traffic Information may be given as far as is practical in respect of other flights.

b. Prohibited areas

1) No-flyzone(NFZ)

It is territory or area over which no civil aircraft has permission to fly. Such zones are usually set up in a military context and usually prohibit military aircraft of a belligerent power from operating in the region. Aircraft that break the no-fly zone may be shot down.

In past, NFZ were set up in Iraq, 1991-2003, then in Bosnia and Herzegovina, 1993-1995 during war in Yugoslavia and over territory of Libya in 2011. Currently, Turkey demands setting up NFZ over whole Turkish- Syrian borders to prevent military attacks on refugees' camps. ICAO should also consider the airspace security over territory of ISIS and establishing NFZ might be one of the options how to end up the conflict.

2) Other prohibited areas

In many countries, flying above several areas, such as nuclear plant, military bases or popular tourist attractions is strictly restricted for all aircrafts without a special permission.

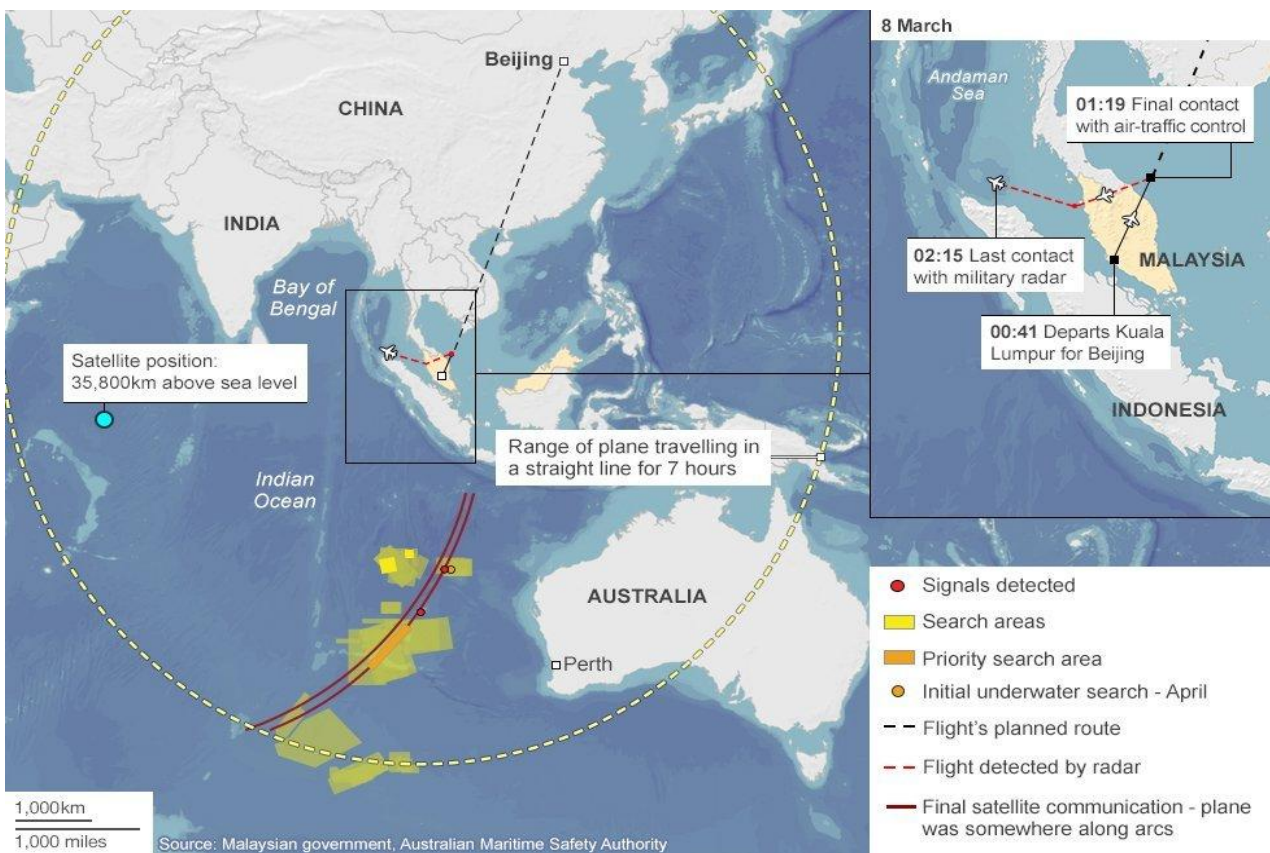
5. Current problems

In spite of previous agreements and protocols, we cannot consider airspace as secured. During last years, several crucial accidents have occurred in different places in the world and new potentially dangerous technologies were launched.

a. Disappearance of Malaysian airplane

On 8 March 2014, the airplane, flight MH370, of Malaysian airlines MH370, departed from Kuala Lumpur to Beijing. Few dozens of minutes after take-off it incomprehensibly changed right direction in the west which confirms last contact of Malaysian military radar. The last information about position of MH370 we obtained from satellites above Indian Ocean- the plane is believed to have ended its journey in seas far west of the Australian city of Perth. Although we attached strong significance to security measures on airport and to strict control of plane position, we have not found neither aircraft, nor bodies of 239 passengers.

Question: Who takes responsibility for missing plane? How should we prevent aircraft hijacking?

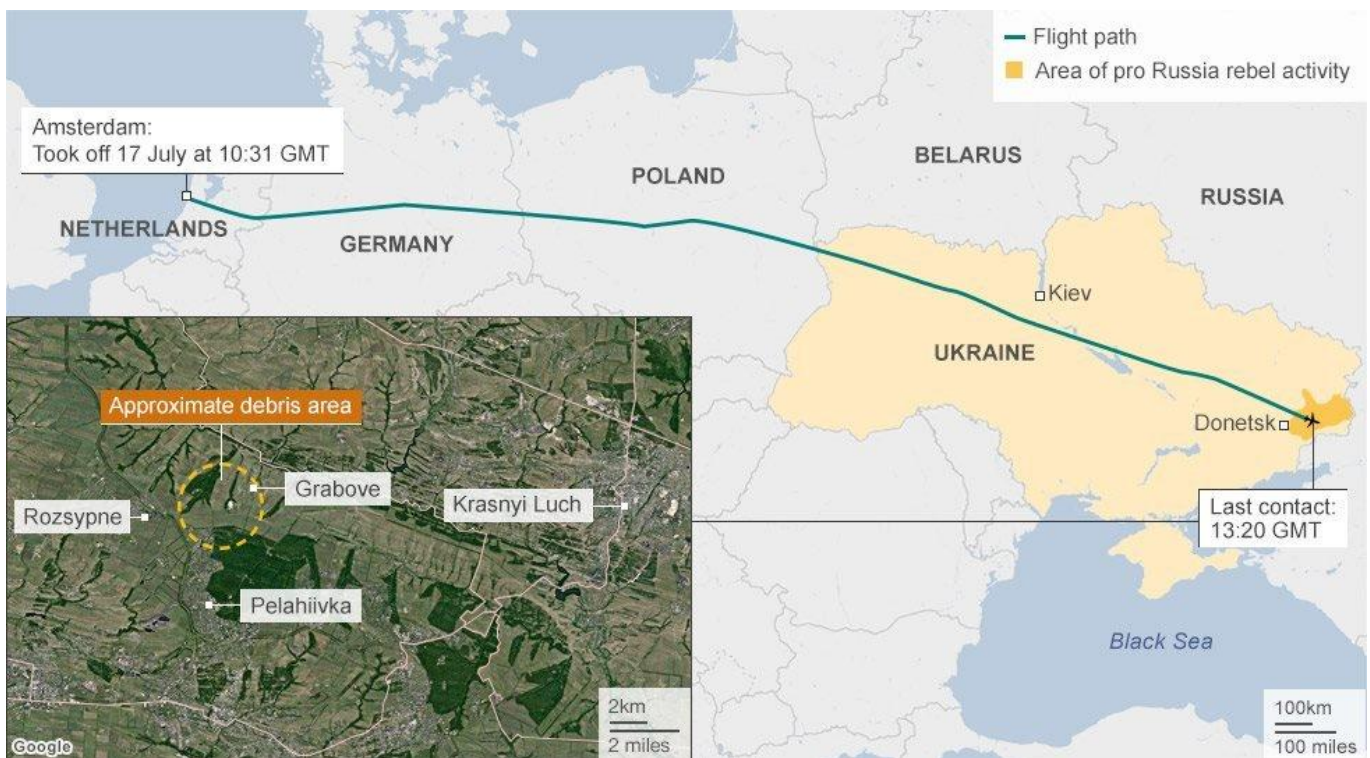


(image: <http://www.bbc.com/news/world-asia-26503141>)

b. shutdown of Malaysian airplane in 2014

Boeing 777-200ER from Malaysian airlines who departed from Amsterdam to Kuala Lumpur made its usual route above the territory of Ukraine when it suddenly crashed down with all 298 passengers, 80 children included. According to international experts' investigations, we found out the aircraft was hit by SA-11 missile fired from the conflict zone in the eastern Ukraine. Both sides, separatists supported by Russia and government of Ukraine argued about taking responsibility for the intolerable attack and stay unclear to the announcing experts final judgement.

Question: How could ICAO help to prevent the massacre to the future? Do we need to maintain a worldwide control of airspace or it should stay exclusively in sovereignty of that country?



(image: <http://www.bbc.com/news/world-europe-28357880>)

c. Do the drones menace airspace security?

Drones, named also unmanned aerial vehicles (UAVS), are aircraft either controlled by 'pilots' from the ground or autonomously following a pre-programmed mission.

They fall into 2 major categories:

- a) for reconnaissance and surveillance purposes
- b) for military purposes- armed with missiles and bombs.

The biggest problem of 1st category with the convergence of other technologies

consists in possibility of machine recognition of faces, behaviours, and the monitoring of individual conversations, so they enormously interfere in people's privacy and eventually in governments matters.

The major issue we currently face considering 2nd category is its usage to targeted killing most controversially in Pakistan by US army, but also in Yemen and Afghanistan as well. More precisely, drones can effectively destroy enemy however in many cases, a high number of civilians die indeed. Additionally, their usage does not require any special permission of any international institution.

6. Sources and useful links

We offered you this study guide as a foundation for your further research. We strongly recommend you to look for more information involving your country policy, investigations of cases mentioned above and previous documents concerning the topic. Here we enclose you some useful links and sources of our general research which may serve you as guidance at the beginning of your studies. We hope this will help you to familiarize with the issue of airspace security and we are looking for your position papers, where you are supposed to employ gained knowledge.

<http://www.icao.int/Pages/default.aspx>

https://ivao.aero/training/documentation/books/PP_ADC_Visual_Flight_Rules.pdf

https://ivao.aero/training/documentation/books/SPP_ADC_Instrument_Flight_Rules.pdf

http://en.wikipedia.org/wiki/Prohibited_airspace

<http://www.un-documents.net/a25r2625.htm>

<http://www.icao.int/publications/Pages/doc-series.aspx>

<http://www.physics.org/article-questions.asp?id=70>

<http://www.studentpulse.com/articles/645/sovereignty-over-airspace-international-law-current-challenges-and-future-developments-for-global-aviation>

<http://theaviationist.com/category/airspace-violations/>

http://www.icao.int/publications/Documents/7300_9ed.pdf

<http://www.icao.int/safety/Implementation/Pages/Resources.aspx>

<http://aviation-safety.net/>

<http://aviation-safety.net/airlinesafety/industry/>

<http://aviation-safety.net/graphics/infographics/missingmapV2.jpg>

<http://legal-dictionary.thefreedictionary.com/Airspace+Rights>

<http://www.icao.int/Meetings/atconf6/Documents/WorkingPapers/ATConf.6.WP.080.1.en.pdf>

<http://uir.unisa.ac.za/bitstream/handle/10500/3689/Fundamina%20Snyman.finaal.pdf?sequence=1>

<http://www.un-documents.net/a25r2625.htm>

http://ec.europa.eu/transport/modes/air/international_aviation/doc/asa_map.jpg

http://www.icao.int/publications/Documents/7300_orig.pdf

<http://www.icao.int/publications/pages/doc7300.aspx>

http://www.skybrary.aero/index.php/Chicago_Convention

<http://www.un-documents.net/a25r2625.htm>

<http://www.bbc.com/news/world-asia-26503141>

<http://dronewars.net/aboutdrone/>

7. Position papers

We would also like to inform you about your further policy statements for ICAO committee. We require you to simply write a few paragraphs on your delegation 's position on the agenda topics before the conference. For our ICAO committee, we will work with a special modified form of position papers, they structure will be a bit different from the model you may have known before.

First of all, you are supposed to introduce **the statement of your country** concerning the topic in **200-300 words**. This part needs not repeat or summarize the issues which we already know. What you need is to-the-point information about what your country thinks about the issue, why it thinks so, how is affected by the issue and its relations with involved parties.

In order to make our committee's work easier and more effective, the second part of your policy statement should involve certain very concrete points and your suggestions for a solution – presented in identical way as in case of resolution. Here you are supposed to formulate **3 preambulatory and 3 operative clauses**, so later during the procedure, you will already have the base to be implemented into resolution or to be at least discussed.

The preamble section, otherwise called the preambulatory clauses is represents one part of the final resolution. It refers to the background and facts of the topic, past resolutions, actions and events. The language is by and large soft and typically uses the present participle form. Preambles are important because they give background information and state the purpose of the resolution. The preamble is not debatable and cannot be amended in a draft

of the resolution. For this reason it is imperative that no controversial or disputable clauses be used in writing this section. Preambulatory clauses are indented and end with commas.

The main section of the resolution (and in this case also of your position paper) contains the operative clauses, which are also called the activating or actuating clauses. This is the policy, action or opinion section. Although you will typically have more than one clause, each dealing with a single aspect, all clauses are supposed to follow a logical pattern and make sense a whole. Each clause begins with an action verb in the third person singular, indented and underlined. Subclauses are lettered (a,b,c, etc.) and sub-subclauses are numbered (i, ii,iii, etc.). Each operative clause ends with a semicolon except for the last clause, which ends with a full stop.

8. Resolution

Even though content determines the effectiveness and strength of a resolution, format is extremely important. Technically, a resolution is a single sentence, with the only full stop appearing at the very end. Everything else is separated by semicolons and commas.

There are three main components of a resolution; the heading, the preamble and the operative clauses. Lines are single – spaced except for a double space between clauses. Clauses always begin with a capital letter.

The heading of the resolution contains the name of the committee (ICAO), the topic and lists the sponsoring and signatory nations.

We have already told you all necessary information about preamble and operative section above, in chapter about position paper. For resolution, it remains the same.

Example:

Disarmament and International Security Committee,

Believing that global challenges and threats require new approaches to interaction across the whole range of their strategic relations,

Stressing the need for a common strategy and new approaches regarding the role of the International Atomic Energy Agency (IAEA) within the Common Nuclear Security Policy,

Working therefore to forge a new strategic relationship based on mutual trust, openness, predictability, and cooperation,

Desiring to bring their respective nuclear postures into alignment with this new relationship, and endeavouring to reduce further the role and importance of nuclear weapons,

Expressing strong support for on-going global efforts in non-proliferation,

Recalling Art. 6 of the Non-Proliferation Treaty from 1968.

1. Seeks to establish one common policy towards the proliferation of nuclear weapons;
 - a. Continuing the process of reduction of the amount of nuclear weapons headed to their total disarmament until 2025
 - b. Calls for the suspension of further development of the national programmes developing the nuclear weapon;
 - c. Raises the awareness on the topic of nuclear threats.
2. Calls for the increase of the role of the International Atomic Energy Agency (IAEA) within the Common Nuclear Security Policy **in controlling nuclear devices in member states**
3. Refers the question of the threat of nuclear terrorism to the Security Council of United Nations, which should establish the prospective common policy how to prevent the possible terrorist nuclear attack with suggestions:
 - a. Controlling stocks of uranium
 - b. Securing the locations and transportation of the material
 - c. Monitoring the black market with a special concern on Russian Federation
 - d. Increasing control of the borders to prevent the transportation of the material
4. Refers the question of the states which not signed the Non-Proliferation Treaty to the Security Council to establish the policy towards these countries;
5. Asks the Security Council to draft an emergency plan in order to mitigate effects of a possible nuclear attempt or attack made by any terrorist organisation or country;
6. Urges the Security Council to recognise the Islamic State as a possible nuclear threat.
7. Urges the Member States to replenish their nuclear energy storages and to coordinate the stockpiling of nuclear energy resources;
8. Recommends that the national governmental and military intelligence services share data that pertains to external threats posed to the Member States by third-party states with special regard to issues of the Middle East;
9. Requests all the Member States to share the data concerning the uranium deposits and transport of the material;
10. Requests all involved bodies to handle all shared data with great care, especially if it comes to the reactions to said threats undertaken by the national governmental or military intelligence services;
11. Asks the governments of the Member States to develop the national policies against possible nuclear terrorism

12. Reminds all involved bodies that the Member States are in no way obliged to share data;
13. Calls for establishment of the economic sanctions imposed on countries which will use the nuclear weapon.

List of suggested Preambulatory and Operative clauses:

http://www.zamun.sk/wp-content/uploads/2014/03/Rules_of_Procedure_-_ZAMUN_2014.pdf ,
page 16-17