

The legal Principles of Airspace Sovereignty in International Law

المبادئ القانونية لسيادة المجال الجوي في إطار القانون الدولي

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Abstract:

In aeronautics field, sovereignty corresponds to the powers and authorities granted to the State to exercise its legislative, administrative and judicial powers. The airspace above territories obeys to the strict rules of sovereignty and is part of a framework of international cooperation. It has been structured around the territory of each State and is therefore inseparable from it's the sovereignty. However, its use includes forms of cooperation between States to ensure a form of collective security. The implementation of airspace regulations is established by each State and guarantees global air security. The air sovereignty is a fundamental right of a sovereign State to regulate the use of its airspace and to apply its own law to civil aircraft crossing its national space.

Keywords: Airspace, International cooperation, civil aircraft, powers, Chicago Convention.

ملخص:

يشير مفهوم السيادة في المجال الجوي إلى الصلاحيات والسلطات الممنوحة للدولة لممارسة سلطاتها التشريعية والإدارية والقضائية على هذا الجزء الحيوي. يخضع هذا المجال إلى قواعد دولية صارمة تحدد من خلالها المناطق التابعة للدول في إطار التعاون الدولي، وبالتالي فهي مرتبطة ارتباطاً وثيقاً بسيادتها، حيث تتولى كل دولة مسؤولية وضع لوائح المجال الجوي، مما يضمن تحقيق الأمن الجوي العالمي. وفي منظور القانون الدولي تكفل السيادة الجوية الحق للدولة في ممارسة كامل سلطاتها وتطبيق قوانينها على الطائرات المدنية التي تعبر مجالها الجوي.

الكلمات المفتاحية: المجال الجوي، التعاون الدولي، الطائرات المدنية، الصلاحيات، اتفاقية شيكاغو.

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Introduction:

International air law has undergone a significant evolution since its beginning. Initially, aviation was mainly of military interest. However, with the advent of commercial flights, it became necessary to establish rules to regulate this new transport space. Historically, one of the major milestones was the Paris Convention¹, but it was truly the Chicago Convention² that made it possible to structure civil aviation. This treaty led to the establishment of the International Civil Aviation Organization (ICAO)³, as an important Entity which plays a key role in the harmonization of global aviation standards.

From the beginning of the aviation era, States considered that the air above their territory should be placed under their control. But while the legal regime of cosmic space tends to come closer to the high seas, that of airspace itself is above all influenced by the concept of territorial sovereignty⁴. It was the world wars, and the increasingly massive use of aviation, that made the international community aware of the need to establish the same rules to regulate the space zone. After an initial draft at the international conference in Paris then in Warsaw⁵, the Chicago Convention established the freedoms of the air, which govern airspace.

Major conventions, such as the Chicago Convention which established fundamental principles for security and cooperation between member states to ensure the respect for the sovereign rights of States while facilitating global connectivity⁶.

Many questions related to the principle of air sovereignty or more especially to airspace and the conditions of its use have occupied researchers of international law since the beginning of aviation. The research question is: What is the legal regime of airspace and how the sovereignty is exercised over this space?

The purpose of this research paper is to explore the concept of sovereignty under international law to be aligned with the concept of sovereignty according to international treaties. The aim is to present a clear perspective on the regulations governing this fundamental principal.

1. The principle of air sovereignty and its exercise in international law

International air law deals with issues of airspace sovereignty mainly through the Chicago Convention. This Convention recognizes the complete sovereignty of States over the airspace above their territory, while establishing rules for international air navigation to facilitate aeronautical cooperation and safety⁷.

Article 1 of the Convention on International Civil Aviation emphasizes that each State has complete and exclusive sovereignty over the airspace above its territory. The Convention contains provisions under which States regulate, manage, and control the use of their airspace, including decisions concerning route designations, the restriction or uniform prohibition of flights over specific areas of their territory, and the extent and conditions for providing air traffic services for international civil aviation operations. In accordance with the provisions of The Convention, States shall ensure the ongoing assessment of the safety and security of their airspace and are responsible for providing air traffic services within that airspace.

They are also required to cooperate closely with the competent authorities in the event of activities that are dangerous to civil aviation. Under the Convention and its Annexes, the State must provide accurate and timely aeronautical information to operators and regulatory bodies, including information on the status of services and facilities, as well as potential safety and security risks. The decision to fly a civil aircraft over specific geographical areas is the responsibility of the various stakeholders involved. More specifically, any State may transmit information to its own operators concerning the risks associated with flights over or near any area, including that of another State.

The Montreal Convention (officially the Convention for the Unification of Certain Rules Relating to International Carriage by Air) is a multilateral treaty adopted on May 28, 1999 by the member states of the International Civil Aviation Organization (ICAO) and entered into force on November 4, 2003.

The Chicago Conference ended with the signing of the Convention on International Civil Aviation and the adoption of several agreements, including the Interim Agreement on International Civil Aviation, which gave rise to the Provisional International Civil Aviation Organization (PACO), replaced by the International Civil Aviation Organization (ICAO). This institutional framework remains virtually unchanged to this day.

The international institutions and standards of air law are closely linked to the era of international relations in the second half of the 20th century, characterized by both the universalism of principles and the assertion of national sovereignty. They gave rise to the multilateral and bilateral regulation of air transport that structures the air legal order resulting from the Chicago Conference⁸.

It is generally accepted that the Chicago system has undeniably preserved the sovereignty of the States Parties to the Convention. This observation stems from two main factors. First, the delimitation of airspace by the Chicago Convention on International Civil Aviation was carried out in strict compliance with state sovereignty. In the context, the Article 1 clearly establishes that the airspace located above the land and sea territory of the State is itself encompassed within the State's sphere of spatial validity." This resonates with certain theories that conceive of airspace as an accessory to the land, as well as with other doctrines .

In this respect, the status of airspace follows the norms accorded to the land. State sovereignty over airspace would thus be merely a projection into the air of the sovereignty it holds over the land.

It would even be exercised in a rather radical way, since third-party states do not enjoy freedoms in the airspace above the territory of their peers, analogous, for example, to the right of free passage existing in the territorial sea, even above the territorial sea. The lack of analogy also extends to maritime areas where states exercise "sovereign rights" under the Montego Bay Convention on the Law of the Sea, since these rights do not establish any specific rights in airspace. This explains the controversial nature of the air defense identification zones developed since the mid-20th century.

Secondly, the conditions under which States have chosen to retain control over the opening of their respective airspaces to international civil air navigation demonstrate, once again, a classical conception of State sovereignty: the opening of its airspace by the State remains based on a

fundamental conventional instrument, directly or indirectly, and thus, on an expression of the State's freedom to commit itself.

1.1. The principle of air sovereignty

Sovereignty is a cardinal principle in international relations. This concept is often used in a political sense and is subject to various interpretations. In aeronautics domain, sovereignty corresponds to the ownership of airspace that allows the State to exercise its legislative, administrative and judicial powers there. It applies to air navigation as a whole. In other words, the exclusive competence of a State to exercise its legislative, administrative and judicial powers in its national airspace.

Airspace is the part of the sky above a state. Since the Chicago Convention, each country has been considered “sovereign” when it has authority, over its territory delimited up to 12 miles from the coast. According to the Chicago Convention, each State enjoys complete and exclusive sovereignty over the airspace above its territory. While national sovereignty cannot be delegated, the responsibility for providing air traffic services can be. Assembly Resolution A37-15 reminds us that a State that delegates to another the responsibility for providing air traffic services in the airspace above its territory without in any way affecting its sovereignty⁹.

The assertion of the sovereignty of the State over its airspace is linked to international relations and more particularly to the two world wars during which the aircraft became an important engine. The Convention on the Regulation of Air Navigation was signed in Paris by 27 States. The article 1 of the Convention on International Civil Aviation goes that: "each State has complete and exclusive sovereignty over the airspace above its territory". This agreement, which established the International Civil Aviation Organization, included 192 States parties¹⁰.

The airspace above a country is subject to precise rules of sovereignty and operates within a framework of international cooperation. Implementation is ensured by each state and guarantees collective air safety and security.

Sovereignty is a fundamental principle in international relations. This concept is often used in a political sense and is subject to various interpretations. In aeronautical matters, sovereignty corresponds to ownership of the airspace, which allows the state to exercise its legislative, administrative, and judicial powers. It applies to air navigation as a whole and, in military matters, takes on particular significance with regard to air defense. Since the beginning of 2023, several incidents have highlighted the importance of airspace regulations.

Like the sea, the air represents a natural space but also an invisible border. However, unlike maritime spaces, airspace has been structured around the territory of each state and is therefore inseparable from its sovereignty. Its use nevertheless incorporates forms of cooperation, even pooling of resources, between states, including to ensure a form of collective security.

It should be noted in this regard that the nine freedoms of the air :over flight, technical stopover, disembarkation of traffic, embarkation of traffic, transport of traffic to or from a third State, transport of traffic via the State of the carrier, transport of traffic from the second State to or from a third State, transport of traffic between two points in a foreign State, transport of traffic solely within a foreign State are far from being fully granted, and if they are, they only apply to civil aircraft.

State aircraft are, under the Chicago Convention, prohibited from overflying foreign territories, except with special authorization from the State overflown. Civil aircraft, for their part, do not all benefit from freedoms of the air equally.

Only civil aircraft employed in non-scheduled services benefit from the first two freedoms, and sometimes even the fourth and fifth as Article 5 of the Chicago Convention. Aircraft used for scheduled services are, however, subject to an authorization regime (Article 6 of the Chicago Convention).

Along with the Chicago Convention, the Montreal Convention is one of the few agreements to have garnered a sufficient number of ratifications to enter into force. This agreement establishes the first two freedoms for aircraft used for scheduled services. The others

Freedoms have only been granted on the basis of various agreements, which ICAO distinguishes according to the degree of liberalization they support: on the one hand, there is a logic of airspace liberalization, and on the other hand, more advanced liberalization strategies, as well as ICAO model agreements on air services accompanied by ICAO conferences relating to air services negotiations.

This mechanism aims to harmonize the technical rules applicable in airspace in order to promote the interoperability of navigation systems, but also of functional divisions of airspace, whether they are common functional airspace blocks. Whatever their degree of liberalization, these systems, by their conventional foundations, all still manifest the formal dimension of state sovereignty as the freedom to commit. It is primarily in the management of airspace uses that a more substantial and functional dimension of state sovereignty emerges.

1.2. The exercise of air sovereignty

Each State has two areas over which its sovereignty is full and complete: internal waters and the airspace adjacent to the land territory. Internal waters correspond to landlocked waters : inland lakes and seas. In addition to the maritime zones adjoining the land territory before the baseline begins¹¹.

The waters over which the State exercises its full sovereignty are only mentioned in the Montego Bay Convention in the part devoted to the territorial sea, in its article 8: "the waters situated on this side of the baseline of the territorial sea are part of the internal waters of a State". The latter are in fact legally assimilated to the terrestrial domain of the State¹².

Airspace management is an essential element in modern aviation. It refers to the regulation of the use of airspace in order to optimize the safety and efficiency of flight routes. This discipline encompasses several aspects such as planning, coordination and control of aircraft.

The International law ensures that states have full sovereignty over the airspace above their land or maritime territories up to 12 nautical miles from the coast. They are free to control access to it. Within this area, the rules of the State overflown apply, while on the high seas, the rules of the International Civil Aviation Organization, a specialized agency of the United Nations established to manage the Chicago Convention¹³.

The idea of projecting state sovereignty onto its airspace should not imply any visibility of the state border in the air: on this point, contemporary doctrine has confirmed, since the mid-20th

century, the invisibility of state airspace borders. This invisibility stems in part from the doubts surrounding, despite the aforementioned provisions, the delimitation of airspace, and even the legal status of these spaces.

On the one hand, only question of the horizontal boundary is clarified, namely, the delimitation to be drawn between the different state airspaces, but also the delimitation between state airspaces and international airspaces. Such a response does not cover all the legal problems raised by the uses of airspace. In particular, it only partially addresses the highly controversial and extensively debated issue of a state's right to reserve the air defense identification zones to control international airspace adjacent to its air borders. The status of international airspace is not directly addressed by the Chicago Convention, except to stipulate, just as indirectly, that the rules of the air annexed to the Chicago Convention apply over the high seas.

The more complex issue of the vertical boundary between, on the one hand, airspace or atmospheric space and, on the other hand, outer space, is not resolved by this convention, nor by other instruments, as it remains vague and dependent on the evolution of air and space navigation technologies, or even on the convergence of these technologies.

On the other hand, as some researchers have noted, the development of civil air navigation reveals a certain discrepancy between, on the one hand, the delineation of state borders and, on the other hand, the pattern of air traffic flows, which use channels materially distinct from borders. This is particularly evident in all real-time intelligence systems monitoring air traffic conditions. Managing these veritable highways requires control activities carried out by states according to principles of functional cooperation in order not to unduly hinder these cross-border modes of communication or movement to manage this, the restructuring of airspace in flux: Thus, superimposed on the territorial structures of the State such as border demarcations, are functional structures that are not so much established by reference to the sovereignty of States, but rather by following the practical logic of airspace use. Airspace is divided functionally both vertically, by flight levels, and horizontally, by flight information regions, or even by no-fly zones.

The Annex 11 to the Convention requires a Contracting State to determine the portions of airspace above its territory within which air traffic services will be provided to make arrangements for the establishment and provision of services. It also provides that a Contracting State may delegate to another State, by mutual agreement for providing air traffic services over its territory. The delegating State, as the executing State, may reserve the right to terminate any such agreement at any time.¹⁴

The delegating State establishes the conditions under which this action will be done. Furthermore, this delegation may be revoked at any time. The rights and obligations of a State to delegate its responsibilities for the provision of air navigation services over its territory, do not constitutes an infringement of its sovereignty¹⁵.

The State delegates the responsibility for the provision of services to a foreign organization in accordance with Article 28 of the Chicago Convention. However, this responsibility is limited to the obligation to ensure that the provision of services is adequately regulated by the service provider with a required certification and an effective supervision¹⁶.

The regulatory framework establishes all the safety and efficiency standards. Compliance with these is verified through monitoring measures. Performance can be measured against criteria of

safety, operational efficiency, cost-effectiveness and environmental responsibility. There are many ways to provide incentives to improve performance¹⁷.

The regulatory framework can set the overall standards for safety, efficiency and the environment. In addition, service delegation arrangements in the form of time-limited service level agreements, including key performance indicators and targets, are an effective way to encourage good performance. Failure to comply with the performance criteria results in the loss of the State's mandate¹⁸.

A major concern of States regarding the cross-border delegation of air navigation services is the need to ensure continuous surveillance of the national airspace for national security reasons, and to be able to respond at all times to security or military threats. The civil air navigation service provider must therefore be able to support the appropriate military authorities in carrying out this task¹⁹.

The risks of a military issues relating to the security are minimized first and foremost through comprehensive and robust coordination measures agreed between the military authorities and the air navigation service provider. The inclusion of key performance indicators for civil-military coordination in delegation agreements is also an incentive for service providers. Air navigation service delegation agreements should always include provisions reserving the right of the State delegating air navigation services to terminate the delegation at any time, with immediate effect, in the event of a crisis or serious threat to its national security²⁰.

Any delegation of responsibility from one State to another or any assignment of responsibility over the high seas shall be limited to technical and operational functions relevant to the safety and regularity of air traffic in the airspace concerned²¹.

Any Contracting State that delegates to another State the responsibility for providing air traffic services in the airspace above its territory does so without prejudice to its sovereignty; The Council approves regional air navigation agreements relating to the provision by a State of air traffic services in the airspace above the high seas, this does not imply any recognition of the sovereignty of that State over the airspace concerned.²²

The Chicago Convention and the transport and transit agreements confer on civil aircraft a number of obligations and rights, including the famous freedoms of the air. These must be reconciled with the prerogatives of the State flown over, and in particular the implementation of air policing which aims to prevent threats in the air, particularly the risk of terrorism²³.

The freedoms of the air defined at the time of the drafting of the Chicago Convention designate the rights granted to one State by another State for regular international air services. They are listed in Article 1 of the 1st Section of the Agreement on International Air Transport: "Each Contracting State grants to the other Contracting States, in respect of the international air services, the following freedoms of the air: The right to cross its territory without landing; The right to land for non-commercial purposes; The right to disembark passengers, mail and cargo embarked in the territory of the State of which the aircraft is a national²⁴.

Following a line of reasoning not unlike that sometimes applied to maritime zones, over which States exercise only sovereign rights and not sovereignty, the functional division of airspace sometimes reveals the State more as the custodian of a kind of mission of general or common interest than in its ordinary form as a sovereign entity.

This mission of the State does not mean that it does not enjoy certain freedoms in choosing its operational methods. Thus, a State vested with control of an area including airspace located above the high seas may, under international law, adapt the application of ICAO secondary legislation to its own practices concerning its national airspace. The ICAO Council specifies, in fact, that this State may “adopt a method of applying the standards and recommended practices in accordance with the one it has adopted for their application in the airspace under its authority.

However, this possibility, which is echoed in Annex 11 of the Chicago Convention, appears to concern, rather than air traffic rules, the rules applicable to ground-based air navigation services. It would not apply to the rules of Annex 2, for which only a few adjustments are made regarding the interception of aircraft when special circumstances so require Annex 11, which deals with air navigation services, is primarily intended to be adapted to the infrastructure of the state controlling the area: by allowing states this flexibility, the aim is to avoid discouraging states from undertaking services over areas of the high seas, which extend the areas under their sovereignty.

However, while this flexibility only applies to the rules of Annex 11, it does not necessarily contradict Article 12 of the Chicago Convention, since, as previously discussed, the rules of Annex 11 do not truly fall under the rules of the air. Article 12 would therefore not cover the rules of Annex 11. Applicable to air navigation services and not, strictly speaking, to flight and maneuvering, they would not fall under this mechanism of unconditional application and could therefore, to the extent technically feasible, be derogated from under Article 38 by the State responsible for air navigation control in the airspace above the high seas.

The possibility for the State ensuring air navigation control over the high seas to amend ICAO secondary legislation would be limited to provisions that are not within the scope of Article 12 of the Chicago Convention. It would in no way affect the interpretation of this provision as conferring on the rules of the air immediate effect in the international order or at least unconditional application by any State to which they are addressed.

We specify that the limits of airspace, whether over the territories of States or over the high seas, shall be determined on the basis of technical and operational considerations, with a view to ensuring safety and improving efficiency and economy for both providers and users of such services. The airspaces should not be segmented for reasons other than technical, operational, safety or efficiency; and that, if airspaces must include territories or parts of lands of two or more States, an agreement on this subject must be negotiated between the States concerned²⁵.

Sovereignty is also expressed by a right of visit and control over foreign aircraft which are required to respect the choice of airports that can accommodate them or allow their departure. Aircraft are placed under the authority of the country whose national flag, according to the principle of registration. As such, they are considered an extension of the national territory with the compliance of the rules of technical control²⁶.

2. The legal status of airspace and its delimitation

The regulation of airspace is relatively recent and has developed following technical progress with the appearance of flying machines. The law of such areas bears the traces of this lateness, which explains why the air domain is essentially governed by conventional law and much less by customs.²⁷

2.1. The legal regime of airspace

The International law distinguishes between the legal regime applicable to national airspace and international airspace. The concern of international law for airspace and outer space is relatively contemporary. The legal regime applicable to these spaces arose with the scientific and technical progress that has allowed human activities to develop. Due to differences in nature, air and outer space are subject to different regimes. The issue concerns the delimitation of these two spaces. The increasingly massive use of aviation during the World War 2 that made the international community aware of the need to establish the same rules for everyone in the skies. After an initial draft at the international conference in Paris, then in Warsaw, the Chicago Convention established the freedoms of the air to govern airspace²⁸.

International air law governs the rules and standards for air navigation between different countries, ensuring a stable legal framework for commercial air transport. Major conventions, such as the Chicago Convention establish fundamental principles for security and cooperation between International Civil Aviation Organization member states. Air rules are established by the Chicago Convention signed which also gave birth to the International Civil Aviation Organization, located in Montreal, acting under the aegis of the United Nations. The convention, amended several times, is now signed by 193 countries. Its objective: to establish the principles for a development of air regulations²⁹.

Safety is based on cooperation between a civil regulatory chain, placed under the authority of the Directorate General of Civil Aviation which is an administration attached to the Minister in charge of Transport. The Aviation security aims to prevent acts of unlawful interference, mainly by ensuring that no dangerous objects, such as weapons or explosives, can be brought on board aircraft.³⁰

2.2. Delimitation of airspace

International airspace is the area not covered by national airspace, also known as sovereign airspace which has no specific or official international definition. It is not defined also by the Chicago Convention. The principle of sovereignty was defined by the Article 2 of the United Nations Convention on the Law of the Sea, which states that "The sovereignty of coastal States extends to the airspace above the territorial sea, as well as to the seabed and subsoil thereof." and Article 58 which defines the freedom of over flight of exclusive economic zones. The case of exclusive economic zones defined by this Convention has, however, sometimes given rise to litigation and differences of interpretation. Unlike maritime areas, airspace has been structured around the territory of each State and is therefore inseparable from the sovereignty of the latter. Its use involves forms of cooperation³¹.

Due to the impossibility of setting a physical criterion for the delimitation of these two areas, a functional criterion has been retained: the applicability of the rules therefore depends on the activities that will be carried out in these areas, according to their purpose and characteristics: those that rely on air are subject to air law and those that do not use oxygen as an oxidant or atmospheric currents to outer space law. The vertical boundary between these two areas is therefore functional and relative. As a result, it cannot be set unilaterally by the underlying State³².

There is a vertical projection of the limits of these areas. This means that the air territory does not extend to the air zones that overlook the continental shelf of the State. The sovereignty of the State over its air territory stops at its limits, that are to say at the limits of its land or its maritime territory. Beyond its territorial sea, the airspace is internationalized³³.

Thus, this mechanism does not refer to the ordinary prerogatives of the State with regard to ICAO secondary law, which is constantly under Article 38 of the Chicago Convention. The State's power to derogate from the rules is limited given the function it performs, no longer as a sovereign entity, but as the custodian of an air safety management function entrusted to it. The coordination of civil and military activities: a requirement of international law.

Certain legal developments reveal that the functionalist logic sometimes prevails over the strictly sovereignty logic. The force of technical necessity, as well as practical convenience, leads to rules for coordination between civil activities. However, these rules are not systematically based on civil activity. This development has been heavily regulated by the ICAO, which, in principle, only has jurisdiction over civil navigation, and the reason is easily understood: various activities are governed by inherently distinct imperatives, explaining why no state wants to confer technical authority over navigation equipment on an international organization.

Other rules are based on the indirect link between two activities that are materially distinct but occur in the same space: the aim is then to coordinate the shared use of this space. An initial approach to addressing this issue was to stipulate the obligation of states to consider the safety of civilians when regulating air activities, as stated in Article 3(d) of the Chicago Convention. This did not, however, imply an obligation to consider ICAO-derived rules for activities conducted on board state aircraft, nor did it grant ICAO the authority to adopt international standards, recommended practices, and procedures for navigation.

It was essentially when the idea of airspace virtually divided into zones for civil or military use was abandoned in favor of its joint use by civilian aircraft that consideration was given to planning and coordinating their respective movements by proposing the development of common rules. In 2007, the ICAO Assembly, using its powers in the coordination and management of global airspace, interpreted Article 3(d) of the Chicago Convention as implying that flights of State aircraft over the high seas should be conducted in accordance with the rules of the air contained in Annex 2, terms which are closer to the norm than to recommended practice, since it states that flights shall be conducted in accordance with the rules of the air of Annex 2.

The legal regime of spaces and their use are incapable of appropriation, like the high seas, airspace and extra-atmospheric spaces are subject to international law insofar as specific activities are carried out there. Indeed, since the physical delimitation of the two spaces is relatively delicate, not to say uncertain, the law has circumvented the difficulty by understanding the activities that are carried out in these spaces. The airspace is divided vertically and horizontally into several areas. Nine regions are each controlled by an approach navigation service that will manage the descent

and climb phases of the aircraft. Above 5,000 meters altitude, for the control of aircraft in the different air corridors³⁴.

It is therefore a standard with universal scope. The States have introduced into this convention a major distinction between State aircraft used for military, police or customs services, and civil aircraft, the former not being covered, unlike the latter, by the Chicago system. The concept of sovereignty has also permeated the economic organization of air transport, which was managed as a public service before the privatization of the national airline³⁵.

These principles are more important since the delimitation of airspace is twofold: horizontal and vertical. In application of Article 2 of the Chicago Convention, the so-called territorial air is that part of the air environment that is above the national territory including land borders and territorial waters if it is a coastal State. The vertical limit of the airspace has not been defined by an international convention.³⁶

Conversely, in international airspace, navigation is governed by the principle of freedom but does not entirely escape the influence of States. Article 12 of the Chicago Convention provides that above the high seas, the rules in force will be those established on the flight and maneuvering of aircraft. Despite some similarities, the rules applicable to air navigation are different from those governing maritime navigation and there is no aerial equivalent, apart from the right of transit passage in certain international straits, to free passage authorizing by right the over flight of the State's territory³⁷.

Nowadays, air traffic is probably one of the most and best regulated and controlled activities of all those carried out by human beings. In the area of each country, as well as at the supranational level, organizations are responsible for legislating and ensuring safety in this space. Tens of thousands of devices fly over the earth at any given time, from private drones to large commercial aircraft. Even when the area overflown is a property, the airspace is public and therefore falls under the jurisdiction of the corresponding national agency.

There are three types of airspace: controlled areas, uncontrolled areas and airspace with special status. The type of airspace is defined in each case according to the movement of aircraft, the purpose of the operations carried out there and the level of safety required.

Airspace is primarily divided into controlled areas, uncontrolled areas, and special or particular airspace. These categories allow for the organization of aircraft traffic and ensure everyone's safety.

In controlled areas, an air traffic controller guides pilots and gives mandatory orders. This corresponds to classes A, B, C, D, and E. Controlled traffic zones are used for takeoffs and landings around major airports.

In uncontrolled areas, pilots are responsible for their own safety. This corresponds to classes F and G. No mandatory orders are given by radio, but pilots must respect weather conditions and altitude restrictions.

Special airspace is governed by specific rules that apply to protect sensitive areas or restrict certain flights: Prohibited areas (P): Over flight is completely prohibited because of high risk such

as nuclear power plants, secret bases. Restricted areas (R): Flight permitted under strict conditions or with agreement as military training. Danger areas (D): Activities risky for aircraft³⁸.

Although this may seem a bit complicated, it should be kept in mind that air traffic is probably one of the most and best regulated and controlled activities of all those carried out by human beings. The objective pursued always remains the same: the systematic maintenance of safety at its highest level.

The assertion of state sovereignty over its airspace is linked to international relations and, more specifically, to the two world wars during which the aircraft became a formidable weapon. Each State has completed and exclusive sovereignty over the airspace above its territory. It is therefore a universally applicable standard. States introduced into this convention a major distinction between state aircraft used for military, police, or customs services and civil aircraft, the former not falling under the Chicago Convention, unlike the latter. The concept of sovereignty has also permeated the economic organization of the

These principles are all the more important given that the delimitation of airspace is twofold: horizontal and vertical. According to Article 2 of the Chicago Convention, territorial air is that part of the airspace located above the national territory, that is, its land borders or its territorial waters if it is a coastal state.

The vertical limit of airspace has not been defined by an international convention. In practice, states refer to the so-called Kármán line, which represents an altitude of approximately 100 km, located well beyond the airspace controlled by air navigation service providers (20 km altitude).

It follows from all these principles that states remain free to authorize, regulate, or even prohibit air navigation. In practice, and with regard to air transport, this authorization stems from Air Service Agreements, which are concluded by states, not by airlines. Conversely, in international airspace, navigation is governed by the principle of freedom but is not entirely free from state control. Article 12 of the Chicago Convention stipulates that over the high seas, the applicable rules are those established by the concerning the flight and maneuvering of aircraft. Despite some similarities, the rules applicable to air navigation differ from those governing maritime navigation, and apart from the right of transit through certain international straits, there is no airborne equivalent to innocent passage that automatically authorizes over flight of state territory. Therefore, like the high seas, international airspace is not a lawless zone.

The questions concerning the principle of air sovereignty and, more generally, airspace and the conditions of its use, have preoccupied legal scholars since the dawn of aviation.

The principle of state air sovereignty endures, but its content is being renewed. Indeed, while considerations of sovereignty remain relevant, from the exchange of traffic rights to the control of airspace use and air policing, new forms of exercising state sovereignty are emerging, particularly within the international context.

This progressive air navigation control, already tested on a limited but successful basis, must constitute the final major step in the realization of a unified civil aviation system. However, there are numerous stumbling blocks, all stemming, more or less directly, from considerations of sovereignty, as demonstrated by the difficulties encountered in establishing functional airspace blocks.

Air sovereignty, quickly overcome for the completion of the internal air transport market, therefore remains a significant challenge for air navigation. While these difficulties are primarily of global interest, lessons can be drawn from them at a more global level, particularly as other experiences of regional air governance are developing, notably in Latin America, Asia, and Africa.

In the future, successes achieved in other regions of the world may, in turn, enrich human thinking on how to reconcile the liberalization of air transport with rationalized airspace management and the guarantee of high levels of safety and security.

Although there is no question of linking this obligation to the derogation notification procedure which, under Article 38 of the Chicago Convention, is a prerequisite for a State's non-compliance with a standard, a shift has begun, almost marking a loss of priority given to military activities over civilian activities. However, this extension should not be equated with a broadening of ICAO's jurisdiction. At most, for the time being, it implies that certain rules produced by these two institutions, competent only in civil matters.

The question of the concept of the right to self-defense has also been revisited in light of this technology, which seemed to allow for operational measures of a lesser scale than resorting to more traditional means: more discreet than deploying combat aircraft.

In this context, such difficulties should not be understood as affecting the very existence of public international law; rather, they are a manifestation of its inherent nature and of a certain social order that persists even in situations affecting world peace a social order that par excellence demonstrates the existence of a genuine international legal order.

Within this legal order, state sovereignty over its airspace no longer appears so much as an abstract and unlimited prerogative whose limitations cannot be presumed, but rather in terms of its functional dimension. In this type of conception, the exercise by the State of a sovereignty defined in its functional dimension and no longer exclusively formal must inevitably have as its ultimate objective that assigned in principle to the legal order to which the legal person State belongs, namely, internal peace, but also the construction of international peace, which constitutes the basic principle or of existence of the international legal order.

Conclusion:

To fully understand international air law and the principle of air sovereignty, it is crucial to look at the main treaties and agreements, such as the Chicago Convention of 1944, which establishes the foundations for international civil aviation. This law encompasses different aspects, including

According to the Chicago Convention, each State enjoys complete and exclusive sovereignty over the airspace above its territory. This is an indisputable fact. National sovereignty cannot be delegated. On the other hand, the responsibility for carrying out functional responsibilities, such as the provision of air navigation services, can be delegated. In fact, the delegation of service provision is an act of sovereignty.

In the context of globally harmonized air navigation services and homogeneous, State sovereignty should be seen as an incentive, not a barrier, to implementing the changes needed for more efficient management of the global air navigation system. Used constructively, the principle of State sovereignty can be proactively leveraged to drive the necessary improvements in

performance in global and regional air traffic management. This more mature understanding of the principle of sovereignty should be actively promoted by all stakeholders in the aviation sector.

States are proactively exercising their sovereignty over their airspace, delegating responsibility for providing air traffic management services to more effective, collaborative cross-border partnerships that will deliver tangible improvements in air traffic management performance;

It is necessary for States to work in collaboration with all relevant stakeholders in the aviation sector to actively promote a more mature understanding of the principle of sovereignty at the political level by taking into consideration the following recommendations:

- Ensure the safety and security of flights
- Protect the rights and duties of airlines
- Comply with the rules concerning the sovereignty of airspace
- Facilitate cross-border air transport while preserving the sovereignty of each nation.
- Optimize and effectively planning airspace management involves the use of various mathematical techniques.
- Analyze data to predict air traffic conditions and volumes.
- Apply optimization methods to determine the best routes.
- Use simulations and modeling to test and adjust flight plans.
- Increase efficiency to reduce operating costs and flight time.
- Ensure air traffic safety.
- Collaboratively regulate traffic flow.
- Harmonize the space above the ground surface.

Citations:

¹ The Paris Convention constitutes the first successful attempt at common regulation of international air navigation and lays the foundations of air law. Each nation has absolute sovereignty over the airspace overlying its territories and waters.

² The Chicago Convention was signed by 52 signatory States.

³ The International Civil Aviation Organization (ICAO) was established by the Convention on International Civil Aviation earlier in Chicago.

⁴ Territorial sovereignty refers to the exclusive, full, and complete power exercised by a state over its geographical territory, its population, and the activities that take place there, to the exclusion of any external interference. The state is the sole master within its own borders; it holds the monopoly on public power, laws, and legitimate force within its territory. Its jurisdiction applies to all persons and property located within its borders.

⁵ The Warsaw Convention for the Unification of Certain Rules Relating to International Carriage by Air, has evolved into one of the most important instruments of private international law.

⁶ The fundamental principles for aircraft safety are based on security against unlawful acts, and the rigorous management of human and operational risks. They guarantee the technical integrity of the aircraft and the protection of those on board.

⁷ The rules of international air navigation are based on the Chicago Convention and are set by the International Civil Aviation Organization (ICAO). They consist of global standards and precise reference systems to ensure flight safety.

⁸ McDougal, G., Lasswell, H. and Vlasîc, I.A, Law and public order in space. The nationality of spacecraft and promotion of optimum order in space, vol. II. McGill, Montreal, 2007, p134

⁹ The Resolution A37-15 is a statement of the organization's standing policy and rules of practice in the field of air navigation, adopted in October 2010 at the 37th session of the Assembly, covering in particular standards, procedures and civil-cooperation.

¹⁰ Reinhardt, D.N., The vertical limit of state sovereignty. *Journal of Air Law and Commerce*, Northwestern University, Texas, 2007, p137.

¹¹ Steven E. Grotch, Mega-Constellations, Disrupting the Space Legal Order, *The Emory International Law Review*, Emory University School of Law, Atlanta, 2022, p102

¹² Maritime sovereignty refers to a country's power and rights over the seas and oceans near its coasts, primarily governed by the law of the sea and the Montego Bay Convention. It guarantees states economic, security, and political control over increasingly conflicted areas.

¹³ The high seas refer to the maritime areas located beyond the Exclusive Economic Zones of states, that is, more than 200 nautical miles from the coast. Covering more than 64% of the oceans and half the globe, this area belongs to no one and is governed by the principle of freedom of navigation, over flight and fishing.

¹⁴ According to Article 1 of the Chicago Convention, as amended by the International Civil Aviation Organization, each State possesses complete and exclusive sovereignty over the airspace above its territory. This airspace is defined by land borders and territorial waters extending up to 12 nautical miles from the coast.

¹⁵ Huala Adolf, State Aspects in International Law, Bandung, Hasnil Basri Siregar, *International Organizational Law*, Medan: Study Group. 2011, p329

¹⁶ Niederstrasser C, 'Small Launchers in a Pandemic World-2021 Edition of the Annual Industry Survey', 2021, p34

¹⁷ Buzdugan, M., 'Developing Rules of the road' for space, issues of Space Traffic Management. Paper presented to Makau conference, 2007, p49

¹⁸ Abeyratne R. *Megatrends and air transport: legal; ethical and economic issues*. Springer, Heidelberg. 2021, p28

¹⁹ Civil air navigation encompasses all the rules, services and techniques used to guide aircraft, ensure flight safety and organize air traffic.

²⁰ Metz C, How deep neural networks could improve airport security. *The New York Times*, 2017, p18.

²¹ Delegation of responsibility in airspace refers to the legal and technical mechanism by which a State entrusts the provision of air navigation services over its own territory to another State or an international organization, while retaining its full sovereignty.

²² Kareng, Yaya. "International Aviation and Airspace Law an Overview. *International Journal of Law Reconstruction*, vol. 4, 2020, p. 53.

²³ The freedoms of the air refer to a set of air transport rights that govern the over flight and commercial operation of international airspace by airlines. Initially formalized at the Chicago Convention, they now range from simple over flight authorization to the most complex cabotage rights.

²⁴ This right is called the right of over flight, which allows an aircraft to cross a country's airspace without landing there.

²⁵ Gaston JK, Environmental impacts of increasing numbers of artificial space object, *Frontiers in Ecology and the Environment*, 2023, p171

²⁶ An aircraft registration is a unique identification code assigned to an aircraft by a country's aviation authority. It ensures the aircraft's nationality, safety, and traceability worldwide.

²⁷ Mirza Satria Buana, *International Law Theory and Practice*, Bandung: Nusamedia Publisher, 2007, p 197

²⁸ The main difference between national airspace and international airspace lies in state sovereignty, applicable rules, and geographical location. In national airspace, the state has exclusive control over the airspace above its land territory and territorial waters. Any foreign aircraft must obtain authorization, file a flight plan, and pay fees to enter. Access is entirely managed and protected by the country's local authorities. The international airspace, is distinguished by the freedom of over flight, located beyond territorial waters, it does not belong to any single country. Aircraft in this airspace follow the global recommendations of the International Civil Aviation Organization. Safety oversight is delegated by international agreement to coastal or designated countries.

²⁹ Goehring, John S.. *Why Isn't Outer Space a Global Commons?*” *Journal of National Security Law & Policy*, 2020, p271.

³⁰ The 42nd session of the Assembly of the International Civil Aviation Organization was held from September 23 to October 3, 2025, in Montreal, Canada. This triennial meeting brought together the 193 Member States to set global air transport policies.

³¹ Soucek, Alexander, and Jenni Tapio. *Standardization in the Space Sector and Its Role in the Long-Term Sustainability of Space Activities: Regulation by Stealth or a Function Creep?*” *Air and Space Law*, 2023. P211

³² The delimitation of airspace for civil aviation is organized by the International Civil Aviation Organization through a global division into seven classes, Flight Information Regions, and specific zones according to control and safety needs.

³³ A maritime territory refers to all areas of the sea under the sovereignty or jurisdiction of a coastal state, including internal waters, the territorial sea, and the exclusive economic zone. These areas are measured from the baseline of the coast and governed by the international law of the sea.

³⁴ Odermatt, Jed. *International Law and the European Union*. 1st ed. Cambridge: Cambridge University Press, 2021, p28

³⁵ The organization of air transport relies on international bodies and national authorities. It structures safety, flight rules, and the commercial operation of aircraft.

³⁶ Territorial waters, or territorial sea, designate the coastal sea area over which a coastal state exercises its full sovereignty, extending to a maximum limit of 12 nautical miles approximately 22 kilometers from its baseline.

³⁷ Ruth E. Stilwell, *Who Is Right When It Comes to Right of Way in Space?* in *Proceedings of 6th. Annual Space Traffic Management Conference -Facing the Security Challenge*. Austin, Texas, 2020, p341

³⁸ Froehlich, Annette, *Outer Space and Cyberspace : Similarities, Interrelations and Legal Perspectives*. *Studies in Space Policy Ser. ; v.33*. Cham, Switzerland: Springer , 2021, p214

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