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LIMITATION OF AIRSPACE SOVEREIGNTY OF STATES IN CONNECTION WITH SPACE ACTIVITY

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With Regards BIBY THOMAS

1. Introduction

The concept of “space of flights”, especially after the appearance of motor aviation at the turn of the 19th and 20th centuries, began to create many legal problems. On the one hand, it was established that space that is used for aviation purposes, and which is subject to the sovereignty of the state is called “air space” or “atmospheric space”. The skies begin where the upper limit of the airspace lies. However, international law does not regulate the issue of the location of the upper limit of airspace. The Chicago Convention of 1944, recognizing the sovereign rights of states in their airspaces, does not define the boundaries of this space. Likewise, the annexes to the Chicago Convention do not deal with legal relations relating to non-atmospheric space (McDougal, Lasswell and Vlasic 2007, Wassenberg 1978, Johnson 1974, Kayser 1995, Martin 1968, Homburg 1965).

On the other hand, looking for the most general assumptions that could determine the legal situation of space (outer space), it was noted that the main goal of the coexistence of the states of the world is respect for the principle of sovereign equality. Among these assumptions, the principle of *res communis* seemed the most appropriate, for which a large group of researchers spoke. According to this principle, each and every state in the world can use space. From an Earth-related point of view, transferring legal concepts to space and considering the possibility of not using space for Earth-related purposes, this principle must be understood in a more general manner and space defined as *res communis Omnis universi*.

It can, therefore, be pointed out that before 1957, there were two main directions in contemporary law regarding upper space. According to the first of these, the state can extend its sovereign power and control to it. According to the second one, supra-space is considered a “common thing”. Until the commencement of the space flight age, however, there were no clear decisions on this matter both in practice and in international agreements.

2. Research Objective

1. Define and Clarify Airspace Sovereignty:

Provide a clear and precise definition of airspace sovereignty and its historical development in international law.

2. Explore International Legal Frameworks:

Examine the various international treaties, conventions, and agreements that govern airspace sovereignty.

Analyze the rights and responsibilities of states in controlling their airspace as established by international law.

3. Investigate Overflight and Transit Rights:

Explore the principles of overflight and transit rights, understanding how they limit airspace sovereignty.

Examine how these rights are governed by international agreements, such as the Chicago Convention on International Civil Aviation.

3. Research questions

1. How do international treaties and agreements define and constrain the concept of airspace sovereignty for states?
2. What are the rights and responsibilities of states in controlling their airspace, as established by international law, and how do they vary among different regions or countries?
3. To what extent do overflight and transit rights, as recognized by international conventions, limit a state's exclusive control over its airspace?

4. Research methodology

Research on the limitations on airspace sovereignty can be conducted using a variety of research methodologies, depending on the specific research objectives, data availability, and the nature of the research questions. I outline a research methodology that you can consider for studying the limitations on airspace sovereignty of states.

Literature Review Documentary Analysis Case Studies

5. Fundamentals of Air and Space law

Air Law:

1. Chicago Convention on International Civil Aviation: The Chicago Convention, adopted in 1944, is a foundational international treaty that establishes the legal framework for civil aviation. It covers aspects like sovereignty over airspace, aviation safety, and the rights and responsibilities of states and international organizations.
2. Sovereignty over Airspace: States have sovereignty over the airspace above their territory, subject to certain international agreements. This sovereignty includes the right to regulate and control air traffic within their borders.
3. Overflight and Transit Rights: International law recognizes the principle of innocent passage, allowing foreign aircraft to overfly a state's territory without landing or stopping. Transit rights enable aircraft to pass through a state's airspace en route to other destinations.
4. Air Traffic Management: This area covers the regulation and coordination of air traffic within a state's airspace and between states. It is crucial for ensuring aviation safety and

efficiency.

5. Aircraft Registration and Liability: Rules exist for the registration and certification of aircraft, as well as the liability of operators and states in case of accidents or incidents.
6. Aviation Safety and Security: International organizations like the International Civil Aviation Organization (ICAO) set safety and security standards to ensure the safe operation of civil aviation.

Space Law:

- 1) Outer Space Treaty: The Outer Space Treaty, adopted in 1967, is a key international agreement that governs activities in outer space. It establishes space as the province of all humankind, prohibits the placement of nuclear weapons in orbit, and prevents the national appropriation of celestial bodies.
- 2) Sovereignty in Outer Space: The Outer Space Treaty specifies that outer space is not subject to national appropriation, and states are not allowed to establish sovereignty over any part of space.
- 3) Liability and Space Debris: States are liable for damage caused by their space objects on the surface of the Earth or to other space objects. Space debris mitigation and management are crucial issues, as the accumulation of debris poses hazards to space activities.
- 4) International Telecommunication Union (ITU): The ITU allocates and manages the use of radiofrequency spectrum and satellite orbits for space communication and broadcasting.
- 5) Moon Agreement: This agreement, although not widely adopted, regulates activities on the Moon and other celestial bodies. It emphasizes resource-sharing and environmental protection.
- 6) Space Commercialization: The commercial use of space is a growing area, including satellite services, space tourism, and asteroid mining. Legal frameworks are evolving to accommodate these activities.

6. Concept of Air Space Sovereignty

Air sovereignty, also known as airspace sovereignty or territorial sovereignty over airspace, is a fundamental concept in international law that asserts a state's authority and control over the airspace above its territory. It is a core element of a state's territorial integrity, alongside land and maritime sovereignty. Here are key components of the concept of air sovereignty:

- 1) **Sovereignty Over Airspace:** Air sovereignty refers to a state's exclusive jurisdiction and control over the airspace located above its territory, typically extending from the Earth's surface to a certain altitude. The specific altitude limit is determined by each state, but it is generally recognized as extending to a height that is necessary for the peaceful use and enjoyment of a state's territory.
- 2) **Territorial Integrity:** Just as a state exercises sovereignty over its land and territorial waters, it does so over its airspace. This concept is rooted in the principle of territorial integrity, which is a fundamental element of international law.
- 3) **Rights and Responsibilities:** States have the right to regulate and control air traffic within their airspace. This includes the ability to establish and enforce aviation regulations, grant or deny permission for aircraft to enter or fly over their territory, and manage the use of their airspace for civil and military purposes.
- 4) **Air Traffic Management:** Air traffic management is a critical aspect of air sovereignty. States establish air traffic control systems to ensure the safe and orderly movement of aircraft within their airspace. These systems provide guidance, communication, and coordination services to maintain aviation safety.
- 5) **International Agreements:** While states have sovereignty over their airspace, they also enter into international agreements, such as the Chicago Convention on International Civil Aviation (1944), to regulate civil aviation at the international level. These agreements establish norms and standards for aviation safety and the peaceful use of international airspace.
- 6) **Overflight and Transit Rights:** International law recognizes the principle of innocent passage, which allows foreign aircraft to overfly a state's territory without landing or stopping. Transit rights are similar, permitting the passage of aircraft through a state's airspace en route to other destinations. These rights are subject to the state's regulations and certain conditions.
- 7) **Military Activities:** States have the right to conduct military activities within their airspace, including exercises, surveillance, and defense operations. These activities are generally subject to domestic laws and international agreements governing military conduct.
- 8) **Challenges and Limitations:** Air sovereignty can face limitations and challenges, particularly in cases of international disputes, issues related to overflights, military activities, or the presence of international aviation organizations like the International

Civil Aviation Organization (ICAO), which regulate civil aviation at the global level.

7. International Treaty and Laws

Airspace sovereignty, while a fundamental concept in international law, is subject to limitations and constraints imposed by international agreements and treaties. These limitations are designed to balance the rights of individual states with the needs of international cooperation, aviation safety, and security. Here are some of the key limitations of airspace sovereignty with respect to international laws and treaties:

Overflight Rights:

Chicago Convention on International Civil Aviation: The Chicago Convention, signed in 1944, allows for the principle of innocent passage, which grants foreign aircraft the right to overfly another state's territory without landing or stopping. States have the sovereignty to regulate such overflights, but they must adhere to international standards and agreements.

1. Transit Rights:

International law recognizes the right of transit, enabling aircraft to pass through a state's airspace en route to other destinations. While states can regulate and control transit traffic, they must allow it in accordance with established international agreements.

2. International Civil Aviation Organization (ICAO):

ICAO, a specialized agency of the United Nations, establishes global standards and regulations for aviation safety, security, and navigation. States must comply with ICAO standards, which may limit their autonomy in setting certain aviation rules.

3. International Telecommunication Union (ITU):

ITU allocates and manages the use of radiofrequency spectrum and satellite orbits for international air and space communication. States must coordinate and cooperate with the ITU to ensure proper allocation, limiting their unilateral control over radiofrequency spectrum.

4. Outer Space Treaty (1967):

While primarily addressing space activities, the Outer Space Treaty has implications for airspace sovereignty. It prohibits the placement of nuclear weapons in orbit and emphasizes

the peaceful use of outer space. This treaty limits a state's ability to assert full sovereignty over its airspace when it comes to space-related activities.

5. Open Skies Treaty (1992):

The Open Skies Treaty allows participating states to conduct unarmed observation flights over the territory of other participants. While it primarily relates to monitoring military activities, it affects the exercise of airspace sovereignty and control over one's airspace.

6. Bi-lateral and Multi-lateral Agreements:

States often enter into bi-lateral and multi-lateral agreements that govern specific aspects of airspace use, including air traffic management, overflight permissions, and air defense cooperation. These agreements can limit airspace sovereignty to varying degrees, depending on their terms.

7. Environmental Regulations:

International agreements addressing environmental concerns, such as emissions and noise pollution from aircraft, can lead to regulations that affect a state's ability to set its own environmental standards within its airspace.

9. Liability for Space Objects:

States are responsible for damage caused by their space objects on the surface of the Earth. This responsibility, established by international agreements, can limit a state's control over its airspace when space objects may re-enter the atmosphere.

10. International Cooperation:

International cooperation in the fields of air traffic management, aviation safety, and space exploration often requires states to work together and adhere to agreed-upon rules and standards, limiting their full sovereignty over their respective airspaces.

8. Difficulties And Conflicts

Several difficulties and conflicts have emerged when conventional airspace sovereignty principles collide with space operations such as satellite launches and space debris management. The intersection of airspace sovereignty and space activities is a complex and evolving area of

international law and policy.

It involves the overlapping interests of states in controlling their own airspace and the increasing utilisation of outer space for various purposes, including satellite launches, space exploration, and the management of space debris.

Overflight Rights: When satellite launches follow paths that cross through several states' airspace, conflicts may arise. Launch corridor disputes may arise from states asserting their sovereignty rights over their airspace.

Collision Avoidance: The number of satellites in orbit and its crowded nature make collisions more likely. In order to avoid collisions, space debris and operational satellites must manoeuvre, occasionally crossing international borders in the process. Concerns about airspace sovereignty may result from this.

Liability for Space Debris: Launch-related space debris presents a liability risk. Liability and compensation disputes may arise when space debris damages aircraft or lands on state territory.

Space Traffic Management: It's critical to coordinate space traffic to maintain safe separations between satellites and debris. Conflicts can occur when nations or groups disregard international standards, raising questions about the safety and risk of collisions.

Transparency and Data Sharing: Both are necessary for efficient space traffic management. Conflicts may occur when nations refuse to divulge details about the orbits of their satellites, which could impede prompt attempts to prevent collisions.

Regulatory Conflicts: The laws governing satellite launches and management differ among the states. International cooperation may be hampered by conflicts that arise when the requirements for obtaining launch licenses or regulating space activities do not align.

Environmental Concerns: States that are concerned about environmental protection may disagree with rocket launches due to their effects on the environment, including emissions and chemical residues. Conflicts may arise when activities involving the freedom of space and environmental responsibility are balanced.

Allocation of Radio Frequency Spectrum: When several satellites use the same frequency bands

for operation, disagreements over spectrum interference and coordination may arise from the distribution of radio frequency spectrum for satellite communications.

Space Traffic Corridors: One common method of mitigating space debris is to steer retired satellites and rocket stages toward controlled re-entry. When these controlled re-entries cross the airspace of several states, conflicts may result.

International Cooperation: Due to national security or sovereignty concerns, some states may be reluctant to participate in international cooperation on space traffic management and space debris mitigation, which could impede efforts made by the international community to address these issues.

Space Governance: The absence of a comprehensive international framework for space governance can result in disputes over the interpretation of existing treaties and the development of new rules and regulations.

To address these challenges and conflicts effectively, international cooperation, transparent data sharing, and the development of clear guidelines and regulations are essential. Collaboration between spacefaring nations and international organisations is crucial to ensure the peaceful and safe coexistence of airspace sovereignty and space activities.

9. Conclusion

In the face of ever-evolving space technology, it is easy to notice changes in the understanding and implementation of the sovereignty of the state in airspace. This happens in different ways in different areas. A states' airspace sovereignty remains a principle whose application is still important for the security of the state, but the development of technology and the activities of states in space must have evolved in the understanding of the limits of the exercise of these sovereign rights. Meanwhile, the concepts and problems regarding the delimitation of space, or air and space activities, remain not fully explained.

Limitations of sovereignty cannot be presumed. Sometimes, however, doctrinal disputes arise in this matter