

# **Air Sovereignty vs National Security: Examining the Legal Challenges of Aerial Intrusions and Unmanned Aerial Vehicles' Warfare**

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## **Abstract**

Air sovereignty defines the use of the airspace perpendicular to a nation's dominion. Throughout history, emergence of various theories has been witnessed. However, today the most prevalent is the theory of limited sovereignty, which stood the test of time. This has led to a constant challenge attributed by the rise of unmanned aerial vehicles, like drones and aerial warfare. This article aims at exploring the existing theories, as well as the impact of drones in obscuring the boundaries between military and civilian operations. It also focuses on India's current legal framework and emphasises the relevance of having robust regulatory guidelines for these specific operations.

## **Introduction**

In the recent times, Indian industry have been transformed, one of the major reasons being the surge in the drone technology. However, these advancements have also concluded in critical legal and regulatory issues, specifically with regard to privacy, security, and commercial use.

As drone technology develops and air-borne invasions grow more frequent in the past decades, notable debates over air sovereignty and national security have been raised. One of the major reasons being the increasing use of drones for a variety of objectives, especially military and surveillance. The intersection of air sovereignty and national security brings forth a complex legal environment. This also poses a threat alongside the conventional challenges by the implications for national security. With an emphasis on the ramifications for India, this article explores the legal issues raised by aerial invasions and Unmanned Aerial Vehicle (UAV) warfare.

The concept of air sovereignty is essential to maintaining national security because it gives countries the power to bar illegal aircraft from entering their airspace, shielding their citizens and important resources from possible dangers.<sup>1</sup> But as UAV technology has advanced, the boundaries of this sovereignty have become hazier since drones provide new security risks that go beyond the conventional bounds of legal aerial operations.

As per International Civil Aviation Organisation (ICAO), air sovereignty allows each state exclusive control over the airspace, perpendicular to its dominion, enabling it to regulate and monitor civilian and military aircraft activities.<sup>2</sup>

## **Theories of Air Sovereignty**

There are numerous theories arguing the same. A variety of viewpoints have been covered by these theories. The legal status of airspace perpendicular to sovereign

states and their territorial waters remained contested pre-World War I (WW I). One viewpoint advocated for total airspace freedom, while another compared it to the idea of territorial seas and suggested that there be a territorial airspace right next to the state's territory, followed by a higher unrestricted airspace zone. According to a third perspective, a state's sovereign authority encompasses all airspace above it. A fourth viewpoint, which differed from the third, proposed that a foreign civil aircraft have the right to fly over a state's airspace without causing any harm.

But this changed with the start of WW I when the security implications of air travel were recognised. The idea of sovereignty over the airspace was born as a result of the theories that were developed in response to this dispute.

- **Theory of Unlimited Freedom.** Jurists in support of this theory advocated that similar ideas may be applied to air travel after seeing the advantages that unfettered freedom of the seas has provided to the world community. Nonetheless, this theory's detractors contend that it goes against a number of international agreements. Every sovereign state claims control over its airspace, and foreign planes are only allowed to fly there with prior authorisation.
- **Theory of Absolute Authority.** This theory is in sharp contrast to the previous one; it asserts complete state authority over the atmosphere while rejecting the idea of freedom. By highlighting its indisputable character and rejecting claims from other nations, it also takes influence from the application of Roman law principles to property ownership. This theory's detractors contend that airplanes are capable of reaching extraordinarily high altitudes due to the rapid improvements in science and technology. Controlling airspace at infinite heights becomes infeasible for each state.
- **Intermediate Theories.** The goal of this theory was to create an efficient international air navigation system while balancing state territorial claims. French lawyer Paul Achille was one of the most well-known proponents of this view. In 1901, he proposed that the air is naturally free and the only way to limit its freedom is to impose restrictions on it through particular rights that belong to the state below. This point of view held that a landowner's sovereignty over the airspace was constrained to the maximum height at which they might erect structures; above this point, the airspace was deemed free and available for unfettered use. The main obstacle to embracing this notion is that no state is prepared to give it its unqualified support.
- **Theory of Limited Sovereignty.** This was founded on the idea that the state has authority over the atmosphere, but it also imposed restrictions to encourage the use of appropriate aircraft, the airworthiness of which could be verified by certain international certifications. This theory, which was based on a functional concept of

air navigation rather than just a spatial one, foresaw the numerous regimes.

### **The Evolution of Aerial Technology and its Implications**

In the past, nations have used aviation laws and enforcement systems to exert their air sovereignty. States have full and exclusive sovereignty over their airspace, according to the principles outlined in the 1944 Chicago Convention, which forbids foreign aircraft breaches unless the proper authorisation is obtained.<sup>3</sup>

Drone operations, for example, have demonstrated efficacy in areas like Afghanistan and Yemen for targeted murders and monitoring without the geographical limitations that conventional manned planes confront. Many countries, like the United States (US) and Israel, have launched military campaigns without first obtaining permission from the states where these operations take place because of the strategic advantage these unmanned systems provide.<sup>4</sup> Given the concepts of sovereignty and permission, this shifting environment calls into question the morality and legality of using UAVs in foreign countries.<sup>5</sup>

Foreign UAVs, both governmental and rebel, pose a growing threat as India negotiates the challenges of preserving air sovereignty. Drone sightings near the Indo-Pakistan border, for instance, have increased and are frequently connected to hostile groups' smuggling or intelligence-gathering operations.<sup>6</sup> Establishing a strong legal framework to effectively address these crimes is just as difficult as detecting and neutralising them.

### **Legal Framework of Air Sovereignty and Aerial Intrusions**

Many facets of international law are intertwined into the legal framework that regulates aerial invasions and UAV activities. State sovereignty and territorial integrity continue to be the fundamental ideas that guide the use of force in international relations.<sup>7</sup> Legal experts point out that invading another country's airspace without permission is a violation of that country's sovereignty and can lead to serious geopolitical disputes.<sup>8</sup>

It has been well established that international law has evolved to define governments' rights and responsibilities with regard to air operations. One of the major concern is, the absence of an internationally acknowledged height limit to airspace sovereignty. There is no internationally recognised agreement that clearly states the exact measures of nations' airspace limits.<sup>9</sup> Nevertheless, there have been some attempts to set it at the Karman Line, which sits about 100 kms above sea level. As a result, the uncertainty over the boundaries of state sovereignty with relation to airspace continues to exist. This uncertainty makes it difficult when foreign drones unexpectedly enter the other nation's airspace.<sup>10</sup>

The dire need requires nations to enact thorough laws that specify acceptable UAV activities and include protections against infractions in order to address these issues. Given India's particular security issues with reference to the geography, this becomes exceptionally important.

## **The Ethical and Human Rights Dimensions of Unmanned Aerial Vehicles Warfare**

The ethical and human rights issues raised by the use of drones often frame the basis of any legal study. Research and graphs argue that drone strikes frequently cause civilian casualties and negative societal effects, which has sparked public outrage about their morality and legality.

The application of International Humanitarian Law (IHL) concepts like distinction and proportionality, which govern behaviour during armed conflict, is made more difficult by the deployment of UAVs, which blur the boundaries between military and non-military operations. The difficulty increases when separating genuine military targets from civilian organisations, since the upsetting results for non-combatants frequently outweigh the greater precision recognised with drone strikes.<sup>11</sup> This leads to a contradiction, whereby, the sophisticated capabilities of drones intended to improve operational effectiveness unintentionally cause public confidence and civilian safety to decline.

### **India's Response to Emerging Threats and Legal Adaptation**

Given the aforementioned difficulties, India needs to proactively evaluate its air sovereignty and UAV operations under national security framework. The Indian government has started working to improve its counter-drone capabilities, emphasising on both kinetic and non-kinetic techniques, as cases of aerial intrusions along international boundaries increase.<sup>12</sup> Addressing the growing complexity of drone threats has required actions like patrols and the installation of detection equipment.

Addressing the legal ramifications is the need of an hour. To reduce hazards and strengthen national sovereignty, a comprehensive legal framework controlling drone operations in Indian airspace is essential. The absence of a clear legal framework to control airborne intrusions has led to misunderstandings about how to interact with unidentified drones, especially when separating military and civilian operators.

Furthermore, in order to retain conformity with larger human rights frameworks, counter-drone legislation needs to be amended and made in consistent with international legal standards. India's Unmanned Aircraft System (UAS) sector has two ambitious but transformative ambitions. By 2030, the first goal is to become self-sufficient in essential UAS technology, and the second is to establish itself as a global hub for drones. The Ministry of Civil Aviation has carry out a number of policy initiatives such as the drone regulations, production linked incentive programs for drones and the drone shakti scheme. By eliminating the intricate approval procedures needed to operate drones, these regulations simplified the certification process. It reduced the number of procedures that need to be fulfilled, eliminated several permissions and approvals, and drastically reduced the types of expenses that need to be paid. The need for a remote pilot license was removed for the non-commercial use of micro and nano drones.<sup>13</sup>

## Conclusion

India continues to invest in defence research and development with the aim to improve drone technologies, alongside sleuth capabilities and artificial intelligence for autonomous platforms. By enactment of legislations and policies that are both capable and adaptable, India can effectively handle the evolving demands of air sovereignty and counter the challenges presented by aerial invasions, thereby, fostering a more stable and secure geopolitical environment. For Instance, with UAV warfare, the interrelation between air sovereignty and national security raises condemning legal concerns, which calls for immediate attention. Addressing these concerns require legitimate understanding of the relevance of international law and its objective, the development of drone use, and the present-day concerns posed by UAV technology. Maintaining national security while promoting a robust legal framework stands as the utmost priority as nations navigate the complexity of modern warfare in an increasingly interconnected world.

## Endnotes

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<sup>2</sup> 'Airspace Sovereignty', *ICAO*, 3 Apr 2013

<sup>3</sup> 'Air Sovereignty', *Benefits.Com*

<sup>4</sup> '49 USC 40103: Sovereignty and Use of Airspace', *United States Code*, 6 Feb 2025  
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<sup>5</sup> 'International Law And Drone Attacks Beyond Armed Conflict Zones', *Harvard*, 30 Jan 2025

<sup>6</sup> 'Drone Intrusions Along the India-Pakistan International Border', *Carnegie Endowment*, 10 Jul 2023,  
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<sup>10</sup> Radhika Shaw, 'High-Altitude Espionage (Spy Balloon) and India's National Security', *Modern Diplomacy*, 17 Mar 2023, <https://modern diplomacy.eu/2023/03/17/high-altitude-espionage-spy-balloon-and-indias-national-security/>

<sup>11</sup> Elizabeth Rushing, 'Consumer Drones in Conflict: Where Do They Fit into IHL?', *ICRC*, 15 Mar 2022, <https://blogs.icrc.org/law-and-policy/2022/03/15/consumer-drones-conflict-ihl/>

<sup>12</sup> 'Drone Intrusions Along the India-Pakistan International Border', *Carnegie Endowment*, 10 Jul 2023, <https://carnegieendowment.org/posts/2023/07/drone-intrusions-along-the-india-pakistan-international-border-countering-an-emerging-threat?lang=en>

<sup>13</sup> Anil Khosla, 'India's Preparedness for Drone Warfare', *Indus Research*, 14 Feb 2022,  
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