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IMPLEMENTING COMMERCIAL DRONE REGULATIONS IN INDIA

BRIEF COMMENTARY- AIR AND SPACE LAW

By Manasa Renduchinthala

INTRODUCTION

What are commercial drones? A commercial drone is a small flying robot that can be commanded remotely or that can fly on its own utilizing innate software-driven flight plans and is used for business rather than personal or recreational purposes. Commercial drones have flight control systems and sensors that enable them to hover in place and perform pre-programmed maneuvers. Commercial drones are outfitted with high-definition thermal cameras that allow the pilots to observe what the drone views in real time. Furthermore, some drones can stay in the air for hours at a time and even fly hundreds of feet in the air.

Commercial drones are used for Surveillance, Entertainment, Signal Emission, Transportation, and delivery. All industries that rely upon these tasks, heavily employ drones. These drones have saved countless manhours and are extremely efficient and long lasting.

Evolution of Commercial Drones in India: The Indian Army purchased unmanned aerial (UAVs) from Israel in the 1990s, and the Indian Air Force and Navy followed suit. During the 1999 Kargil war with Pakistan, India first utilized military drones for photo surveillance along the Line of Control (LOC). Following the loss of an Indian aircraft to a Pakistani infrared homing missile due to an inefficient and tactically weak drone system, Israel quietly gave the Indian Air Force with Searcher drones, allowing them to obtain target information along the LOC. Since then, the Indian government's Defense Research and Development Organization

(DRDO) and a number of private Indian companies have begun developing drones and UAV technologies¹.

Presently, The Ministry of Civil Aviation recently approved a pilot project with the Telangana government to evaluate alternate logistical pathways for providing safe, accurate, and dependable pickup/delivery of health care supplies in rural places via drones. Drones are often utilized by law enforcement organizations to monitor COVID-19 hotspots and containment zones in real time to guarantee strict adherence to lockdown requirements.

Hazards of unregulated Commercial Drones in India: As helpful as these Commercial drones are, they come with their own set of limitations and hazards. There are major possibilities of drone accidents, air collusion, safety, and security. Each of these challenges need a foolproof framework for effective regulation in civilian airspace to properly address domestic security, privacy, and legal concerns. As a developing country, India proactively approaches in shaping global norms and regulations, not only because the evolution of Drone technology has the potential to impact India's security in a variety of ways, but also because it is better for India to be a part of any new global effort as a norm shaper while also safeguarding its own interests. There is a possibility of using weaponized drones for terrorism purposes.²

COMMERCIAL DRONE REGULATIONS IN INDIA

Evolution: In the absence of well-defined standards, rules, and operating procedures, the usage of drones has been plagued with issues and uncertainty. On 7 October 2014, the Office of the Director General of Civil Aviation (DGCA), India's civil aviation regulator, issued one of the first Indian notifications on the subject in the form of a Public Notice. The civil operation of UAS will require clearance from the Air Navigation Service provider, defense, Ministry of Home Affairs, and other related security agencies, in addition to the DGCA, the document

¹ The Indian Air Force terms this family of platforms as RPAs Remotely Piloted Aircraft). Also known as UAVs andUCAVs in the west and then there are drones that refer to military as well as commercial platforms.

² PTI, Possible Use of Weaponized Drones for Terrorism Calls for Serious Attention: India at United Nations, The Economic Times, June 29, 2021.

stated³. The DGCA is in the process of developing standards for certification and operation of unmanned aircraft systems in Indian civil airspace⁴.

On April 21, 2016, the DGCA announced a set of proposed guidelines on the use of UAVs for civilian or recreational reasons, two years later⁵. For a period of 21 days, the DGCA requested opinions on this circular from various stakeholders, as determined by the Ministry of Civil Aviation. The DGCA announced a new set of rules in October 2017 after a year and a half of inaction on the prior guidelines. The civil aviation regulator had issued a request for feedback on the revised standards, with the goal of finalizing them by December 31, 2017⁶.

The rules, on the other hand, appear to be the result of a desperate need; they lack foresight. Several occurrences in recent years have demonstrated the dangers of unregulated drone use for all stakeholders, including the general people. Despite the near-universal ban on drones, there have been an alarmingly high number of sightings of UAVs in various places across the country, emphasizing the need for adequate rules to be implemented as soon as possible. It is impossible to overstate the importance of a more sophisticated regulatory framework with suitable guidelines, which addresses concerns such as culpability in the event of mid-air collisions.



ANALYSIS OF PRESENT COMMERCIAL DRONE REGULATIONS IN INDIA.

On October 30, 2017, the DGCA released a set of proposed regulations for the use of UAVs in civilian airspace. The circular was issued a year and a half after the previous set of draught regulations on the same subject, which were never implemented.⁷ The items from the April 2016 circular were integrated into these regulations, along with a few additions. Even while it is hoped

³ *A UAV Traffic Management System for India*
<https://link.springer.com/article/10.1007/s12524-020-01226-0>.

⁴ Government of India, Office of the Director General of Civil Aviation, "Public Notice – Use of Unmanned Aerial Vehicle (UAV)/ Unmanned Aircraft Systems (UAS) for Civil Applications," October 7, 2014,

⁵ *Drones: Guidelines, regulations, and policy gaps in India* <https://www.orfonline.org/research/drones-guidelines-regulations-and-policy-gaps-in-india/>.

⁶ Government of India, Office of the Director General of Civil Aviation, "Requirements for Operations of Remotely Piloted Aircraft Systems (RPAS),

⁷ *Autonomous BVLOS Drone Market Size, Share, Growth* <https://www.researchinformatic.com/reports/autonomous-bvlos-drone-market-269>.

that these laws will take effect and that the blanket prohibition would be lifted, the track record does not appear to be encouraging.⁸

In terms of the requirement for Visual Line of Sight (VLOS) activities, the new laws are regressive. Only Mini and Micro drones were required to fly with VLOS according to the 2016 standards. According to the 2017 standards, all UAVs, regardless of weight category, must be flown in VLOS. While most other countries place such restrictions on lightweight drones, the blanket application of VLOS will discourage a variety of drone applications. Regulators are unhappy with operators who rely on visual aids to operate these drones. While these aids are already advanced, they will only improve and become more trustworthy soon. It does not seem fair to prohibit their use totally.⁹

All UAVs must follow the rules for restricted and controlled airspaces, as well as any hazard zones, as stated by the Aeronautical Information Publication issued by the DGCA or the Ministry of Civil Aviation. The revised limits, on the other hand, have decreased the no-fly zone area surrounding Rashtrapati Bhavan, from thirty kilometres in 2016 to 5 kilometres in 2017. The radius of the MHA-mandated no-fly zones around vital areas and military installations has been decreased to five hundred meters. The DGCA took a positive step forward with these improvements in the 2017 rules.

Import standardization is the most notable omission from the regulations. Because a sizable percentage of India's drones are still imported, quality control and standardization are essential. The DGCA has not passed any law addressing this issue.

While there are no regulations in place, authorities have yet to develop a protocol for accident management. Alarming, an anonymous person was spotted flying a drone near the Rashtrapati Bhavan and the Indian Parliament in 2015¹⁰. In a risky event in 2014, an Air India flight nearly crashed with a UAV at Leh airport. The Indian Air Force's Air Traffic Control (ATC) in Leh had

⁸ *Autonomous BVLOS Drone Market Size, Share, Growth ...*,
<https://www.researchinformatic.com/reports/autonomous-bvlos-drone-market-269>.

⁹ Drones were classified into four categories by the DGCA Guidelines 2016 based on their weight: micro-UAVs (less than 2 kg), mini (less than 20 kg), small (between 20 and 150 kilograms), and giant (more than 150 kg) (greater than 150 kg). "Air Transport Circular XX of 2016 - Guidelines for Obtaining Unique Identification Number (UIN) & Operation of Civil Unmanned Aircraft System (UAS)," April 2016, Government of India, Office of the Director General of Civil Aviation.

¹⁰ "Unidentified foreign man spotted using drone near Parliament," The Indian Express, October 18, 2015.

no information about the UAV that was flying near to the runway and undetected by radars. A drone flying close to the IGI Airport in New Delhi was noticed by ATC staff without the use of binoculars or any other instrument in another instance¹¹.

When it comes to UAVs, the issue of privacy becomes a complex one, bringing up the contentious security versus privacy argument. Drones operated by non-governmental organizations are a significant challenge to current privacy legislation. Most UAVs feature cameras that are constantly streaming and often work in high definition. Intentional violations of privacy are common enough, but drones also provide the possibility of unintended invasions. This makes it more difficult to determine whether there has been a breach of privacy under Indian law.¹²

With the rapid advancements in the range of roles that a drone can perform, known terrorist organizations (ISIS) have used them to carry out their operations. In this area, as well, policymaking must be robust to ensure that security agencies are equipped to deal with threats of this sort.

The DGCA Guidelines places legal responsibility for UAVs on their operators. The presumption is that the operator will make sure the vehicle is safe to fly and functions properly. This, however, may not always be the case. Even though users should be able to tell if their drone is working well in an ideal world, this is an expectation that cannot be realized in all instances. The rules governing drone trespass on private property are another component of legal liability. Important considerations arise regarding the variables that will be used to evaluate whether flying a drone over private property is considered trespassing. This is a question that the DGCA circular does not answer.

CONCLUSION AND SUGGESTIONS

In the field of drones, there are a number of ethical, regulatory, and implementation issues to consider. To build a successful governance regime for UAVs in India, these problems must be properly addressed while keeping in mind existing legal and moral norms and adapting them to

¹¹ "AI plane almost hits UAV in Leh after ATC failure," The Times of India, December 15, 2014,

¹² AN ANALYSIS OF INDIA'S DRONE REGULATIONS 2021 - Jus Corpus, <https://www.juscorpus.com/analysis-of-indias-drone-regulations-2021/>.

rapid technology changes. As it formalizes its regulatory structure, India must also evaluate existing policy frameworks in other nations to adopt their best practices. However, it is worth noting that standards alone are not enough; guaranteeing adoption and compliance is crucial. This would imply that guidelines and circulars published by nations and multilateral organizations such as the International Civil Aviation Organization (ICAO) must be transformed into legal and policy documents with binding impact on governments. Drone-related rules and norms, on the other hand, are critical first steps in this direction.

