

# THE DOOM OF DRONES: AN EXPLORATION OF POLICY GAPS IN INDIA

Written by *Aishath Alsan Sadiq*

*3rd Year BBA LLB Student, CHRIST (deemed to be) University, Bangalore*

---

## ABSTRACT

Bill Gates had once quoted, “Drones overall will be more impactful than I think people recognize, in positive ways to help society”. The application of drones has expanded from military use and has entered the civilian and commercial sector of life. Drone technology has become increasingly useful in sectors varying from agriculture, environment conservation, disaster mitigation and construction.

However, the regulatory framework relating to civilian and commercial application of drones is in a preliminary stage. This paper primarily contends that the present draft drone guidelines passed by the Directorate General of Civil Aviation in 2017 are insufficient and do not ensure effective measures of security, privacy and effectiveness in the operation of drones or unmanned aerial vehicles. The paper would further lay down the basic features of the draft regulations and comment about the various policy gaps and lacunae present in the regulations. The main policy gaps and lacunae identified relate to aspects of quality/import control, privacy, trespass, nuisance, surveillance, legal liability, standard operating protocol for incidents and terrorist threat management.

Rather than imposing a blanket ban on civilian drones, a more effective solution would be to formulate a better and more comprehensive legislation. In this regard the incorporation of various legislations, common law principles and policies of countries with more advanced drone laws in India have been discussed in the paper. Since the legislation is at a very primitive stage, research and development from other countries of similar landscapes can be referred to bring out innovative ideas to solve problems.

## INTRODUCTION

Drones are also referred to as Unmanned Aerial Vehicles (UAVs), Unmanned Aircraft System (UAS) Remotely Piloted Aircraft (RPAs). It is no doubt that in this modern technological era, the scope and extent of usage and application of drones has been rapidly evolving.

India has used military drones or UAVs for various missions. The military is also developing combat versions (UCAVs or Unmanned Combat Aerial Vehicles). Besides manufacturing drones, India has also entered into various agreements and has procured lethal drones from Israel and is also in the process of obtaining US Predator (or MQ-9B Guardian) naval drones<sup>1</sup> which are high altitude long endurance drones. Drones are no stranger in the military field of India as they have been time and again used for the purposes of surveillance and reconnaissance, border patrols and rescue missions.

Apart from the military usage of drones, the civilian application of drones has witnessed a slow emerging growth. From applications ranging from agriculture, aerial photography, disaster mitigation, environment conservation, construction and photography the potential for drones is quite vast and dynamic.

Although technology has time and again aided us in our day to day lives, it could also prove quite disastrous. It was only after the disastrous 9/11 attack that sanctions on drone misuse was taken seriously and given crucial importance. Drones since then have been emerging in numerous quantities thus required stricter regulations. Since the civilian application for drones is at a very preliminary stage, the policies and regulatory framework are also on a similar preliminary level. The draft regulations issued by the Directorate General of Civil Aviation (DGCA) witnessed various policy gaps in issues in the field of drones such as quality control of drones, import standards, privacy, trespass, legal liability, air traffic management, terrorist threat management and standard operating protocol for collision incidents. These various lacunae and ambiguity in drone laws pose as a serious threat as it fails to address and solve various legal, regulatory and even moral issues around their use. Further, there are also various issues of safety, collisions and security which revolves around drone usage.

---

<sup>1</sup>UC Jha, "Why India's Game of Drones needs a tighter regulation"(21<sup>st</sup> March 2018 )  
<http://www.dnaindia.com/analysis/column-why-india-s-game-of-drones-needs-tighter-regulation-2595869>

The basic contention that the paper submits is that the present regulations and policies revolving around the civilian/ commercial use of drones is insufficient to effectively address and solve various legal issues of liability, trespass, privacy, security, import controls and terrorist threat management. This paper primarily aims to point out all the lacunae and policy gaps present in the draft regulations. The paper would first describe the past and present regulatory mechanisms pertaining to drones in the civil/ commercial sector. It would also highlight the main features of the draft regulations of the Director General of Civil Aviation (DGCA). Furthermore, there would also be an emphasis laid down on the various policy gaps in the current guidelines with respect to privacy, security and legal issues.

The concluding section would explore how it is extremely imperative for both the central and state governments to take up a more proactive role towards ensuring a concrete and comprehensive set of laws for drones which would also comply with the international standards of governance. This would ultimately pave the way for an efficient legal and regulatory framework that would take into consideration the evolving nature of drones and accommodate the various features for safety and security as may be necessary. One method to do this is to analyse the current drone regulations present in various countries with advanced drone regulations and complex or similar landscapes and use the relevant data and research to curate specific laws and provisions for various aspects of drone applications.

## **DRONE LEGISLATIONS IN INDIA**

The regulation regarding civilian and commercial usage of drones is still at a very primitive level in India. Although, the Ministry of Home had very recently circulated a draft law to regulate the use of low-flying or inter-ministerial consultations. The DGCA has claimed that the exclusive jurisdiction of all aircraft manned or unmanned and the licensing and regulation of the same lies with them.

In October 7, 2014, the Directorate General of Civil Aviation had issued a public notice which imposed a blanket ban on all civil drones owing to various concerns over national security and

safety anticipated after numerous drone sightings in public places.<sup>2</sup> However, it was soon realized that a blanket ban was not the most effective measure as this curtailed the possibilities for making the most effective use of drones in day to day activities.

Therefore, subsequently in April 2016 the DGCA released draft guidelines which were even open for public suggestions. However, these guidelines were heavily criticized for being inefficient and lacking in various aspects such as conduct of operations, stringent requirements to make an application for Unmanned Aircraft Operator Permit 90 days prior to drone operations as well as the strict regulation to intimate the local authorities regarding every operation of the drone irrespective of the weight and size of the drones.

Taking all these issues into the hand, the DGCA on November 07, 2017 issued a revised set of regulations for the operation of civil Remotely Piloted Aircraft System (RPAS) and also sought comments from the public regarding the same. Even after revision, it has been observed that the present regulatory framework has major policy gaps with respect to issues of safety, security, privacy, legal obligations, import controls and standards, air traffic management and terrorist threat management.

## **FEATURES OF DRAFT DGCA GUIDELINES**

The DGCA has proposed certain regulation in the form of draft guidelines on November 07, 2017. Various basic features of these guidelines have been identified and is relevant in bringing out the various policy gaps.

*i)Weight Classification* : The drones, technically referred to as Unmanned Aerial Vehicles (UAVs) or RPAs (Remotely Piloted Aircraft) has been classified into various categories based on their weight. The classifications are as follows:

- Nano (less than or equal to 250 grams),
- Micro (greater than 250 grams and less than or equal to 2 kilograms),
- Mini (greater than 2 kilograms and less than or equal to 25 kilograms),

---

<sup>2</sup>TRA, Regulation of Drones in India (20<sup>th</sup> February 2018) <https://www.tralaw.in/regulation-of-drones-in-india/>

- Small (greater than 25 kilograms and less than or equal to 150 kilograms) and
- Large (greater than 150 kilograms).

*ii) Unique Identification Number:* This is the licensing aspect of civil drones. The DGCA issues a unique identification number (UIN) for the purpose of accountability and management of drones. The application for issuance of a UIN happens on a case to case basis. There are also various criteria to be eligible for obtaining a UIN<sup>3</sup>. The Applicant must be a citizen of India or

- The central government or any state government or any company or corporation owned or controlled by either of the said governments or,
- A company or corporate body provided either it is registered and has its principal place of business within India, or its chairman and at least two-thirds of its directors are citizens of India, or its substantial ownership and effective control is vested in Indian nationals or
- A company or corporation registered outside India, provided that it has leased the RPAS to any organization mentioned in points above.

There are also various documents which need to be submitted regarding the same.<sup>4</sup>

*iii) Height/ Altitude Restrictions:*

There has been no restrictions places for UAV's that operate below 200ft above ground level in uncontrolled airspace. UAS operating at or above 200ft above ground level in uncontrolled airspace, or at any height in restricted or prohibited airspace, will require a Unmanned Aircraft Operator Permit (the "UAOP")<sup>5</sup> that has an initial validity of five years. There also various exceptions for obtaining a UAOP i.e.

- a Nano RPA operating below 50 feet in uncontrolled airspace and indoor operations;
- Micro RPA operating below 200 feet in uncontrolled airspace and clear of prohibited areas, provided the local police authorities have been given prior intimation; and

---

<sup>3</sup> Section 6 of of Draft Guidelines: Requirements for Issue of UIN, 'Requirements for Operation of Civil Remotely Piloted Aircraft System(RPAS)', 2017, Director General of Civil Aviation

<sup>4</sup> Section 6.2 of DGCA Guidelines

<sup>5</sup> Section 7 of DGCA Guidleines

- RPA owned and operated by Government security agencies after giving prior intimation to the local police authorities and ATS units.

The pilot operating the UAV or RPAS is also required to fulfil training with respect to the provisions<sup>6</sup> laid down in the draft guidelines.

*iv) Speed Restrictions:* The aspect of speed has not been addressed in the guidelines.

*v) Enforcement action:* The UAOP issued by the DGCA may be suspended at any time if it is found that the performance or maintenance of the RPAS is no longer acceptable. Breach of compliance may also attract penal action and imposition of penalties.

*vi) Autonomy:* An important point to note is that the operation of autonomous aircrafts are strictly prohibited under the draft guidelines.

## **POLICY GAPS IN THE DGCA GUIDLEINES, 2017**

### *1. Quality Control*

One very crucial aspect that the guidelines fail to address is the standard of import of drones in India. There is a great absence of quality control and this issue has not been addressed by any legislation. There is also no legislation regarding the standard of domestically manufactured drones. The Department of Customs has issued a notification placing drones on the list of dutiable items making it mandatory to declare them at the time of import. However, there is no regulatory mechanism to keep a check on the quality or quantity of drones that are being imported despite the stringent mechanism to obtain a license for the operation of a drone.

In this modern era, all applications are extremely susceptible and vulnerable to the aspects of hacking and malware. There is a huge scope of misuse of drones. Furthermore, drones that fall under the category of Nano and Micro, which do not require a permit could pose as a great security threat as these could easily be equipped with malware. Furthermore 'recreational use

---

<sup>6</sup> Section 9 of the Draft Guidleines,2017

of micro and Nano drones has also not been defined in the legislation. This may further become a huge risk for national security.

Perhaps the most alarming issue arising out this issue is the legal liability that would arise out of drone related incidents. In an event of an accident or collision, it would be extremely difficult to ascertain and infer whether the device malfunctioned or whether it was incorrectly handled by the pilot.

## 2. Privacy, Nuisance and Trespass

A general observation that has been made is that the guidelines have a very airspace centric view. There is a propounding similarity observed with regard to present consumer UAV technology and manned aircraft for high altitude space. The guidelines restrict the UAVs from operating in controlled airspaces, but primary regulate them in other aspects mainly for the purpose of avoiding collisions. By doing this the guidelines lose sight of actual reality. i.e. the probability of conflict and collision is much higher between landowners and UAVs operators who operate their drones in the visual line of sight or low altitudes.

The privacy question is quite an intricate one when it is applied to the context of drones. Primarily, an intrusion of privacy may just be regarded to something that is observed in the visual line of sight, i.e. the visual recordings that a drone capture. However, with the advancement of data capturing and sound recording, the question of invasion of privacy has become far more complicated. It may extend to facial recognition, thermal imaging, open Wifi and license plate scanning. Invasion of privacy due to these technologies may be intended or unintended due to the various technological advancements. This makes it even more difficult to ascertain the extent of invasion of privacy.

Furthermore, the controversial debate of security versus privacy has also not been comprehensively explored by the draft DGCA guidelines. The draft DGCA guidelines contains only one vaguely worded, ambiguous sentence relating to the integral problem of privacy. Since a Fundamental Right of Privacy is guaranteed to all citizens under Article 21 of the Constitution, it is crucial that this matter of privacy is comprehensively addressed to provide clarity to all the stakeholders.

Another potential issue related to usage of drones by government agencies for the purpose of surveillance. The application of drones has been contemplated for activities ranging from traffic management to monitoring crowds in order to maintain security. Recently, the Mumbai police has also used drones to conduct surveillance and maintain law and order during festival processions.<sup>7</sup>The Indian Courts have yet to formulate an effective model for ensuring the balance between privacy and security of all citizens in a drone manifested society. Countries such as the United States of America as well as Australia have already looked into various feasible models to curb out an effective measure to solve this paradox of privacy issues. Since Australia is a common law country, the same principles could be relied upon while seeking out a solution.

Perhaps an important point to note is the concept of “reasonable” breach of privacy. In its operation a UAV would take snapshots of certain areas as a surveillance mechanism and this may be further classified as a reasonable breach of security that is required to maintain security. However, when an amalgamation of these snapshots is constituted, it creates a ‘pattern of life’ which examines the routine behavior of humans. It is in the mechanism of a drone to capture snapshots of certain areas within a particular time. However Indian courts and policy makers must realise that it is how the law enforcement agencies choose to view and use the data collected by drones that classify it as a reasonable or unreasonable breach of privacy.

The US Supreme Court laid down that <sup>8</sup> ‘the maxim of “*cujus est solum ejus est usque ad coelom* (he who possesses the land possesses also that which is above it)—would not apply in the modern world to extend ownership over land to the periphery of the universe. Otherwise, the court pointed out, every transcontinental flight would subject the airline operator to countless trespass suits and clog the courts”. Thus, the landowners may not claim the maxim so as to regard every interference of land as trespass or an infringement of privacy. A solid test must be laid down to determine trespass. Subsequently, the Second Restatement of Torts,<sup>9</sup> stated that aircraft flight over the land of another would amount to a trespass only when (a) the

---

<sup>7</sup> “Who allowed Hanuman drones to hover over city,” The Times of India, September 19, 2016, <https://timesofindia.indiatimes.com/city/bhopal/Who-allowed-Hanuman-drones-to-hover-over-city/articleshow/54400065.cms>

<sup>8</sup> United States vs Causby 328 US 256 (1946)

<sup>9</sup> The American Restatement of Torts, second is an influential treatise issued by the American Law Institute that summarizes the general principles of tort law in the United States

craft entered into the “immediate reaches of the airspace next to the land,” and (b) it caused substantial interference with the owner’s use and enjoyment of the land.”

The principle of tort claimed for nuisance may also be a probable outcome for drone users. Although drones do not emit a substantial amount of noise and dust, they could likely come under the ambit of private nuisance if the amount of drones grows to an exponential number.<sup>10</sup> In order for such a claim to succeed, landowners would have to satisfy the dual test of substantial and unreasonable interference caused by drones fling over or in close proximity to their property. This test could also be utilized in the Indian context and scenario for better implementation.

### 3. Standard Operating Protocol for incidents

The DGCA guidelines lack a clear mechanism, procedure or protocol that is to be followed in the event of an accident. For example, in the year 2015, , an unidentified man was spotted flying a drone close to the residence of the President (the Rashtrapati Bhavan) and the Indian Parliament<sup>11</sup>. That was extreme confusion and ineffective response with regard to the situation. The man was reportedly confronted by a person from the media subsequent to which he was let free and never identified since. . Various reports in the media state that the Delhi Police has given out various standard instructions and directions to its task force who were responding to similar 17 situations, making the Indira Gandhi International (IGI) Airport a no-fly zone and giving the power to police officers to shoot down any UAVs sighted in its vicinity.<sup>12</sup> It is evident that a better regulation mechanism or a standard operating procedure (SOP) needs to be brought about with respect to accidents. There needs to be a proper dialogue of communication and coordination between the regulators and enforcers of the law. Furthermore, it would also be an advantage to seek the help and advice of the Armed Forces for the operation,

---

<sup>10</sup> Michelle Bolos, “A Highway in the Sky: A Look at Land Use Issues That Will Arise With the Integration of Drone Technology,” *University of Illinois Journal of Law, Technology & Policy* 2 (2015): 422–23.

<sup>11</sup> “Unidentified foreign man spotted using drone near Parliament,” *The Indian Express*, October 18, 2015, <http://indianexpress.com/article/india/indianews-india/unidentified-foreigner-spotted-using-drone-near-parliament/>

<sup>12</sup> “Police can shoot down unidentified 'flying objects',” *The Times of India*, January 29, 2016, <https://timesofindia.indiatimes.com/city/delhi/Policecan-shoot-down-unidentified-flying-objects/articleshow/50763996.cms>

maintenance and regulation of drones since they have considerable amount of expertise and experience with respect to accidents of this manner.

#### 4. Legal Liability

The draft guidelines issued by the DGCA states that the liability arising out of the operation of drones would rest solely on the operator of the drone. This is based on the assumption that the operator would take all necessary steps to ensure that his drone is in a well working airborne worthy condition. However, this expectation cannot be met in reality because it is impossible for the operator of a drone to have the relevant technical expertise to judge the working and operating of a drone. Since there are no standards for import control and domestic manufacture of drones, it would obviously be unfair to hold the operator liable in the event of malfunctioning of the drone itself. The guidelines prescribe for insurance of any damage to third party resulting from any accident or incident. There needs to be a proper addressing of the aspects of third party liability mechanisms.

Furthermore, India could utilize principles from the Rome Convention of 1952. Although the convention essentially focuses on answering questions of legal liability for damage caused by regular aircraft, the same principles can be taken for drones. The Convention limits the liability for unintentional damage by aircrafts and provides for unlimited liability in case of intentional damage. There is also a scope for better demarcation of civil and criminal liabilities that could arise in the operation of drones. Various parameters and applicable tests as well as the provision for burden of proof are to be included in further drone legislations to smoothen the legal proceedings revolving around drones.

#### 5. Terrorist Threat Management

A common opinion that has come up is that drones would be utilized as the future of warfare turning the whole scenario into a 'costless warfare' that eliminates the aspect of humans physically fighting. Drones may also be used for the purpose of biological warfare. Also, the draft guidelines of the DGCA pertain exclusively to the civil and commercial aspect of drone operations it is not wrong to assume that civil drones themselves would pose as a risk for national security. Therefore, it is highly essential that policymaking is robust to ensure that security agencies are well equipped and prepared to deal with treats of this nature.

The argument on one side is that drones should be completely banned. However, this idea is not feasible. There should be a stringent regulatory mechanism and comprehensive policy framework that encompasses features of security and efficiency. Currently, the primary method of stopping rogue drones is to shoot them down from the sky. The law enforcement agencies also try to locate the operator from the ground itself. Unfortunately, the infrastructure required to ground a drone is not present in a country like India and it is high time that the policymakers make provisions regarding the same. There could also be background checks conducted for the applicants of a Unique Identification Number (UIN) to check for a history of convictions and criminal proceedings. Equipment such as nets, frequency jammer guns and anti-drone rays can also be used to bring down rogue drones.

## **THE GLOBAL GOVERNANCE OF DRONES**

In the international sphere, the laws, rules and regulations governing drones is at a very primitive stage due to the recency in application of drones in various sectors. There are still various countries with drones flying in the sky despite the absence of a clear regulatory legislation or framework. It is highly imperative for the central and state governments to come together and make a unified law for the governance of drones.<sup>13</sup>

The International Civil Aviation Organization (ICAO), the United Nation's aviation agency is the lead platform in the international sphere of governance of drones. Its work on UAVs date back to the year 2007. Subsequently, the first set of rules in the form of Circular 328 was issued only in 2011, it also came out and developed the Remotely Piloted Aircraft Systems (RPAS) Manual. Circular 328 which was a primary piece of regulation. It called on "states to provide comments, 'particularly with respect to its [drone] application and usefulness'" with the aim of developing 'the fundamental international regulatory framework through Standards and Recommended Practices (SARPs), with supporting Procedures for Air Navigation Services (PANS) and guidance material, to underpin routine operation of UAS throughout the world in

---

<sup>13</sup> Regina Mihindukulasuriya, "Drones: Clipped Wings," *Business World*, May 15, 2017, <http://businessworld.in/article/Drones-Clipped-Wings/15-05-2017-118167/>

a safe, harmonized and seamless manner comparable to that of manned 33 operations.<sup>14</sup>” A more comprehensive set of standards and regulations is set to be formulated in 2018. It has also been proposed to make a single ledger for the registration of drones worldwide.

## CONCLUSION

It is no doubt that UAV technology has gone beyond military application and entered into commercial and civilian sectors of agriculture, construction, mining, disaster mitigation and so on to prove beneficial to citizens.

However, without a concrete regulation, law or policy regarding the same, it is extremely dangerous to let unmanned aerial vehicles to wander around in the Indian skies. The draft drone guidelines issued by the Directorate General of Civil Aviation (DGCA) possess a lot of policy gaps and ambiguity with regard to operation of civil and commercial drones.

Firstly, there has been no standard set for import control and standardization. The government must take adequate measures to establish a mechanism or a body that has all the technical expertise to ascertain the air worthiness of a drone. While addressing concerns of privacy, nuisance and trespass law makers must incorporate and define what would amount to a reasonable invasion of privacy for the purpose of security. Along the same lines, the principle of a substantial amount of interference to one’s property in order to constitute a nuisance should also be incorporated to strengthen the legislative framework. There should also be concrete provisions laid down with respect to third party liability mechanisms. Lastly, there should be an initiative taken to enhance the infrastructure so that measures of national security can be handled in a quick, effective and hassle-free manner.

Overall, the paper concluded by stating that rather than imposing a blanket ban on the operation of drones for civil purposes, the Central and State governments should ideally revise the guidelines and formulate a comprehensive and concrete legislation for drones that would provide clear and effective solutions for issues relating to privacy, security, legal liability,

---

<sup>14</sup>Library of Congress, “Regulation of Drones,” April 2016, <https://www.loc.gov/law/help/regulation-of-drones/regulation-ofdrones.pdf>

terrorist threat management and import controls. There should also be steps taken to ensure compliance of drone laws and principles in the International sphere as laid down by the International Civil Aviation Organization.

Since the civilian application of drones is a very primary concept in India, it is crucial that expansive research and development takes place to accommodate all dynamic factors that would arise in the future times.

## REFERENCES

- Peter L. Begen and Daniel Rothenberg, ‘ Drone Wars : Transforming Conflict, Law and Policy, Cambridge University Press (2015)
- Sarah E Kreps, “Drones- What Everyone Needs To Know, Oxford University Press, (2016)
- UC Jha, Why India’s Game of Drones needs a tighter regulation”(21<sup>st</sup> March 2018) <http://www.dnaindia.com/analysis/column-why-india-s-game-of-drones-needs-tighter-regulation-2595869>
- TRA, Regulation of Drones in India (20<sup>th</sup> February 2018) <https://www.tralaw.in/regulation-of-drones-in-india/>
- Nayantara Shankar, ‘Drones- They Continue to Fascinate (8<sup>th</sup> August 2017\_ <https://novojuris.com/tag/indian-regulation-for-drones/>
- Aditya Nair ‘Despite DGCA Guidelines on Drones, India Fails to Check Trespassing, Privacy: Report’ (May 24<sup>th</sup> 2018) <https://www.news18.com/news/india/despite-ban-drones-used-widely-in-india-as-govt-fails-to-keep-a-check-1687191.html>
- Rajeswari Pillai Rajagopala ‘ Why India’s Drone policy needs a Rethink’ (17<sup>th</sup> May,2018) <https://thediplomat.com/2018/05/why-indias-drone-policy-needs-a-rethink/>
- Anant Padnamabhan, ‘Civilian Drones and India’s Regulatory Response’ Carnegie Endowment for International Peace (March 2017)
- Rajeshwari Pillai Rajagopala,Rahul Krishna ,” Drones: Guidelines, Regulations, and Policy Gaps in India’, Observer Research Foundation, 2018.