Draft Drone Rules 2021

Anchor: Vishal Dahiya

Participants:

- Rajan Luthra, Chairman of FICCI's Drone Committee.
- Group Captain Ajay Lele (Retd.), Senior Fellow, MPIDSA.

Context:

The Ministry of Civil Aviation recently released the draft Drone Rules 2021. The focus is on giving a big push to new-age technology and its implementation on the ground. Now, these rules will make it much easier for individuals and companies to go ahead and operate drones and will also make the certification process a little simpler for manufacturers and other stakeholders.

Need for drone regulations:

- Drones in a relative sense is a new system that has got a tremendous amount of potential. At the same time, there are certain concerns also like if the usage of drones is allowed without any rules, there will be many challenges. Recently, we have witnessed a terrorist attack on the Air Force station at Jammu.
- Hence, drones in a sense are a double-edged sword where if there is a lack of proper rules and regulations, it will be difficult to use the technology effectively.
- On the other hand, we should not get bogged down because drones have been used by terrorist organizations and there is a possibility that this system could be used as an asymmetric weapon because the system itself has got a tremendous amount of utility for various purposes such as for an agricultural economy like India, drones can be utilized in many ways in the farming sector. It can also be used in other sectors such as the logistics sector, and even in the entertainment industry.
- If there are proper rules and regulations in place then definitely we can take advantage of these new emerging technologies.

Drone regulations:

- On 12th March 2021, the Unmanned Aircraft Systems (UAS) Rules were released. The new rules which have just been announced are transnational in the sense that they are now enabling a lot of positive change. For example:
  - Some of the requirements that were laid out in terms of the permissions that were needed have been simplified significantly.
  - The many requirements that were there for all the stakeholders including the manufacturers have been eased out including what is needed for creating a prototype, what is needed for getting it registered.
- So, all the aspects of regulations have been made very simple through the drone draft rules.
- The positive changes brought by the new drone draft rules are listed below:

- Now there will be ease of doing business. The industry will find it easier because earlier there were 25 forms to be filled up and now the number has been reduced to only 5.

- There is good clarity about registration, remote pilot licensing, how to get into R&D developments, even insurance has been taken care of.

- There are various aspects that are associated with the usage of a drone, which has been fully taken into consideration.

- There are forms available so that people know exactly what sort of certifications are required, what sort of policies are in place, and how one can go ahead with it.

- Drones have created a digital sky platform under which various avenues are open. Hence, all the clarities which were missing are provided in the new drone draft rules 2021.

Read more about the [Draft Drone Rules, 2021](#) in the linked article.

Multidimensional uses of drones:

- Drones can be used in very significant and diverse areas.
  - For example, the [SVAMITVA scheme](#) which has been launched by Prime Minister Narendra Modi on National Panchayati Raj Day, 24th April 2020. The scheme aims to provide the 'record of rights' to village household owners in rural areas and issue Property Cards.
  - Under the scheme, the government used drone technology to map the lands in the villages.
  - The drones have enabled more than half a million residents to get their property cards after the areas had been mapped out using drones within less than a year.

- Likewise, currently, there is a project approved by the Ministry of Civil Aviation with the Telangana government where it is planned to pilot the use of drones for the delivery of vaccines in remote areas.

- Agriculture is another big area where not only micronutrients can be spread but even surveys can be done to examine what precisely are the challenges or the issues the farmers are facing.

- Railways are using drones for track monitoring. Some telecom companies are using drones for evaluating the option to use it for monitoring their towers, etc.

- There is an unending list of use cases and applications which generate not only value for the drone companies themselves but significantly for the people who end up using them in their digital platforms. Hence, it benefits both the manufacturers and the users as well.

India and drone technologies:

- In September 2020, drones were identified as one of the 24 sectors that are being taken up by the Government of India where the [Atma Nirbhar Bharat scheme](#) can be implemented.

- Not only do we have very extensive R&D being carried out by many of our educational institutes including IIT Kanpur, IIT Bombay, IIT Delhi, and many other institutes, but at the same time, the research is being transformed into actual products.

- We have more than 130 startups being registered with the IITs. The startups are also getting investments from companies that are now keen to leverage drones in multiple application areas for themselves and also for offering these services to others.

- If we look at the end-users, they are also eager to adopt these because they help them generate significant value not only in reducing cost but also increasing the opportunity to leverage it in their digital value chains.

- Drones, also known as the "eye in the sky", have multiple other application areas where they can add value such as the law enforcement agencies, the fire and emergency services, or even the health care services.

- The above points reflect the footprint of the current developments happening in the area of drones in India and it is believed that the cumulative market potential for drones is as much as three lakh crores of rupees in the next eight to ten years' time frame.

Future prospects of drone technology:

- Since this is a useful technology and this is going to boost our industry, one has to ensure that security and the drone system will stay together.

- If we look at the draft policy, then it has identified a few zones: green zone, yellow zone, red zone, etc. These zones are dynamic in that their definitions can change with the situation.

- We need to ensure that the guidelines are in such a fashion that the security considerations are not at all compromised but at the same time the technology can be used for all its advantages.

Threats from drones and the draft policy:

- Drones are essential for the future growth of various sectors and applications. At the same time, the threat from rogue drones cannot be ignored.

- The draft policy clearly says that these rules and regulations are not for the purposes of the army, navy, and air force. We have seen that BSF is suffering a large number of problems because of drones that are coming across the line. There have been incidents when arms have been dropped by drones. So, there are a lot of security challenges that exist.

- We have to evaluate the threat and the risks on each of the sensitive and critical installations and deploy the counter system. DRDO has already started developing an anti-drone system and one of them is already in place.

- There are two options: soft kill and hard kill. In the soft kill option, the threat is identified and the drones are jammed and in the hard-kill option, the drones are destroyed by laser technology. One has to identify what type of threat there is.

- Each and every drone has been specified to a unique identification number with the transmission of their location, their altitude, their speed, as well as their unique identification number to the unmanned traffic management system. This is the standard that is followed all over the world and this enables us to identify any drone which is not emitting the unique identification number with all the other details as a rogue drone.

- Each and every flight of the drone will be monitored in the digital sky platform so when any remote pilot is trying to fly a drone he or she will have to automatically register the flight path and get the permissions for the capability of the drone.

- All of this data will be shared with the relevant agencies so that they will also be able to monitor and make sure that it is one of the verified drones.

Way Forward:

- In the present context, as far as these rules are concerned, they have clearly identified that we will have drone corridors, we will have drone traffic management. So as far as the security aspects are concerned, everything has been taken care of.

- Using drones will make our lives easier and simpler particularly in the far-flung areas, right from disaster management to the oil industry, high-rise buildings, everywhere where remote access is required.

- These systems will come in a very cost-effective manner because the more emphasis the industry starts giving to it, the more orders it gets, the cost of the system is also going to go down drastically.

- In the years to come, it is going to be the most effective cost-benefit analysis and this will be the most utilized system both in the civilian domain as well as in the military domain.

Read all the [RSTV articles](link) in the link.