

Analysing The Unmanned Aircraft Systems Rules 2021

written by Rajdev Singh | May 21, 2021



The Ministry of Civil Aviation by virtue of Sections 4, 5, sub-section (2) of Section 8, sub-section (2) of Section 10, and Sections 10A, 10B, and 12A of the Aircraft Act, 1934 has formulated the Unmanned Aircraft System Rules 2021 (hereinafter referred to as “UAS Rules”) which was notified on 12th of March, 2021 and will be replacing the long-standing Civil Aviation Requirement on Remotely Piloted Aircraft System, 2018.

The UAS Rules were under the pipeline for a long time and the same had been finalized after having a consultation with stakeholders for almost 10 months. The UAS Rules are applicable to all Unmanned Aircraft System which are registered in India and further to the persons who are involved in owning, processing, importing, exporting, manufacturing, trading, leasing, operating, transferring of ownership.[1]

Unmanned Aircraft are aircraft that are intended to be operated without any pilot on board.[2] As such, after the enactment of the UAS Rules, unauthorized operation of drones would now attract much more severe penalties on the owners, operators, manufacturers, importers, traders, and service providers as well. The UAS Rules have increased liability when it comes to the unauthorized operation of a drone. The UAS Rules have also made it mandatory for every individual and company to obtain approval from the Director-General of Civil Aviation (DDCA) to import, manufacture, trade, own, or operate drones in India.

CATEGORIZATION & CLASSIFICATION OF UNMANNED AERIAL SYSTEMS

The UAS Rules has categorized unmanned aircraft systems as airplane, rotorcraft, and hybrid unmanned aircraft systems and they are further sub-categorized as[3]:-

1. Remotely piloted aircraft systems
2. Model remotely piloted aircraft systems
3. Autonomous unmanned aircraft systems

The UAS Rules classifies the unmanned aircraft system based on the maximum all-up weight including its payload which is as under[4]:-

1. Nano- Less than or equal to 250 grams
2. Micro- Greater than 250 grams and less than 2 kgs
3. Small- Greater than 2 Kgs and less than 25 Kgs
4. Medium- Greater than 25 Kgs and less than 50 Kgs
5. Large- Greater than 250Kgs

Depending upon the classification of the unmanned aircraft systems, licenses/permits vary and the same needs to be attributed before undertaking the flying.

Further, the UAS Rules prescribes different permits for different classifications of unmanned aircraft systems. Any person who seeks to undertake flying of Nano drones does not need to apply for any permits when it comes to flying it in India.[5] When it comes to flying drones which are categorized as Micro or Small Drones, then the pilot needs to obtain the Unmanned Aircraft Systems Operator Permit-I which shall be issued by the DDCA and the same needs to be limited to visual line of sight and not to undertake any delivery or carriage of dangerous goods.

[6] In cases where Medium or Large drones are required, the pilot is required to be in possession of Unmanned Aircraft Systems Operator Permit-II, and herein carriage of dangerous goods and Beyond Visual Line of Sight operation and deliveries are allowed subject to clearance from the DDCA.[7]

FLYING RESTRICTIONS AND DATA SECURITY

The UAS Rules prescribes certain restrictions when it comes to the flying height by drones. The restrictions imposed by the UAS Rules are mentioned below[8]-

1. Micro- Shall not fly beyond a height of 60 meters above ground level (AGL) and further, the maximum speed can be 25 meters per second.
2. Small- Shall not fly beyond 120 meters AGL and further, the maximum speed can be 25 meters per second.
3. Medium or Large- Shall follow the conditions which are specified in the Operator Permit which are issued by the DDCA.

Whenever any drone is being flown, there is a chance that it might store certain data which is of sensitive nature, and therefore to protect the same, UAS Rules make it mandatory for the operator of the drone to protect any data which had been gathered during a drone operation. It also makes it mandatory to undertake suitable procedures and hardware for securely storing the data and in no circumstances can the same can be shared with any third party.[9]

RESEARCH AND DEVELOPMENT AND IMPORT

The UAS Rules prescribed that research and development (R&D) with respect to unmanned aircraft systems can only be undertaken by authorized R&D organizations. It is pertinent to mention here that the UAS Rules does not define what all would be constituted as R&D, therefore, the restriction with respect to R&D of unmanned aircraft systems is very vague. Any start-ups which are not recognized by the Department for Promotion of Industry and Internal Trade are eligible to be demarcated as authorized R&D organizations. Even if unmanned aircraft systems are being used for the purpose of R&D, then too they are required to comply with the cumbersome procedures mentioned under the UAS Rules for getting the authorization to undertake the same. There are various restrictions with respect to flying height and flying area even if the same is being undertaken for R&D purposes and failure to comply would attract penalties under the UAS Rules.[10]

When it comes to importing any unmanned aircraft systems, the same can be done after all procedures have been complied with as enumerated in the UAS Rules. The importer is required to obtain a Certificate of Manufacture and Airworthiness followed by an application to the DDCA, which after being satisfied would issue an import clearance certificate in favour of the importer and would further recommend the application to the Director-General

of Foreign Trade (DGFT).

Thereafter, the DGFT may grant an importer license for the unmanned aircraft systems or their components. It is pertinent to mention here that each unmanned aircraft system and its components need separate approval before the same can be imported in India. No exemption is provided when it comes to the import of the category Nano drones to India and the same also needs to follow the due procedure.

BEYOND VISUAL LINE OF SIGHT (BVLOS) AND RECENT DEVELOPMENTS

In India, when it comes to experimental drone flight operations beyond the visual line of sight (BVLOS), approval from the DDCA is required. As per Rule 28(3) of the UAS Rules, Medium and Large drones are allowed to undertake operation BVLOS and delivery of goods – provided that explicit permission is provided by the DDCA. In the current situation which has been caused due to the outbreak of the COVID-19, the DDCA has provided conditional exemption to the Government of Telangana for conducting experimental BVLOS drone flights for undertaking delivery of vaccines.

It is to be noted that though the conditional exemption has been provided, complete adherence to the condition of direction given needs to be followed. The exemption granted is only for a limited time of 1 year. These exemptions are provided for the sake of faster delivery of vaccines to remote areas across the state. It is pertinent to mention here that a similar exemption has already been sanctioned to Indian Council of Medical Research (ICMR) for conducting feasibility study of COVID-19 vaccine delivery using drones in collaboration with IIT Kanpur.

Recently, the DDCA has also granted conditional exemption from UAS Rules to 20 entities to conduct BVLOS experimental flight of drones. These exemptions are provided looking at the future wherein a supplementary framework pertaining to BVLOS drone operations can be formulated.

These exemptions are given to companies like Swiggy, Dunzo, Spicejet, etc. for conducting experimental drone delivery. Looking at the future wherein it would be feasible to provide delivery through drones, the Central Government has constituted a BVLOS Experiment Assessment and Monitoring Committee whose sole purpose is to invite Expression of Interest to undertake BVLOS experimental flight of drones. The entities who have been granted exemption are required to adhere to the requirements as mentioned in the Expression of Interest.

PENALTIES

Prior to the enactment of the UAS Rules, penal provisions with respect to unmanned aircraft systems were being governed through the Indian Penal Code, 1860, and relevant sections of the Aircraft Act, 1934/ Aircraft Rules, 1937. As there was no substantive provision, there was a lot of ambiguity with respect to contravention which had fallen beyond the scope of the above-mentioned legislation. The UAS Rules prescribes a table containing detailed penalties based on the type of contravention. UAS Rules also provide for the compounding of offenses in certain cases.

The monetary penalties under the UAS Rules have been substantially enhanced. UAS Rules also considers the mechanical factor with respect to unmanned aircraft systems and therefore, in cases wherein it can be proved that the contravention has occurred due to circumstances that were beyond the control of the relevant person or without the knowledge or fault of such person.^[11]

CONCLUSION

After analysing the UAS Rules, it can be concluded that they are one step forward when it comes to providing a consolidated guideline with respect to unmanned aircraft systems. The UAS Rules provides for a cumbersome process for obtaining authorization, license, R&D which would ultimately result in a reduction of companies who would be willing to step into the unmanned aircraft system rules 2021. Further, imposing authorization on R&D with respect to unmanned aircraft systems would result in deterioration of innovation.

The recent exemption being provided for BVLOS by the government will help in creating a framework for future deliveries and other major applications using drones. The BVLOS will provide the entities to cater the needs of future by undertaking speedy deliveries without being worried about physical factors which have been hampering the timely deliveries. The BVLOS exemption provided to entities are in very starting stage and therefore, accordingly we have to wait to see how the same would impact the market at large and what all field they target to tap in.

All in all, the UAS Rules is a welcome step but the same comes with certain restriction which needs to be taken care off in the near future to enhance the use of technologies with respect to unmanned aircraft systems.

- [\[1\]](#) Rule 1(3) of UAS Rules
- [\[2\]](#) Rule 2(zw) of UAS Rules
- [\[3\]](#) Rule 3 of UAS Rules
- [\[4\]](#) Rule 4 of UAS Rules
- [\[5\]](#) Rule 28 of UAS Rules
- [\[6\]](#) Rule 28(3) of UAS Rules
- [\[7\]](#) Ibid
- [\[8\]](#) Rule 29 of UAS Rules
- [\[9\]](#) Rule 28(17) of UAS Rules
- [\[10\]](#) Rule 56 of UAS Rules
- [\[11\]](#) Rule 76(3) of UAS Rules

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