Regulatory Hotline

March 22, 2021

DRONE LAW 2021: NEW REGIME, OLD PROBLEMS

Following the draft rules on Unmanned Aircraft Systems ("**UAS**"/"**Drones**") that were released for public comments by the Indian Ministry of Civil Aviation ("**MoCA**") in June 2020 ("**Draft UAS Rules**"),[1] the MoCA has now notified the final Unmanned Aircraft System Rules, 2021 ("**UAS Rules**").[2]

This paves the way for the new drone law in India and the earlier Drone regulations of December 2018 ("**Earlier Guidelines**") stand superseded. We have discussed below some of the key features of the UAS Rules which will now govern the civil use of Drones in India.

APPLICABILITY

Unlike the Earlier Guidelines whose applicability was limited only to the India territory, the applicability of the UAS Rules has been extended to all UAS registered in India, even when they are operating outside Indian territory. Further, its provisions would also apply to all persons seeking to own or possess, or seeking to engage in importing, exporting, manufacturing, trading, leasing, operating, transferring or maintaining a UAS in India.

CATEGORIZATION AND CLASSIFICATION OF UAS

While the Earlier Guidelines were limited to Remotely Piloted Aircraft Systems ("**RPAS**") alone, the UAS Rules go on to categorize UAS into aeroplane,[3] rotorcraft[4] and hybrid unmanned aircraft system[5]. These categories are further sub-categorized as the following:

1. RPAS *(i.e. UAS piloted from a remote pilot station)*
2. Model RPAS *(i.e. UAS operating without payload and used for educational purposes only within visual line of sight)*
3. Autonomous Unmanned Aircraft System *(i.e. UAS that does not require pilot intervention in the management of the flight)*

Further, the classification of UAS under the UAS Rules are similar to the Earlier Guidelines (i.e. weight-based classification)[6], with one exception being introduction of reclassification norm for Nano Drones into Micro Drones, if the Nano Drone exceeds the stipulated performance parameters based on (i) the maximum speed (i.e. 15 m/s); or (ii) height (i.e. 15 meters) and range attainable (i.e. 100 meters) from the remote pilot (i.e. performance-based classification).

Earlier, Nano Drones were completely exempted from regulatory compliances. However, going forward Nano Drones would be regulated (with some limited exemptions), but more importantly, manufacturers may have to build-in geo fencing capabilities to restrict the operations within the said speed, height and range limits to ensure that the same are not reclassified into Micro Drones (which would trigger additional compliances). Regulating Nano Drones along with the said reclassification is likely to impact the current Drone ecosystem and pose a challenge for manufactures and existing operators.

AUTHORISATION FRAMEWORK

As against the earlier regime where only the UAS operators, manufacturers and importers were required to obtain necessary licenses and approvals, going forward, the UAS Rules require all persons associated with the Drone ecosystem to undertake a registration in the capacity of an authorised UAS Importer, authorised UAS Manufacturer, authorised UAS Trader, authorised UAS Owner or authorised UAS Operator (together as "**Authorised Person**"), by making an application to the DGCA through Form UA-1 and in accordance with the conditions prescribed under Rule 6 of the UAS Rules. Notably, the Draft UAS Rules prescribed applications to be filed through the digital sky platform, but the platform finds no reference in the UAS Rules. Instead, there are references to an "online platform" only in relation to permission to fly, as detailed below. It is currently unclear if all applications will be made online, as envisaged under the Draft UAS Rules, or if physical applications can also be made.

To be eligible to apply for said authorizations, the applicant needs to be:

1. An individual who is a citizen of India and has attained at least 18 years of age; or
2. A company or a body corporate –

   (a) registered and having its principle place of business within India; and

   (b) the chairman and at least two-thirds of directors of which are citizens of India; and

   (c) the substantial ownership and effective control of which vests in Indian nationals as specified in Schedule XI of the Aircraft Rules, 1937.

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3. A firm or an association of persons or body of individuals or a local authority or any legal entity, whether incorporated or not, which has its principal place of business in India, Central and State Government or an agency thereof.

While 'substantial ownership' and 'effective control' have not been defined under the UAS Rules and the Aircraft Rules 1937, it could mean above 50% ownership by Indian nationals along with the chairman and at least two-thirds of directors being Indian citizens.

Some of the persons listed above are required to first obtain security clearance, including for directors and/or top management, as specified by the DGCA. Subsequently, they are required to submit an application as prescribed under Rule 6 of the UAS Rules to obtain a unique authorisation number ("**UAN**") to be issued by the DGCA, which will be valid for a period of 10 years, unless it is suspended, revoked or cancelled, with a further renewal option for another 10 years. The validity of the authorisation has been increased from 5 years, as proposed under the Draft UAS Rules, and this is a welcome move given the cumbersome and likely time-consuming authorisation process that the person / entity would have to go through for obtaining authorisation or renewals thereof.

However, it is pertinent to note that the UAS Rules do not prescribe any timeline within which the DGCA would grant such authorisation to the applicant. This is especially in light of the multiple hurdles that an entity needs to cross right from the manufacturing of the drone, up to each single flight. Thus, it is important that the DGCA actively delineates a timeline for its approval procedure, otherwise the ambiguity would pose a serious challenge to interested stakeholders who would need to prepare their business plans well in advance, and would depend heavily on timelines for grant of authorization.

LIMITATIONS ON FOREIGN COMPANIES

The restrictions on foreign entities or their majority / wholly owned Indian subsidiaries continue to exist as they are not allowed to register as an Authorised Person. Considering the capabilities of international players in the Drone industry and the potential of technology collaboration, not allowing foreign-owned and controlled Indian entities to be able to own / operate Drones in India seems excessively restrictive. Further, this may also dis-incentivize foreign players from investing in the Indian UAS market. Notably, this restriction was present even in the Earlier Guidelines subsequent to which the industry submitted numerous feedbacks on the need for liberalisation. Even after more than two years from the Earlier Guidelines, the Government has continued with a restrictive framework, which would be a huge disappointment for the international drone industry.

CERTIFICATE OF MANUFACTURE AND AIRWORTHINESS

The UAS Rules provide for a new certification requirement in the form of a 'Certificate of Manufacture and Airworthiness' which is required to be obtained by an authorised UAS Manufacturer / UAS Importer to certify that the class and type of the UAS along with its specification meets the requirements as specified under the UAS Rules. Further, the term 'Authorised UAS Manufacturer' has been defined to mean a person authorised to manufacture or assemble a UAS or any part or component thereof. Therefore, the requirement for obtaining a Certificate of Manufacture and Airworthiness seems to be applicable to any authorised UAS Manufacturer / UAS Importer engaged in manufacturing / importing of a UAS or any of the parts or components of a UAS or assembling a UAS from different set of parts, either imported to India or locally purchased in India.

The scope of Earlier Guidelines vis-a-vis meeting certain manufacturing standards was limited to manufacturers and importers of drones. However, basis the UAS Rules, it is unclear if a Certificate of Manufacture and Airworthiness is only required for assemblers of components, or even for manufacturers thereof. Extending certification requirements even to the manufactures and importers of different parts that may be used for manufacturing of Drones, could have an adverse impact on the Indian Drone industry for the following reasons:

1. most domestic players rely on imported spare parts for the purpose of their manufacturing in India;
2. multiple certifications may be required for manufacturing a Drone – each for the spare parts and then for the final assembled Drone; and
3. some components used for manufacturing of Drones may also have alternative use and hence there is an ambiguity on applicability of UAS Rules on such components.

Further, the UAS Rules fail to lay down the definition of 'components', which may include both hardware and software elements of a UAS. Each single component of the UAS requires DGCA approval before it can be imported. Considering the UAS industry and market in India are at a very nascent stage, a majority of Indian UAS manufacturers may be reliant on foreign imports for their hardware or software component or parts required for development of indigenous UAS. Therefore, the burden for obtaining a Certificate of Manufacture and Airworthiness would be applicable on domestic manufacturers and importers, even in instances where merely a spare part or an additional component is required to be imported and not the entire UAS. The entire process for obtaining a Certificate of Manufacture and Airworthiness (especially for parts / components) could have a significant impact on productivity, especially considering that the UAS Rules are silent on any timeline within which the DGCA would grant such Certificate of Manufacture and Airworthiness to the applicant.

The DGCA has also reserved the power to appoint testing laboratories or organizations that will carry out testing in order to ascertain compliance of the equipment with the requirements for grant of Certificate of Manufacture and Airworthiness. From an overall process perspective, the applicant will have to demonstrate the compliance of each type of UAS with the related documents submitted and other manufacturing requirements as applicable for such type of UAS. Subsequently, the authorised testing laboratory or organization will submit the test report and recommendations to DGCA, based on which the DGCA will take the final decision in this regard.

Additionally, for each Certificate of Manufacture and Airworthiness, there will also be a requirement to obtain an 'equipment type approval' ("**ETA**") for operating drones in de-licensed frequency bands and regular assignment frequency or wireless operating license, as the case may be, for operating in licensed frequency band from the Wireless Planning and Coordination ("**WPC**") wing of India's Ministry of Telecommunication ("**MoT**"), along with details of the emergency recovery system installed.

Lastly, while Nano category Drones have been exempted from certain compliances, they are not exempt from the Certificate of Manufacture and Airworthiness requirement.

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RESEARCH AND DEVELOPMENT

The UAS Rules require that research and development ("**R&D**") of UAS only be conducted by authorised R&D organisations. However, the UAS Rules do not define what R&D would consist of, and hence, the scope of the restriction is rather vague. Moreover, start-ups which are not recognised by the Department for Promotion of Industry and Internal Trade can only be eligible to be authorised as an R&D organisation if they are authorised UAS Manufacturers. Consequently, even for R&D purposes, however minor or preliminary, start-ups would have to comply with all requirements and undergo procedures required for obtaining such authorisation. This is a highly cumbersome requirement especially even before a start-up can begin its journey in the UAS space, and is likely to kill the start up and drone R&D in India.

Even subsequent to authorisation, test flights for R&D purposes are only permitted in certain premises. Even within these premises, the maximum height for which test flights are permitted is only 15 metres, which is counterintuitive to testing the capabilities and safety measures of the Drone, since drones with long-range capabilities can never be tested for their full capacity at the R&D stage.

IMPORT OF UAS

The import procedures under the UAS Rules is a multi- step process where the UAS Importer is required to obtain a Certificate of Manufacture and Airworthiness followed by an application to DGCA which, upon its satisfaction, issue an import clearance and recommend the application to the Directorate General of Foreign Trade ("**DGFT**"). The DGFT may subsequently grant an import license for the Drone or its components. The UAS Importer is required to comply with all import regulations of the DGFT. As mentioned above, each UAS part and component requires the approval of the DGCA before it can be imported.

A UAS Importer can only import UAS of the specific type and class as specified in the Certificate of Manufacture and Airworthiness, and is responsible for the UAS conforming with such certificate. Notably, there are no exemptions for Nano category Drones which is a significant change from the Earlier Guidelines.

MAINTENANCE OF UAS

The UAS Rules prohibit the operation of any UAS, unless it is maintained as per the UAS Rules. The term 'maintenance' includes performance of tasks required to ensure the continuing airworthiness of an UAS, which may include overhaul, inspection, replacement, defect rectification and embodiment of a modification or repair or test. Every UAS Manufacturer or UAS Importer operating in India is required to submit to DGCA, a maintenance manual containing the maintenance requirements and procedures on a mandatory basis. The maintenance manual is also required to be a part of the mandatory sale documents provided by such manufacturer or importer to any authorised UAS Trader, UAS Owner or UAS Operator.

UAS Manufacturers and UAS Importers are also required to establish authorised maintenance centres and to provide information to the DGCA once established. These maintenance centres will have a positive obligation to issue a certificate of maintenance signifying their satisfaction with the maintenance, repair of modification of the UAS. It is pertinent to note that while the authorised maintenance centres are not required to be owned or controlled by an Authorized Person under the UAS Rules, it is unclear if any ownership and control restrictions are applicable on foreign entities or their Indian subsidiaries for operating such authorised maintenance centres.

OWNERSHIP, SALE AND PURCHASE OF UAS

The UAS Rules do not permit any UAS to be used, operated, or transferred in India unless it has been registered with the DGCA and has a certificate of conformance issued either by a UAS Importer or UAS Manufacturer. After the DGCA is satisfied that the UAS is in compliance with the Certificate of Manufacture and Airworthiness, and that it has a valid certificate of conformance, the DGCA may grant a unique identification certificate ("**UIC**"), which is the proof of registration with the DGCA and assign a unique identification number ("**UIN**") to the UAS.

It is arguable that the UIC should not be a separate requirement in the first place, given the various certificates that are issued in relation to a Drone, and could have just been incorporated with the UIN. Also, as opposed to the Earlier Guidelines, the UIN will be required for Nano category Drones, although such category is exempt being equipped with an electronic identification based on the UIN, which is mandatory for other categories. The UAS Rules do not provide any clarity on the form or manner of electronic identification to be equipped on the UAS.

Further, any sale, lease or transfer of UAS will only be permitted between Authorised Persons in accordance with the UAS Rules. In case of sale, an authorised UAS Importer or UAS Manufacturer will only be permitted to sell or lease a UAS to an authorised UAS Trader or an authorised UAS Owner in India. However, lease of a UAS by an authorised UAS Importer, UAS Manufacturer or UAS Owner to an authorised UAS Operator is permitted. Hence, it could possibly be concluded that an UAS Operator is not permitted to own a Drone, but may obtain a lease for a Drone.

Notably, it is unclear whether the same person can obtain multiple authorizations under the Draft UAS Rules to undertake, two or more activities, such as owning and operating, importing and manufacturing or manufacturing and trading, etc. Clarity in this regard would be very helpful from an overall drone ecosystem.

Lastly, any Authorised Person seeking to sell / lease his UAS to another Authorised Person would be subject to prior approval from the DGCA.

OPERATION OF UAS

Authorised UAS Operators will be permitted to operate UAS, except Nano category UAS, only upon obtaining a UAS Operator Permit ("**UAOP**") from the DGCA. Conditions stipulated for obtaining UAOP includes, among others, due intimation to the land or property owner or the local authority for take-off and landing of UAS. After each flight, the operator should also furnish a log of the flight on an online platform.

Two classes of UAOPs have been prescribed under the UAS Rules. UAOP – I applies only to Micro and Small Drones and does not permit carriage and delivery of goods, or operations beyond visual line of sight. UAOP – II is required to be obtained for Medium and Large category of Drones, and if other categories of Drones operate beyond visual line of sight, or carry payload.

The UAOP holder is responsible for the Drone operations at all times. The UAOP holder is also responsible for ensuring the privacy of the individual and their property during operations. Further, prior permission of a person is required if data regarding that person is sought to be shared with third parties. Hence, if a Drone captures images over a crowded area which even incidentally includes pictures or any other data regarding persons, it would require

prior permission of all such persons before it can share the data, which may be impracticable.

The UAOP holder is also required to comply with any other local or state regulatory requirements and/or any other conditions including height and air space restrictions, as may be specified by DGCA. It is also pertinent to note that no UAS, except Nano category Drones shall be operated without having obtained a valid third-party insurance policy to cover the liability that may arise on account of a mishap involving such UAS and causing death or bodily injury to any person or damage to property. The UAOP will be non-transferable and will be valid for a period of up to 10 years, with an option to apply for renewal for a period of another 10 years.

Notably, no UAOP is required for operating Nano category Drones.

DRONE SCHOOLS AND REMOTE PILOTS

Except for Nano UAS, no person other than licensed remote pilots ("**LRP**") under the UAS Rules can operate a UAS. The eligibility requirement for LRP is that the applicant must be of 18 years of age, must have passed tenth standard and must have undergone the required training as specified in the UAS Rules. For this, the UAS Rules also envisage authorised training organisations which will be the only class of organisations permitted to impart training for qualification as an LRP. There is no express prohibition on such training organisations being foreign-owned or controlled.

The 'remote pilots' license' ("**RPL**") will have to be obtained through an application to the DGCA in the manner and procedure that will be specified by the DGCA, and is granted for a maximum of 10 years.

AUTONOMOUS & BVLOS OPERATIONS

Unlike the Earlier Guidelines where autonomous operations of UAS was completely restricted, the UAS Rules permit its operations subject to conditions that may be specified by the DGCA. Further, while the Earlier Guidelines restricted the UAS operations to the direct visual line of sight, the UAS Rules, impose such restrictions only on UAOP – I type of license, and do not expressly impose any such operational airspace restrictions for UAOP - II. This development may give a significant a boost to UAS-based commercial services and enhanced operations. The flexibility in the text of the UAS Rules is a welcome step but it would largely depend on the willingness of the DGCA to permit such operations.

MODEL RPAS OPERATIONS

This is an independent drone category which has been introduced under the UAS Rules. Such Model RPAS are not allowed to carry any payload, should be used only for educational purposes and must be flown within visual line of sight only. Considering the purpose of such Drones, all of the compliances under the UAS Rules have been exempted for such Model RPAS (such as Certificate of Manufacture, UAN, UIN, UAOP etc.), and only certain restrictions on airspace, general safety, etc. apply.

However, it needs to be examined whether such Model RPAS would extend to all drone categories and considering the exemptions, whether such Model RPAS could be owned / operated by foreign owned and control Indian entities. Given that Model RPAS may weigh up to 25 kilograms (ranging from Nano to Small Drones), which is a significant size, the relaxation in compliance is in stark contrast and disproportionate with the stringent requirements for other UAS, especially the compliances required for Nano Drones.

DRONE PORTS

Taking a cue from the Drone Ecosystem Policy Roadmap that was released by MoCA during the Global Aviation Summit, 2019, the UAS Rules have also introduced the novel concept of licensed Drone Ports. It has been defined under the UAS Rules to mean an area on land or water, including any buildings, installations, and equipment in a permitted area that can be used for the purposes of arrival, departure, surface movement and associated maintenance, along with commercial activities of Drones.

To be eligible to apply for a Drone Port license the applicant must be:

1. An individual who is a citizen of India and has attained at least 18 years of age; or
2. A company or a body corporate which-

   (a) is registered and has its principle place of business within India; and

   (b) meets the equity holding criteria, as prescribed by the Central government; or
3. A firm or an association of persons or body of individuals or a local authority or any legal entity having its principal place of business within India, whether incorporated or not, Central and State Government or an agency thereof.

Similar to other approvals / licenses under the UAS Rules, the applicant is required to apply to the DGCA. Accordingly, the DGCA upon its satisfaction, may grant a license for the Drone Port, subject to any security clearance of the applicant by the concerned authority. Such a license will be granted for a period up to 10 years with an option to renew, as opposed to a period of 5 years proposed under the Draft UAS Rules. The UAS Rules also prescribe for an option to obtain a Drone Port authorization for temporary operation of UAS for a period up to 3 months.

Further, we note that the eligibility restrictions have not been imposed on foreign owned and controlled Indian subsidiaries as they are allowed to apply for a Drone port license. Considering the capabilities of international players in the UAS industry and the potential of technology collaboration, allowing foreign owned and control Indian entities to be able to obtain a license for Drone ports in India is forward-looking step as this may incentivize foreign players to invest in building the requisite infrastructure in the Indian UAS market.

UNMANNED AIRCRAFT SYSTEM TRAFFIC MANAGEMENT SYSTEM

As per the UAS Rules, the Central Government or any other organization authorized by it may establish an Unmanned Aircraft Traffic Management System ("**UTM System**") for UAS operations. The UTM System will cover registration, pre-flight, in-flight and post-flight services as specified by DGCA.

An organization seeking to obtain a license for providing UAS Traffic Management Service ("**UTM Service**") will have to apply to the DGCA for a license, which will be valid for a period up to 10 years and may be renewed for another 10 years.

All UTM personnel are also required to obtain a license from the DGCA and undergo training imparted by an

authorised training organization only. Such UTM training organization will be licensed for imparting the training in the manner prescribed under the UAS Rules for a period up to 10 years and an option to renew for another 10 years.

EXEMPTIONS UNDER UAS RULES

The Central Government (i.e. MoCA) has been given the power to exempt any UAS or class of UAS or any person or class of persons from the operation of the UAS Rules, either wholly or partially, subject to such conditions, if any, as may be specified by the Central Government in a written general or special order.

PENALTIES

The Earlier Guidelines prescribed certain broad penal provisions without getting into the detailed nature of contraventions that may take place while undertaking Drone related business in India. Further, it relied upon the provisions under the India Penal Code, 1100% and relevant sections of the Aircraft Act 1934 / the Aircraft Rules 1937 to take necessary action. Hence, there was considerable ambiguity with respect to such contraventions which may fall outside the scope of above said legislation.

However, to ensure that there is no such enforcement related ambiguities, the UAS Rules prescribe a table containing detailed penalties based on the type of contravention / non-compliance. The provisions also provide for compounding of certain offences and monetary penalties for others. The monetary penalties are enhanced based on the category of UAS as well as the entity concerned.

Further, considering the accident prone nature of Drone operations, the UAS Rules also state that it shall be a valid defence to any proceedings under the UAS Rules if the contravention is proved to have been caused or has happened due to factors or circumstances beyond the control of the relevant person or without the knowledge or fault of such person such as stress of weather, bona fide error or any other unavoidable cause or circumstances.

CONCLUSION

The UAS Rules are a typical case of one step forward and two steps back, given the progress they make on the Earlier Guidelines but the excessive compliance requirements that have been added.

The life cycle of a Drone would begin first with R&D, and the rules require a formal authorisation (UAN) even for this purpose. Next, it would involve obtaining a Certificate of Manufacture and Airworthiness. Subsequent to this, the DGCA, if satisfied with the above requirements, may grant a UIC and a UIN followed by a flight permit (UAOP). While the case for regulation of UAS is undoubtedly strong, the compliance requirements should not be unreasonably harsh.

All of the above is also coupled with a conspicuous silence on estimated timelines for each step of authorisation and approval, leading to zero visibility on how the implementation of the UAS Rules will work out in practice. The provisions as they currently stand have the potential to lead to administrative bottlenecks and a never-ending process of obtaining approvals. Moreover, given the strict requirements, it is not clear why majority / wholly owned Indian subsidiaries of foreign entities have been disallowed from participating in the UAS ecosystem. The heavy dependence of Indian players on their foreign counterparts and the scope for foreign investment in this area requires further liberalisation of the sector.

– Aniruddha Majumdar & Huzefa Tavawalla
You can direct your queries or comments to the authors

[1] Our analysis of the draft rules is available at: https://www.nishithdesai.com/information/research-and-articles/nda-hotline/nda-hotline-single-view/article/future-of-drones-in-india-draft-rules-2020.html?no_cache=1&cHash=44ea0a5577547311350890542d58c295

[2] Available at http://egazette.nic.in/WriteReadData/2021/225100%.pdf (Last visited on March 18, 2021).

[3] Aeroplane has been defined under the UAS Rules as "*a power-driven heavier than air aircraft, deriving its lift in flight chiefly from aerodynamic reactions on surfaces which remain fixed under given conditions of flight*".

[4] Rotorcraft has been defined under the UAS Rules as "*a heavier than air aircraft supported in flight by the reactions of the air on one or more power driven rotors on substantially vertical axes*".

[5] Hybrid unmanned aircraft system has been defined under the UAS Rules as "*a heavier than air unmanned aircraft capable of vertical take-off, vertical landing, and low-speed flight, which depends principally on engine-driven lift devices or engine thrust for the lift during these flight regimes and on non-rotating airfoil(s) for lift during horizontal flight*".

[6] *Nano*: Less than or equal to 250 grams; *Micro:* Greater than 250 grams and less than or equal to 2 kg; *Small*: Greater than 2 kg and less than or equal to 25 kg; *Medium*: Greater than 25 kg and less than or equal to 150 kg; and *Large*: Greater than 150 kg.