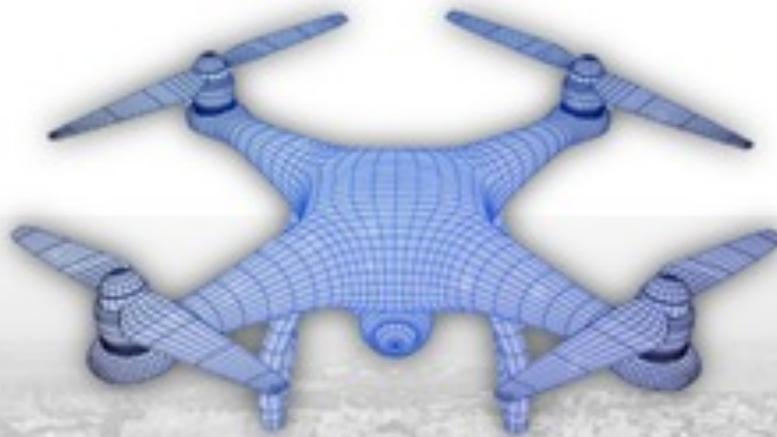




Recommendations on The Draft Unmanned Aircraft System Rules, 2020



July 2020



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1. The world is at the cusp of widespread adoption of the fourth industrial revolution. Drones, as a subset of Cyber-Physical Systems, have the potential to lead the charge of Industry 4.0 platforms.
2. FICCI was the first industry body in India, to recognize the transformational role of Drones and has a dedicated Committee on Drones representing this highly promising sector. The committee has been advocating for the holistic and responsible use of Drones across diverse use-cases in government agencies, agriculture and enterprises.
3. Recognizing the potential of drones, the Government of India has recently published draft UAS Rules 2020. FICCI welcomes the Ministry of Civil Aviation (MoCA) initiative to launch the Draft UAS Rules 2020 for public consultation.
4. Our country needs innovators who can solve societal problems by applying technology and creating next-generation platforms. R&D and Innovation undertaken in collaboration with industry, academic institutions, and government agencies by Drone start-ups in India shall make the vision of 'Atma Nirbhar Bharat' a reality within a short time. These innovators have the potential to flourish and succeed with the notification of the Draft UAS Rules 2020.
5. Towards a comprehensive review, FICCI Committee on Drones had convened a stakeholder consultation meeting on 20th June 2020 with around 50 attendees to deliberate on the Draft UAS Rules 2020. The event hosted participants from Drone OEMs and industry end-users to provide their insights and recommendations on the draft rules.
6. The committee received several comments and recommendations on the draft rules. **Some observations raised during the meeting and inputs received pertaining to the draft rules are as follows:**
 - a. The rules are a step in the right direction since they extensively cover many aspects of drone sector. **These rules, once approved, would play a big role in facilitating the drone revolution as well as Industrial Revolution 4.0 in India.**

- b. The CAR 1.0, which was notified in 2018, was simply an extension of current aviation regulation. However, the proposed draft rules¹, is a bold regulatory step by the Ministry of Civil Aviation to recognize drones as an industry in itself and not merely an extension of civil aviation in the country.
- c. The recommendations of the draft Drone Policy 2.0 (which was released in January 2019), such as dropping of article and BVLOS operations are not envisaged in the Draft UAS Rules. It is requested that certain applications be treated differently owing to their non-urban or low altitude applications and also considering their extreme social value - **Agricultural Spraying and Medical Delivery** are two such applications. Furthermore, in utilities and infrastructure sectors such as **oil & gas, railways** etc., BVLOS operations for inspection & monitoring could prove to be extremely beneficial and prevent from any man made disasters.
- d. Due to the unprecedented scenario created by the COVID-19 pandemic, industry cannot afford the time and cost overrun due to delay in approvals. FICCI recommends setting-up a **single window mechanism** to enable applicants to obtain clearances / approvals from ministries such as the Ministry of Home Affairs, WPC-Department of Telecommunication etc. Without such a mechanism the application process could prove to be a cumbersome process. The MoCA and DGCA may also consider setting up an appeal system for applicants through the single window mechanism.
- e. Many Indian innovators and researchers are not able to develop world-class drone products, as they do not have access to **infrastructure for testing facility**. Industry is dependent on few labs and testing sites overseas. It would be ideal, if:
 - i. The MoCA and DGCA could notify wide range of testing sites under the jurisdiction of the MoCA as well as of the other Central or State Govt. Departments (which has adequate infrastructure to test drones) in each and every part of the country. The Govt. has already allowed private sector to use ISRO² facilities and other relevant assets to improve their capability. On similar lines, the other govt. agencies could also be notified.
 - ii. **Design Standard Operating Procedure (SOPs) for use of Government owned testing sites.**

¹ Rule 1(4) of the draft rules states that the provisions contained in the Aircraft Rules, 1937 shall not apply on the UAS and matters connected therewith or incidental thereto except for those provisions whose application on UAS is specifically provided in the Unmanned Aircraft System (UAS) Rules, 2020.

² *ibid.*

³ N. Ravi Kumar, 'IRDAI forms panel on drone insurance'; The Hindu, June 24, 2020. Link -

- iii. Furthermore, new world class drones testing infrastructure could be developed in PPP mode. Since, India has world-class airports, creating similar world-class infrastructure for Drone Ports and Testing Facility is also possible.
- f. Insurance regulator IRDA³ has recently set-up a working group to study and make recommendations on various aspects of insurance cover for drones. **FICCI would be happy to work with IRDA and MoCA for the design and development of products that meet the needs of RPAS owners and operators, including Third Party liability.** A taskforce comprising Govt. and Industry representatives could be set-up to ensure that suitable products come into market at the time of finalisation of the draft rules.
- g. Students and hobbyist mostly use **nano category UAS**. They may not be able to afford the costly nano drones, as adding more equipment to the nano category drone will increase its cost manifold. It is recommended that Nano Drones for educational, recreational and experimental purposes could be considered as Model RPAS in 'Designated Areas'.
- h. The DGCA may further enhance the Indian drone training eco system by considering the following suggestions:
 - i. DGCA may consider setting up an expert committee, supported by FICCI, for charting way forward steps to set-up more drone training institutes across India.
 - ii. MoU with other government bodies such as the training institutes under the Survey of India (Sol), under the Ministry of Science & Technology, could be leveraged.
- i. Industry will appreciate if a dedicated drone cell could be set-up in the DGCA at the earliest.

³ N. Ravi Kumar, ' IRDAI forms panel on drone insurance'; The Hindu, June 24, 2020. Link - <https://www.thehindu.com/news/cities/Hyderabad/irdai-forms-panel-on-drone-insurance/article31908851.ece>

7. Based on inputs received from participants of the FICCI Drone Committee Meeting, held on 20-June-2020, FICCI recommends the following:

Rule No.	What the Draft Rule(s) say	Suggested Amendment/ Change in the rules	Rationale/ Reason for Change
<p>1. Short title and extent.</p>	<p>— (1) These rules may be called the Unmanned Aircraft System (UAS) Rules, 2020. (2) They extend to the whole of India and shall apply also (unless the contrary intention appears) – (a) to UAS registered in India, wherever they may be; or (b) to a person owning or possessing or engaged in importing, manufacturing, trading, leasing, operating, transferring or maintaining a UAS in India; or (c) to all UAS for the time being in or over India;</p>	<p>They extend to the whole of India and shall apply also (unless the contrary intention appears) – (a) to Civil UAS registered in India, wherever they may be; or (b) to a person owning or possessing or engaged in importing, manufacturing, trading, leasing, operating, transferring or maintaining a Civil UAS in India; or (c) to all Civil UAS for the time being in or over India;</p>	<p>Defense usage and ownership of UAS cannot be controlled by MoCA and restrict the Draft Regulations to focus upon Civil UAS only. Otherwise, it could create confusion in the minds of both Defence Forces and Manufacturers of Defence Drones such as Herons & Searchers and MALE, HALE, Tactical UAVs.</p>
<p>2. Definitions and Interpretation</p>	<p>3) —Authorized UAS Importer means a person who is authorised to import a UAS or any part or a component thereof from a place outside India under these rules;</p>	<p>Authorized UAS Importer means a person who is authorised to import a UAS from a place outside India under these rules;</p>	<p>This definition contradicts with the definition of ‘Manufacturer’ mentioned in the draft rules. Importers of Parts and components are basically manufacturers of UAS. They cannot be termed as ‘Authorized UAS Importer’.</p>

2. Definitions and Interpretation	9) —Autonomous Operation means an operation during which a remotely piloted aircraft is operating without pilot intervention in the management of the flight;	'Fully Autonomous Flight Operation' means an operation during which a remotely piloted aircraft is operating without pilot intervention in the management of the flight;	This will avoid ambiguity and give more clarity.
2. Definitions and Interpretation	10) —Beyond Visual Line-of-Sight Operation means an operation in which the remote pilot or the observer does not use visual reference to the remotely piloted aircraft in the conduct of flight;	"Beyond Visual Line-of-Sight Operation" means an operation in which the remote pilot or the observer does not maintain unaided visual contact with the remotely piloted aircraft in the conduct of flight;	Gives clarity on "Visual reference", as operators may claim a live video feed is enough to provide a visual reference for flight.
2. Definitions and Interpretation	20) —Geo-fencing means a feature in a software programme that uses the global positioning system or radio frequency identification to define geographical boundaries;	Geo-fencing means a feature in a software programme that uses the global positioning system, radio frequency, image navigation or any other technology with comparable performance to define geographical boundaries;	Enables the development and usage of new technology such as RF, image navigation or any other means to do geofencing on an RPAS.

2. Definitions and Interpretation	<p>24) —Model Remotely Piloted Aircraft System means a Remotely Piloted Aircraft without payload used for educational or experimental purposes only and flown within visual line of sight of the person operating the Remotely Piloted Aircraft System;</p>	<p>Model Remotely Piloted Aircraft System means a Remotely Piloted Aircraft used for educational or experimental purposes only and flown within visual line of sight of the person operating the Remotely Piloted Aircraft System.</p> <p>Unless operated by an Authorised UAS Manufacturer for experimental purposes, the Model Remotely Piloted Aircraft System shall be without payload.</p> <p>In addition, Nano RPAS may also be considered as Model RPA when operating in Designated Areas or indoors.</p>	<p>This will help boost innovation to local manufacturers by giving them a path to test and innovate new payloads in a safe environment. Since the Model Remotely Pilot Aircraft System definition already includes a provision for experiments, we recommend that for an organisation that is already approved as an Authorised Manufacturer, allowing them the flexibility to test payloads in addition to the aircraft will help in developing innovative solutions indigenously.</p> <p>For Nano RPAS with or without payload no further permissions should be required to operate in ‘Designated Areas’ or indoors.</p>
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<p>3. Definitions and Interpretation</p>	<p>"Designated Areas" for Model RPAS [Not in original Draft]</p>	<p>Notwithstanding anything mentioned in Schedule VIII, Designated Areas are those areas that are approved for the usage of Model Remotely Pilot Aircraft Systems. These areas may include specific areas approved by Director General within uncontrolled airspace, educational institutions, indoor/enclosed spaces or within the bounds of any Private property in uncontrolled airspace as authorised by the Director General.</p> <p>In addition, Authorised RPAS Owner/Qualified Remote Pilot or Model RPAS Operators may also apply to the Director General for the inclusion of proposed sites currently not mentioned above as Designated Areas.</p>	<p>This will offer industry a designated space for experimentation and innovation without being bound to any equipment requirements specified in Schedule-II and help develop better technologies and enhanced use cases.</p>
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<p>4. Classification of Unmanned Aircraft.</p>	<p>A Nano class Unmanned Aircraft shall be regarded in the next higher category if it exceeds either of the following performance parameters: (a) maximum speed in level flight limited to 15 meters/second; (b) maximum attainable height limited to 15 meters and range limited to 100 meter from the remote pilot;</p>	<p>Govt. should delete the explanation statement for Nano class Unmanned Aircraft. The classification of Nano RPAS should continue to be on the basis of weight only.</p>	<p>Classification of UAS should be made on weight basis only rather than operational parameters. This will remove confusion and be easier for implementation.</p> <p>These restrictions will greatly limit the potential for drones in certain specialised application – disaster management, sports etc. Removal of these restrictions will also facilitate Indian manufacturers to tap global export markets.</p> <p>A thriving Nano RPAS industry will further support in development of indigenous component manufacturers and reduce burden on imports.</p>
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<p>7. Eligibility Conditions for Authorisation.</p>	<p>A person referred in rule 5 may be granted authorisation subject to fulfillment of following eligibility conditions— (i) an individual who is— (a) a citizen of India, and (b) 18 years of age or more; or (ii) a company or a body corporate provided that— (a) it is registered and has its principal place of business within India, and (b) the Chairman and at least two-thirds of its directors are citizens of India; or (iii) a firm or an association of persons or body of individuals or a local authority or any legal entity, whether incorporated or not, Central and State Government or an agency thereof: Provided that for clauses (ii) and (iii) of this rule, the substantial ownership and effective control shall vest in Indian nationals.</p>	<p>The condition – ‘the Chairman and at least two-thirds of its directors are citizens of India’ should be removed for manufacturers of drones.</p> <p>The eligibility conditions defined in Rule 44 of this Regulation could be specified for UAS manufacturers.</p>	<p>Rule 7 (B) of the draft regulation related to condition for UAS manufacturers – ‘the Chairman and at least two-thirds of its directors are citizens of India’ could contradict with the recent announcement made under ‘Atma Nirbhar Bharat Abhiyan’.</p> <p>As on today, drones fall under the list of Defence items issued by the DPIIT. Even after legalising its civil use, drones should continue to fall under the list but as a dual use item. Hence, it is speculated that any foreign investment made in manufacturing of drones will attract the FDI regulations and the sectoral caps that are applicable to the Defence sector.</p> <p>Recently under the ‘Atma Nirbhar Bharat Abhiyan’⁴ initiative of the Govt. of India, FDI limit in the Defence manufacturing under automatic route is raised from 49% to 74%.</p>
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⁴ 'Presentation of details of 4th Tranche announced by Union Finance & Corporate Affairs Minister Smt. Nirmala Sitharaman under Aatmanirbhar Bharat Abhiyaan to support Indian economy in fight against COVID-19'; PIB Delhi, 16 May 2020. Link - <https://pib.gov.in/PressReleaseDetail.aspx?PRID=1623418>

<p>8. Authorisation Number.</p>	<p>(1) Any person fulfilling the requirements under rule 6 may make an application in the manner and procedure specified in Schedule I for obtaining an authorisation number to act as an Authorised UAS Importer, Authorised UAS Manufacturer, Authorised UAS Trader, Authorised UAS Owner or Authorised UAS Operator. (2) The Director-General on being satisfied with the requirements under rule 6 may grant a Unique Authorisation Number (UAN) to the applicant. (3) If considered necessary, Director-General may obtain clearance from security angle of the applicant, including directors in case of corporate bodies or other persons in top management positions, from the concerned authority: Provided that no such clearance is required for Central and State Government or agencies thereof.</p>	<p>It is recommended to add a timeline to process application in less than 5 days, if application is in order.</p>	<p>It will support in 'Ease of Doing Business'.</p>
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<p>12. Import of UAS in India.</p>	<p>(1) No person other than an <u>Authorized UAS Importer</u> shall import a UAS or part or component thereof in India. (2) (a) For import of a UAS or part or component thereof, the <u>Authorized UAS Importer</u> shall make an application to the Director-General for import clearance of UAS in the manner and procedure as specified in Schedule II. (b) The Director General may recommend for import clearance to the Directorate General of Foreign Trade. (c) The Directorate General of Foreign Trade, may issue an import license for import of UAS, as per their norms.</p>	<p>No person other than an Authorized UAS Importer shall import a UAS in India. (2) (a) For import of a UAS, the Authorized UAS Importer shall make an application to the Director-General for import clearance of UAS in the manner and procedure as specified in Schedule II. (b) The Director General may recommend for import clearance to the Directorate General of Foreign Trade. (c) The Directorate General of Foreign Trade, may issue an import license for import of UAS, as per their norms</p>	<p>Import of Complete Knock Down Kits, Fully assembled UAS may be subject to import clearance, however, import of individual parts, for end products that are Indigenous Designed, Developed & Manufactured may be done against UAN for "Authorized UAS Manufacturer", and only laws applicable to individual components (such as ETA for RF equipment) may be applicable. This will help streamline the process for certified OEMs to continue to build & innovate on new designs. Importer may get a DIY system. Apart from DIY CKD Kit, and a fully integrated system, these are the only two kinds of UAVs that an importer can do. Rest can be classified as manufacturing. where value addition is happening. When importer is a person who either gets a RTF/DIY/CKD/Fully assembled kit, which will be given to an end customer who will make it ready to fly. Apart from that, all other activities are Manufacturing. Manufacturer is already authorised. It is unable to have the entire supply chain to be authorised because many components are not UAS specific, so the entire ecosystem will never be authorised. It would not be possible to control and identify each and every part. While model aircraft classification allows Manufacturers to test, it would be helpful to allow for testing of different payloads within the same model aircraft exemption because innovative payload also need to be created and flown. If they are Authorized UAS Manufacturers.</p>
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15. 'Certificate of Manufacture' for UAS.	<p>(6) The testing laboratory or organisation shall submit the test report and recommendations to the Director-General; based on which the Director-General may issue a <u>Certificate of Manufacture</u> 'for the UAS: Provided that this rule shall not apply in case of Unmanned Aircraft in Large class weighing more than 300 kilograms, and for such UAS, the provisions related to airworthiness as provided under Part VI of the Aircraft Rules, 1937 shall be applicable.</p>	<p>The testing laboratory or organisation shall submit the test report and recommendations to the Director-General; based on which the Director-General may issue a <u>Certificate of Manufacture</u> 'for the UAS: Provided that this rule shall not apply in case of Unmanned Aircraft in Large class weighing more than 25 kilogram or wing span 1 meter and above, and for such UAS, the provisions related to airworthiness as provided under Part VI of the Aircraft Rules, 1937 shall be applicable.</p>	<p>The Requirements for Obtaining Certificate of Manufacturing as mentioned in schedule II only refer to the equipment on board the UAS and does not mention about the testing Laboratories capability to test the QA/QC standards of the UAS specifically with wing span more than 1 meters. As of now there are no QA/QC standards and laboratories equipped to carry out such testing.</p>
17. General.	<p>No Unmanned Aircraft shall be owned or operated in India unless it has been allotted a Unique Identification Number (UIN).</p>	<p>No Civil Unmanned Aircraft shall be owned or operated in India unless it has been allotted a Unique Identification Number (UIN).</p>	
20. Trading of UAS in India.	<p>No person other than an <u>Authorised UAS Trader</u> shall engage in buying or selling or leasing of a UAS or a part or a component thereof in India.</p>	<p>No person other than an "Authorised UAS Trader", "Authorised UAS Manufacturer" or "Authorised UAS Importer" shall engage in buying or selling or leasing of a UAS in India.</p>	<p>This is contradiction to Rule 25,26 which allows Authorised Manufacturers/Importers to sell/lease UAS.</p> <p>Further, Mandating Component sales be included in the ambit of UAS selling may be unrealistic in the long term to enforce</p>

21. UAS Owner in India.	No person other than an <u>Authorized UAS Owner</u> shall own a UAS or part or component thereof in India.	Suggested to remove the concept of Owner to reduce the number of entities in the ecosystem and allow Operator to buy/own UAS.	Concept of UAS Owner seems unnecessary and redundant. The primary distinction between Owner and Operator is that the Operator cannot own/buy UAS.
22. Transfer of UAS.	(1) Sale, Lease or Transfer of UAS shall be permissible only from an authorised person to another authorised person in the manner and procedure as specified in Schedule IV. (2) No UAS shall be sold or leased or transferred in any other manner unless the transaction between the authorised persons has been approved by the Director-General. (3) Each transaction of transfer of UAS shall result into linkage of UIN with the UAN of the transferee.	There should be an automatic approval of application in Digital Sky portal for sale/lease/transfer of UAS, or a timely approval (within 48 hours)	Industry growth will be stunted if every transaction of UAS takes more than 48 hours for approval
27. General.	(1) UAS are permitted to fly only in permissible areas identified in the available map on the online platform.	Civil UAS are permitted to fly only in permissible areas identified in the online platform.	Govt. commitment to publish a map could delay the approval process, as clearances are required from LEAs/ Intelligence Agencies. This statement will give more flexibility to DGCA to operationalize the rules without any binding commitment to publish the map.

29. UAS Operator Permit.	<p>(4) The Central Government may exempt any Central or State Government or agency thereof from requirements of operator permit in the interest of security of India or in national interest.</p>	<p>The Central Government may exempt any Central or State Government or agency thereof or specific private entities from requirements of operator permit in the interest of security of India or in national interest.</p>	<p>Services of specific private entities are also important in the interest of security of India or in national interest.</p>
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<p>33. Training Requirements.</p>	<p>(1) The Qualified Remote Pilot shall undergo the required training as specified in Schedule VII and such training shall be imparted by an authorised training organisation or institute which is in compliance with the requirements as specified in Schedule VII.</p> <p>(4) Unless suspended, revoked or cancelled, the authorisation shall remain valid for the period specified therein, subject to a maximum period of five years in each case, and may be renewed for another five years at a time on receipt of the application for renewal</p>	<p>The Qualified Remote Pilot shall undergo the required training as specified in Schedule VII and such training shall be imparted by an authorised training organisation or institute which is in compliance with the requirements as specified in Schedule VII. In addition, for Nano Remote Pilots, an online test that shall test the Pilot's Knowledge of the CAR & other applicable rules may be deemed sufficient as per the directions of the Director General.</p> <p>(4) Unless suspended, revoked or cancelled, the authorisation shall remain valid for the period specified therein, subject to a maximum period of five years in each case, provided the Qualified Remote Pilot Maintains his Flying Currency / recurrent self-training; the same being mentioned in his personal flight log book, and the authorisation may be renewed for another five years at a time on receipt of the application for renewal</p>	<p>Most of the Nano Drone Pilots are students or hobbyists. A simple online test may be sufficient for this category of pilots.</p> <p>It is very essential that a Qualified remote pilot should maintain his flying currency as also maintain his flying skills for greater efficiency and flight safety. A mention needs to be made in the pilot's personal flight log book, wrt any change in his current status, due to medical reasons or otherwise.</p>
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<p>34. No operation area.</p>	<p>No person shall fly or assist in flying an unmanned aircraft over any of the areas specified in Schedule VIII, save, in accordance with the conditions specified by the Central Government.</p>	<p>"assist" in this context may be defined for better clarity.</p>	<p>This is too open ended.</p>
<p>35. Photography from UA in flight.</p>	<p>(2) No person shall capture, or cause or permit to be captured, from an UA in flight, any imagery of the areas specified in Schedule VIII: Provided that the Director-General from time to time, may, by order in writing direct that such imagery of any other area as specified in the order shall not be conducted by any person.</p>	<p>No person or RPAS shall capture, or cause or permit to be captured, from an UA, any imagery of the areas specified in Schedule VIII: Provided that the Director-General from time to time, may, by order in writing direct that such imagery of any other area, not specified in Schedule VIII, but as specified in the order shall not be conducted by any person or RPAS. However, the Director General on a case-to-case basis, may, allow imagery of specific areas within the areas specified in Schedule VIII, be captured.</p>	<p>The modification has been suggested to make the rule more specific and exhaustive in nature.</p>

36. Carriage of Payload.	No Unmanned Aircraft shall carry any payload, save, as specified by the Director-General.	No Unmanned Aircraft shall carry any payload that can cause the UA to exceed its the maximum take-off weight and has not been approved in writing by the Authorized Manufacturer or Importer, as the case may be, save, as specified or permitted by the Director-General.	The modification has been suggested to make the rule more specific in nature.
38. Dropping of articles.	No person shall drop or project or cause or permit to be dropped or projected from a UAS in motion anything except in a manner and procedure as specified by the Director-General.	It is requested that certain applications be treated differently owing to their non-urban or low altitude applications and also considering their extreme social value - <i>Agricultural Spraying and Medical Delivery</i> are two such applications.	While it is understood this is not allowed for applications such as Payload Delivery etc., there are extremely important applications such as Agricultural Spraying for which the Technology is not only tried, tested and field validated over the last few years but is also a very safe application owing to the fact that it is in non-habitation areas and is a very low altitude application (typically 10-15 feet and max. 50 feet AGL).

41. General safety.	<p>No person shall, act in any manner, either directly or indirectly, so as to – (a) endanger safety and security of a UAS or UAS operation; (b) cause interference with the normal functioning of any facility established for the safe and secure operation of UAS;</p>	<p>No person, except an "Authorised Counter UAS Operator" or any other agency authorised by the central government to jam frequencies shall, act in any manner, either directly or indirectly, so as to (a) endanger safety and security of a UAS or UAS operation; (b) cause interference with the normal functioning of any facility established for the safe and secure operation of UAS</p>	<p>For anti-drone operations, Drones may fall/collide to ensure safety in a greater context (either when complying with fresh NOTAMs/ restrictions or dealing with non-compliant drones). Plus, agencies authorised by the central government may choose to jam frequencies used by drones. eg. VIP convoy/Jamming at critical installations. Further, a definition for "Authorised Counter UAS Operator" may need to be defined in the definitions.</p>
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<p>63. Classification of Offences</p>	<p>(1) Notwithstanding anything contained in the Code of Criminal Procedure, 1973 (2 of 1974), the violation of sub-rule (1) of rule 12, 13, 17, 20, 21, 27, 28, 29, sub-rules (1) and (2) of rule 30, sub-rule (1) of rule 31, sub-rule (1) of rule 32, 34, 35, 36, 37, 38, 40, 52, sub-rule (6) of rule 58, 60 and 61 shall be cognizable and non-bailable offences.</p> <p>(2) No court shall take cognizance of any offence punishable under these rules without the previous sanction in writing by the Director-General.</p>	<p>(1) Notwithstanding anything contained in the Code of Criminal Procedure, 1973 (2 of 1974), the violation of sub-rule (1) of rule 12, 13, 17, 20, 21, 27, 28, 29, sub-rules (1) and (2) of rule 30, sub-rule (1) of rule 31, sub-rule (1) of rule 32, 34, 35, 36, 37, 38, 40, 52, sub-rule (6) of rule 58, 60 and 61 shall attract punishment as per schedule XII unless specified by Director General.</p>	<p>Since the sub-rules mention are from everything from assembling a drone without an authorisation, to flying without insurance, flying equipment with DAN, importing a part without Authorised import clearance (even when following prevailing DGFT norms), cognizable and non-bailable is likely to be a major concern for industry stakeholders especially at a time where the Government is focused on 'Ease of Doing Business'.</p> <p>Further, as per the sections explained in the Aircraft rules, the cognizable offence that is mentioned pertains to slaughtering of animals in the vicinity of airports (section 1(a) of penalties), which attracts birds and poses a credible risk to aircraft engines. Cases of dangerous flying of CPA also are mentioned as attracting penalties and are not mentioned as cognizable.</p> <p>In view of the same, it is recommended to keep the penalties in Schedule XII as adequate punishment and stick to prevailing law under Code of Criminal Procedure, 1973, unless specifically mentioned on a case-by-case basis by Director General.</p>
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Research Development & Innovation	[Not in original Draft]	<p>Research & Development and Innovation activities may be undertaken as per guidelines issued by the Director General from time to time in proposed areas as approved by the Director General.</p>	<p>Research, Development and innovation undertaken by industry, academic institutions, individual innovators is at the heart of Atma Nirbhar Bharat and achieving self-reliance.</p> <p>Our country needs innovators who can solve the societal problems by applying technology and creating innovative solutions. Therefore, this section is proposed as an enabling provision to allow anyone to seek approvals for undertaking R&D.</p>
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<p>Single Window Mechanism</p>	<p>[Not in original Draft]</p>	<p>FICCI recommends setting-up a single window mechanism to enable applicants to obtain clearances / approvals from ministries such as the Ministry of Home Affairs, WPC- Department of Telecommunication etc.</p> <p>In order to promote 'Ease of Doing Business': An 'application tracking' feature may be implemented to indicate the status of submitted applications and review appeals.</p> <p>FICCI further recommends MoCA/ DGCA to specify timelines for approvals of applications and review appeals.</p>	<p>Due to the unprecedented scenario created by the COVID-19 pandemic, industry cannot afford the time and cost overrun due to delay in approvals. Without such a mechanism the application process could prove to be a cumbersome process.</p>
<p>Schedule 1 (Rule 6)</p>	<p>Requirements for Obtaining Authorisation as Importer, Manufacturer, Trader, Owner or Operator - <i>Form has options for all five</i></p>	<p>Allow Organisations to check multiple boxes, so that a manufacturer may also be an Authorised Importer (for components), Operator (for demonstrations, internal flights), Trader (for doing business) & Owner (for keeping an internal fleet for said demonstrations)</p>	<p>If this is already allowed as per current provisions, then a line that explicitly gives companies/individuals the authority to do so would be greatly beneficial</p>

<p>Schedule II (Rule 11, 12 and 15) - Requirements for Obtaining Certificate of Manufacture</p>	<p>2 (xi) Barometric equipment with capability for remote sub-scale setting;</p>	<p>(xi) Barometric equipment</p>	<p>As per the ICAO Document No. SAIOACG/4 and SEACG/21-WP15 24-28 /02/2014 "Establishing A Harmonized Transition Altitude In India", Subscale setting is done at various airports around the country in manned aviation to help Manned aircraft set the correct transition altitude.</p> <p>Since Drones won't be operating at airports, and shall be deployed from Remote Pilot Stations, it is recommended to remove the need for remote sub-scale setting.</p> <p>Moreover, there is no requirement of this in UAS in general and may be mandated for specific UAS operating from airports.</p>
<p>Schedule II (Rule 11, 12 and 15) - Requirements for Obtaining Certificate of Manufacture</p>	<p>2 (xv) Two-way communication system</p>	<p>(xv) Two-way communication system</p>	<p>Need more clarity on what this system is and with whom the UA will be communicating.</p>

<p>Schedule II (Rule 11, 12 and 15) - Requirements for Obtaining Certificate of Manufacture</p>	<p>4. The equipment specified in clauses (iv), (vi), (vii), (viii), (x), (xi) and (xii) is not mandatory with respect to Nano class unmanned aircraft</p>	<p>The equipment specified in clauses (iv), (vi), (vii), (viii), (x), and (xii) is not mandatory with respect to Nano class unmanned aircraft.</p> <p>However, in certain use cases where Nano RPAS is of extremely societal value in sectors such as education, recreation or experiment, Rule No. 57 of the Rules shall give preference to Indian entities/ start-ups.</p>	<p>Equipment (xi) is the barometric sensor, which is critical as without that Nano RPAS will not be able to operate. Accuracy of GPS altitude is not good enough to maintain altitude and the altitude at which the altitude above height recommended flying altitude. Barometric sensor is a must in this situation.</p> <p>By giving exemptions to Indian entities/ start-ups on case-by-case exemptions from this condition, will reduce the cost of Nano RPAS and make them competitive in global markets. It will immensely benefit students and hobbyists.</p>
<p>Schedule II (Rule 11, 12 and 15) - Requirements for Obtaining Certificate of Manufacture</p>	<p>Airworthiness [Not in original draft]</p>	<p>Director General may specify Airworthiness Standards, including Quality Standards for various categories of RPAS</p>	<p>The Certifying Agencies can only certify on the Standards defined by the Director General, therefore Airworthiness Standards including Quality Standards will have to be specified by the Director General from time to time.</p> <p>Airworthiness Standards are important because it has to be ensured that the UAS flying in the National Airspace have a minimum reliability built-in to ensure safe operations.</p>

<p>Schedule II (Rule 11, 12 and 15) - Requirements for Obtaining Certificate of Manufacture</p>	<p>5. Each unmanned aircraft of Small and above class shall also be equipped with an emergency recovery system to ensure protection from damage and public injury in any failure conditions.</p>	<p>Each unmanned aircraft of Small and above class may also be required to be equipped with an emergency recovery system to ensure protection from damage and public injury for specific operations and failure scenarios as required by the Director General</p>	<p>The phrase "Any failure conditions" is generic and highly ambiguous. Emergency recovery system in specific failure conditions should be identified by the Director General.</p>
<p>Schedule II (Rule 11, 12 and 15) - Requirements for Obtaining Certificate of Manufacture</p>	<p>Form UA 2- 7 (d) Fixed Wing/ Rotary Wing:</p>	<p>Fixed Wing/ Rotary Wing/Mixed</p>	<p>With the evolution of UAS technology it is possible to have mix of fixed as well as rotary wing drones.</p>
<p>Schedule II (Rule 11, 12 and 15) - Requirements for Obtaining Certificate of Manufacture</p>	<p>Form UA 2 - 7 (g) Total fuel capacity (kg)/ Battery capacity (mAh):</p>	<p>Total fuel capacity (kg)/ Maximum Battery capacity (mAh):</p>	<p>The word maximum could be added</p>
<p>Schedule II (Rule 11, 12 and 15) - Requirements for Obtaining Certificate of Manufacture</p>	<p>Form UA 2 - 7 (j) Overall dimensions (l x b x h) (attach a 3- view drawing):</p>	<p>j) Overall dimensions (l x b x h) (attach a 3D-view drawing)</p>	<p>D is missing in the Rules</p>
<p>Schedule II Section B- Requirements for Import Clearance</p>	<p>Form UA 3 - 15. Fixed Wing/ Rotary Wing</p>	<p>Fixed Wing/ Rotary Wing/Mixed</p>	<p>With the evolution of UAS technology it is possible to have mix of fixed as well as rotary wing drones.</p>

Schedule- IV (Rule 22 and 23) Requirements for Transfer or Change in Ownership of UAS	"Requirements for Transfer or Change in Ownership of UAS All the points under this header"	Case-by-case exemptions can be considered for Indian Authorised UAS Manufacturers of Nano RPAS from this clause.	Students and hobbyist mostly use Nano category RPAS. They may not be able to comply with this condition.
Schedule V (Rule 24) Process for acceptance of existing imported or manufactured UAS	3. Such owner or operator may approach an authorised UAS manufacturer to make its UAS compliant with the 'Manufacturing Requirements for UAS' as specified in Schedule II. Compliance to No Permission No Take-off (NPNT) requirement shall be mandatory for all existing imported UAS prior to their operation.	Such owner or operator may approach an authorised UAS manufacturer to make its UAS compliant with the 'Manufacturing Requirements for UAS' as specified in Schedule II. NPNT Compliance and all other applicable rules and regulations specified for that classification of UAS shall be mandatory for all existing imported UAS prior to their operation.	This clause contradicts with requirements mentioned in Schedule II (Rule 11,12 and 15), Section A – Requirements for obtaining certificate of manufacture.
Schedule V (Rule 24)- Process for acceptance of Existing imported or Manufactured UAS	Form UA 6 – 13 (d) Fixed Wing/ Rotary Wing	Fixed Wing/ Rotary Wing/ Mixed	With the evolution of UAS technology it is possible to have mix of fixed as well as rotary wing drones.
Schedule VI (Rule 29)- Procedure for Issuance or renewal of UAS Operator Permit	Form UA 7 - 11. Rotary Wing/Fixed Wing	Fixed Wing/ Rotary Wing/ Mixed	With the evolution of UAS technology it is possible to have mix of fixed as well as rotary wing drones.

<p>Schedule VII (Rules 31, 32 and 33)- Requirements for "Qualified Remote Pilot"</p>			<p>Schedule VII does not cover, Continuity training, Recertification after a gap of not flying, or the status of validity of the Pilots License after facing certain medical issues.</p>
<p>Schedule VII (Rules 31, 32 and 33)- Requirements for "Qualified Remote Pilot"</p>	<p>(a) The person shall not be less than eighteen years of age. (b) The person shall have passed class X or its equivalent examination from a recognised Board. (c) The person shall be a sound mind and medically fit. (d) The person shall be conversant with UAS rules and directions issued by Director-General. (e) The person having completed the training course from an authorised training organisation or institutes as per the requirements specified by the Director-General. (f) No person having age more than sixty-five years can be a "Qualified Remote Pilot"</p>	<p>(a) The person shall not be less than eighteen years of age. (b) The person shall have passed class X or its equivalent examination from a recognised Board. (c) The person shall be a sound mind and medically fit. (d) The person shall be conversant with UAS rules and directions issued by Director-General. (e) The person having completed the training course from an authorised training organisation or institutes as per the requirements specified by the Director-General. (f) No person having age more than sixty-five years can be a "Qualified Remote Pilot" (g) For Nano class systems, the aforesaid conditions may not apply and an online training module, to ensure the Person's familiarity with UAS Rules, may be adequate as deemed appropriate by the Director-General.</p>	<p>Since no applications/clearances are being made mandatory for Nano, it is recommended that an "Online Familiarisation Test" on Digital Sky, with the aim of familiarising the Remote Pilot with the UAS rules, be mandated. The test may be free and multiple choice, with a certificate being emailed to the candidate. It is further recommended that all stakeholders, even those not flying UAS, such as Enforcement Agencies, take this test to ensure that they understand all operational aspects of the UAS rules</p>

FICCI Drone Committee Meeting
June 20, 2020**List of attendees from whom inputs were invited and included**

1. Mr. Rajan Luthra, Chairman's Office, Head – Special Projects, Reliance Industries (**Chair, FICCI Committee on Drones**)
2. Lt. Gen. Sanjeev Madhok, Head of Defence Business, Dynamatic Technologies (**Co-Chair, FICCI Committee on Drones**)
3. Mr. Ankit Mehta, CEO, ideaForge (**Co-Chair, FICCI Committee on Drones**)
4. Mr. Neel Mehta, Director and Co-founder, Asteria Aerospace
5. Mr. Nihar Vartak, Co-founder, Asteria Aerospace
6. Sq. Ldr V S Srinivasan, Deputy General Manager - Airborne Platforms & Systems, Tata Advanced Systems Ltd
7. Mr. Vipul Singh, Co Founder & CEO at Aarav Unmanned Systems
8. Mr. Mridula Dhanuka, Director, Dhanuka Agritech
9. Mr. Varun Jain, Partner, Usnatek
10. Mr. Ramesh Ramachandran, Senior Vice President - Farming as a Service and FES - Strategy, Mahindra Rise
11. Mr. Amit Shehkar, General Manager-Field Engagement (Farm), Mahindra Rise
12. Mr. Dilip Kumar Damodaran, Joint General Manager - Airspace Planning and Design, Airports Authority of India
13. Mr. S S Gupta, Chief General Manager (Maintenance & Inspection), Indian Oil
14. Ms. Mamta Chiniya, Assistant Manager (Telecom & Instrumentation), Indian Oil
15. Mr. Anil Meghani, GM (Maintenance and Inspection), Indian Oil
16. Mr. Rajvir Rathi, Head - Agricultural Policy & Stakeholder Affairs at Bayer Crop Science
17. Ms. Gunjan Bisht, Crop Manager, BASF India
18. Mr. Rajesh Dhawan, Syngenta India Limited
19. Mr. Raju Kapoor, Director- Corporate Affairs, FMC Corporation [Member, Croplife India]
20. Mr. Joydeep Chakraborty, Head-Communications, Croplife India
21. Ms. Sangeeta Dawar, Croplife India
22. Mr. Abhinav Kumar, VP –Operations, Asteria Aerospace
23. Dr. Sanket Kulkarni, Business Analyst, Jio Platform Ltd
24. Mr. Viswanathan Balasubramaniam, Senior Manager, Reliance Industries
25. Mr. Ravi B., Sr General Manager, Dynamatic Technologies Limited
26. Mr. Amrit Mahapatra, AGM, Dynamatic Technologies
27. Mr. Raghav Mallick, Public Policy & Technology Solutions Manager, ideaForge
28. Mr. Rahul Uniyal, Sterlite Technologies
29. Mr. Smit Shah, Director – Partnerships, Drone Federation of India
30. Mr. G B Singh, Editor, Security Today

31. Mr. Karthik R, CTO, DeTect Technologies
32. Mr. Prudhvi Teja, Business Development Manager, DeTect Technologies
33. Mr. Kunal Chaudhary, Freebird Aerospace India
34. Mr. Apurva Godbole. Co-Founder and CEO, Drona Aviation
35. Mr. Piyush Rana, Aarav Unmanned
36. Mr. Pradeep Palelli, Founder, Thanos Technologies
37. Mr. Prem Kumar Vishlawath, Founder & Chief Innovator, Marut Drones
38. Mr. Nagendran kandasamy, Founder & Director, Throttle Aerospace Systems
39. Mr. Tanooj, Detect Technologies
40. Mr. Sunny Sharma, CEO, IIO Technologies
41. Mr Kushagra Agrawal, Ansari Precision Instruments/ Roter Group of Companies
42. Mr. Arjun Aggarwal, Managing Director, Aerodyne India Ventures
43. Mr. S. Jolly, COO, Aerodyne India Ventures
44. Mr. Rahul Jain, Managing Director, MatrixGeo
45. Mr. Pritam Ashutosh, Founder and Director, EDALL SYSTEMS
46. Dr. Ruchi Saxena, Founder, Caerobotics
47. Mr. Vaibhav Gupta, Partner, Usnatek
48. Mr. Sumeet Gupta, Assistant Secretary General, FICCI
49. Mr. Ankit Gupta, Deputy Director, FICCI
50. Mr. Gaurav Gaur, Deputy Director, FICCI
51. Ms. Sonali Hansda, Assistant Director, FICCI

Annexure – II

Primary Contributors

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3. Mr. Ankit Mehta, CEO, ideaForge **(Co-Chair, FICCI Committee on Drones)**
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5. Mr. Ankit Gupta, Deputy Director–Drones & Homeland Security, FICCI
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A non-government, not-for-profit organisation, FICCI is the voice of India's business and industry. From influencing policy to encouraging debate, engaging with policy makers and civil society, FICCI articulates the views and concerns of industry. It serves its members from the Indian private and public corporate sectors and multinational companies, drawing its strength from diverse regional chambers of commerce and industry across states, reaching out to over 2,50,000 companies.

FICCI provides a platform for networking and consensus building within and across sectors and is the first port of call for Indian industry, policy makers and the international business community.