DRONE FEDERATION OF INDIA'S
COMMENTS ON DRAFT OF
THE UNMANNED AIRCRAFT SYSTEM RULES, 2020

DRONE FEDERATION OF INDIA

Date: 1st July 2020

To:
Director - General of Civil Aviation

Kind Attention:
Shri Hillol Biswas

Subject: Drone Federation of India's comments on draft of The Unmanned Aircraft System Rules, 2020

Respected Sir,

The Drone Federation of India (DFI) is a non-government, not-for-profit, industry-led body that promotes and strives towards building a safer and scalable unmanned aviation industry in India. DFI engages with Thought Leaders, Industry Experts, Visionaries and Policymakers to share their expertise and build a sustainable Drone Industry in India. The Drone Federation of India has Drone Manufacturing Companies, Services Providers, Software Companies, Training Companies, Hobbyists and Enthusiasts as its members.

Adoption of UAS is increasing in India and worldwide, it is imperative that the future of the industry is secure while ensuring the overall safety measures required for carrying out UAS operations. The Ministry of Civil Aviation would face situations where regulations are to be devised to ensure safety and security while fostering growth and innovation in the drone industry. Striking this balance is supremely beneficial for the growth of the industry and will enable an increase in the adoption of UAS technologies.

We welcome the move by the Ministry of Civil Aviation to notify the draft of the Unmanned Aircraft System Rules, 2020 and would like to provide our comments and suggestions via this submission. Please note that we have received comments from more than 100 contributing companies and our summarising the same for your perusal.

As these rules define the course of the Indian drone industry, it is suggested that after amending the observations and before finalising the rules, another round of stakeholder consultations should take place.

Regards,

Sign Redacted

Stamp Redacted

Smit Shah,
Drone Federation of India

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SECTION A - GENERAL COMMENTS

1. Regarding regulation on components of UAS

1.1 Proposed Rule:
These draft rules propose to regulate “UAS or any part or a component thereof under these rules” for various activities like importing, manufacturing, trading, ownership, etc.

1.2 Background and Reasoning:
It is important to understand that a lot of the components used in UAS are classified as multi-use components (eg. motors, Electronic Speed Controllers(ESCs), Microcontrollers, cameras, sensors, batteries, etc). All such components can be used in more than 1000 simple or complex use cases(eg. Electronics / embedded systems / robotics / industrial automation, motor vehicles, etc) across multiple industries. Importing, manufacturing, trading, ownership of all such components is not restricted for all other use cases and industries. Any importer, manufacturer, trader, owner maybe consuming/using such components for more than one use case/industry.

1.3 Recommendation:
Such proposal on regulating any part or component thereof under these rules is unfair and detrimental to the progress of the drone industry.

Also, these restrictions do not stop any UAS component from being imported, manufactured, traded or owned in India as such components can still be imported, manufactured, traded or owned easily by declaring them as components for other use cases/industry. Hence, it should be concluded that such proposed rules for specially restricting or authorising import, trade, manufacture or ownership of UAS related components do not address or solve any security challenges.

Lastly, critical components which may pose security and other challenges like Radio Equipment are already restricted and licensed by the Department of Telecommunication.

1.4 Proposed Change in the Rule:
All rules and sub-rules restricting or authorising the import, trade, manufacture, ownership, etc of “any part or component” of UAS should be removed or amended to remove such restrictions.

2. Regarding Single Window Clearance

2.1 Proposed Rule:
None

2.2 Background and Reasoning:
UAS related activities (importing, manufacturing, trading, ownership, etc) and UAS Operations might require additional clearances or approvals from other agencies, departments, ministries under the Government of India.

2.3 Recommendation:
It is recommended that active efforts should be made to bring all such clearances and approvals through the DigitalSky Platform by integrating other clearance and approval systems.

2.4 Proposed Addition in the Rule:
Single Window Clearance - The DGCA’s online platform shall act as the single window clearance platform for all UAS related activities and operations in India.

3. Regarding Model RPAS

3.1 Proposed Rule:
Under Part I - Preliminary -- 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;

Under Part IX - General -- 53) (2) Any Model RPAS may operate only in accordance with the conditions and in the defined areas as specified by the Director-General.

3.2 Background and Reasoning:
Hobby, recreational and educational aeromodelling related flying of RC Unmanned Aircrafts have been in existence in India for more than 100 years now with a proven track record of no major accidents or mishaps. These unmanned aircrafts have GoPro or other similar action cameras mounted on the unmanned aircraft for capturing recreational videos; Hence under model RPAS definition, there is a requirement to allow payloads like cameras.

To keep encouraging aeromodelling and recreational flying activity, model RPAS should only consider RPAS used for educational or recreational purposes only. Such recreational activities happen only at RC Clubs that have been established in India over time. Hence model RPAS should be allowed to fly in Model RPAS flying areas as identified or defined later through Civil Aviation Requirements and Circulars and such areas should be amended from time to time.

Experimental UAS should be defined separately and not under Model RPAS as it may be sophisticated in nature.

3.3 Recommendation:
Model RPAS should be allowed with payloads; Model RPAS Flying Areas should be recognised.

Experimental UAS should be separately recognised from Model RPAS.

3.4 Proposed Change in the Rule:
Definitions added in the Clause Specific suggestions in the later sections of this document.

4. Regarding Nano RPAS

4.1 Proposed Rule:
These draft rules propose to regulate “Nano UA” as per the following important clauses:

Definitions:
- UAS with maximum all-up-weight(including payload) less than or equal to 250 gram;
- Nano class UAS 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;

Authorisation: A person importing, manufacturing, trading, owning, operating Nano UAS has to be authorised.

Equipment Requirements: Nano UAS should be equipped with
- Global Navigation Satellite System (GNSS) receiver(s),
- Autonomous Flight Termination System or Return to Home (RTH) option;
- Geo-fencing capability;
- Flight controller;
- Reliable Command and Control Link;
- Manufacturer Serial Number;
- Fire resistant identification plate for engraving the UIN; and
- Two-way communication system

Certificate of Manufacture: Nano UAS requires a Certificate of Manufacture.

4.2 Background and Reasoning:
A RC Helicopter, Plane, Educational RPAS kit can be bought for INR 250 - INR 2000 in the market. Most of these RPAS fall under the Nano category. These devices have been operating in the country for more than 20 years now and there have been no instances of their collisions with a manned aircraft in India. Initial market analysis suggests that there are at least 20 crore such devices in the country.

Also, Nano RPAS do not have any localisation system (GNSS receivers etc.) integrated in them. Any mode of calculation of speed, distance from the remote pilot, height (GNSS or otherwise) is not feasible either economically or technically.

This makes it impossible for them to evaluate their own speed. In absence of the system knowing its own speed, it is not possible for such a drone to implement any control loop algorithm to limit the speed. This may be considered to be analogous to limiting the speed of a car which does not have a speed sensor or a speedometer.

Any attempt at including factors other than weight in the definition of nano drones will shoot up the cost of R&D for products that sell for very low cost. This makes the products uneconomical for honest participants and the compliance unenforceable for the authorities. Having weight as the single measurable threshold is a straightforward way to implement compliance.

Further, the draft rules classify all UAS based on maximum all-up-weight and hence this should be uniform for all UAS and Nano UAS should not have special performance parameters based conditions. It is inappropriate to regulate UAS based on performance because there is no data or reports available stating the advantages of the same based on the Indian UAS industry.

4.3 Final Recommendations:
Because of the sheer number of approximately 20 Crore Nano RPAS as toys and recreational items, educational kits, etc in India, it is recommended that import, manufacturer, trade, ownership of Nano RPAS should not be under any authorisation.

Most of these toys and educational kits do not have equipment or features like GNSS, Flight Termination or Return to Home, Geo-fencing Capabilities, etc, it is recommended that such equipment requirements should not be mandatory for Nano RPAS and Certificate of Manufacture should not be mandatory of a manufacturer or importer of Nano RPAS.

Based on the equipment and other reasoning above, it is inappropriate to additionally classify/promote Nano UAS based on performance requirements of maximum speed in level flight and maximum attainable height. Rules related to Nano RPAS should be retained from CAR D3X Part I.

4.4 Proposed add the following clause in the Rule:
Rules applicable to Nano RPAS -- (1) The Rules contained in Parts III, IV, V, VI (except rules 34 to 41), VII, VIII, IX (except rules 50,55, 59 to 62 and 64) shall not be applicable to the Nano RPAS. (2) Director-General may specify further manner and procedure to operate Nano RPAS.

5. Regarding focus on Research and Development

These draft rules do not explicitly recognise Research, Development and Testing of UAS related activities. Hence, a separate set of clauses are proposed at the end as Part X: Research, Development and Testing of UAS.

6. Recommended General Exemptions

These draft rules mention a clause for granting general exemptions. Under this provision we recommend that a fast track method should be created to approve exemption applications on an urgent basis for usage of drones for emergency services, humanitarian applications and disaster related applications.

7. Regarding timelines for all approvals

It is recommended that the Director-General may create and notify strict timelines for all UAS related activities and authorisations. This will ensure time-bound approvals and help the UAS industry stakeholders plan business activities efficiently.

8. Regarding interim approvals till rules are operational

It is observed that there are a few new concepts like authorisation of various stakeholders through the DigitalSky Platform. The Ministry should note that this will create changes in the current DigitalSky Platform architecture and may lead to the platform being further unavailable after these rules are published. In such a case, provisions should be created to grant interim permissions by alternate - paper based methods or blanket general exemptions for continuity of UAS Operations.

9. Dedicated UAS Cell

We collectively believe that UAS operations require dedicated manpower to inorder to grow and foster the unmanned aviation ecosystem in India. Hence, it is recommended to form a Dedicated UAS Cell with dedicated UAS personnel for managing the work.

SECTION B - SPECIFIC COMMENTS

PART I: PRELIMINARY

Section	**1. Short title and extent**
Existing Clause	(1) These rules may be called the Unmanned Aircraft System (UAS) Rules, 2020.
Proposed Change(s)	(1) These rules may be called the Civil Unmanned Aircraft System (Civil UAS) Rules, 2020.
Reason for Proposed Change(s)	The title does not specify if these rules are only meant for civil UAS. There is a need to bring clarity by adding "Civil" in the title as there are a lot of UAS that are built for Defense use as well.

Section	**2. Definitions and Interpretation**
Existing Clause	3) “Authorised 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
Proposed Change(s)	3) “Authorised UAS Importer” means a person who is authorised to import a UAS, either as a whole UAS or as a Knocked Down Kit (Semi Knocked Down Kit or Complete Knocked Down Kit) which may be used directly to assemble a UAS from a place outside India under these rules.
Reason for Proposed Change(s)	A lot of the components used in UAS are classified as multi-use components (eg. motors, ESCs, Microcontrollers, cameras, sensors, batteries). An importer may be importing the same battery for use in UAS as well as multiple other applications. It is not possible to authorise such a large number of importers dealing with such components with no provision of any checks and balances. Hence, it is recommended to remove the proposed restriction on components altogether.

Section	**2. Definitions and Interpretation**
Existing Clause	4) “Authorised UAS Manufacturer” means a person who is authorised to manufacture UAS or any part or a component thereof under these rules
Proposed Change(s)	4) “Authorised UAS Manufacturer” means a person who is authorised to manufacture a UAS, either as a whole UAS or as a Knocked Down Kit (Semi Knocked Down Kit or Complete Knocked Down Kit) which may be used directly to assemble a UAS thereof under these rules.
Reason for Proposed Change(s)	A lot of the components used in UAS are classified as multi-use components (eg. motors, ESCs, Microcontrollers, cameras, sensors, batteries). A manufacturer may be manufacturing the same battery for use in UAS as well as multiple other applications. It is not possible to authorise such a large number of importers dealing with such components with no provision of any checks and balances.

	Hence, it is recommended to remove the proposed restriction on components altogether.

Section	**2. Definitions and Interpretation**
Existing Clause	7) “Authorised UAS Trader” means a person who is authorised to trade (buy or sell or lease) a UAS or a part or a component thereof under these rules;
Proposed Change(s)	7) “Authorised UAS Trader” means a person who is authorised to trade (buy or sell or lease) a UAS, either as a whole UAS or as a Knocked Down Kit (Semi Knocked Down Kit or Complete Knocked Down Kit) which may be used directly to assemble a UAS thereof under these rules;
Reason for Proposed Change(s)	A lot of the components used in UAS are classified as multi-use components (eg. motors, ESCs, Microcontrollers, cameras, sensors, batteries). A trader may be trading the same battery for use in UAS as well as multiple other applications. It is not possible to authorise such a large number of traders dealing with such components with no provision of any checks and balances. Hence, it is recommended to remove the proposed restrictions on components altogether.

Section	**2. Definitions and Interpretation**
Existing Clause	20) “Geo-fencing” means a feature in a software programme that uses the global positioning system or radio frequency identification to define geographical boundaries;
Proposed Change(s)	20) “Geo-fencing” means containing/restricting the movement of a UAS within a software defined virtual perimeter for a real-world geographic location for a location aware UAS using a location aware technology such as global positioning system or radio frequency identification.
Reason for Proposed Change(s)	Original definition does not define the functionality of Geo-fencing.

Section	**2. Definitions and Interpretation**
Existing Clause	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;
Proposed Change(s)	24) “Model Remotely Piloted Aircraft System” means a Remotely Piloted Aircraft with or without payload used for educational or recreational purposes only and flown within visual line of sight of the person operating the Remotely Piloted Aircraft System;
Reason for Proposed Change(s)	Model RPAS should only consider RPAS used for educational or recreational purposes. Experimental UAS may be sophisticated in nature and hence should not be considered under the same category of Model RPAS. Also, Educational /

	Recreational RPAS have some kind of payload for the majority of the time, hence it would be incorrect to define Model RPAS without payload. Example: 1) All RC Aircrafts have GoPro or other similar cameras mounted on them for capturing recreational videos; 2) Most of the toys have small cameras for recreational purposes.

Section	**2. Definitions and Interpretation**
Existing Clause	**Proposed Definitions:**
Proposed Change(s)	The following definitions are recommended to be added: <u>Drone:</u> UAS is commonly known as “Drone” <u>Knocked Down Kit:</u> “Knocked Down Kit” means a kit containing the parts needed to assemble a product, in this case a UAS. The parts are typically manufactured in one place, then transferred to another region for final assembly. <u>Semi Knocked Down Kit:</u> “Semi Knocked Down Kit” means a knocked down kit of partially assembled parts of a product, in this case a UAS. <u>Complete Knocked Down Kit:</u> “Complete Knocked Down Kit” means a knocked down kit of completely non-assembled parts of a product, in this case a UAS. <u>Airworthiness:</u> “Airworthiness” means the measure of a unmanned aircraft's suitability for safe flight. <u>Airworthiness Standards:</u> “Airworthiness standards” means technical standards and minimum safety standards established to ensure the implementation of unmanned aircraft’s airworthiness. <u>UAS Swarms:</u> “UAS Swarms” means a group of UAS flying in coordination with each other, the operation of which may be managed via a common remote pilot station <u>Logistics UAS:</u> “Logistics UAS” means unmanned aircraft system built for the specific purpose of transporting goods from one place to another place. <u>Passenger UAS:</u> “Passenger UAS” means unmanned aircraft system built for the specific purpose of transporting persons from one place to another place. <u>Experimental Unmanned Aircraft System:</u> “Experimental Unmanned Aircraft System” means an unmanned aircraft and its

	associated elements, which are operated with no pilot on board and are developed for the sole purpose of research and development; <u>Model RPAS Flying Areas:</u> “Model RPAS Flying Areas” means class of airspace or airspace of defined dimensions or enclosed space or enclosed space with defined dimensions or any other area, recognised or listed by the Director-General within which Model RPAS can be operated. <u>Testing Areas:</u> “Testing Areas” means class of airspace or airspace of defined dimensions or enclosed space or enclosed space with defined dimensions or any other area recognised or listed by the Director-General within which UAS can be operated for research and development related purposes. The Director-General may propose classification/categorisation of ‘Testing Areas’ for different UAS Testing Activities.
Reason for Proposed Change(s)	Necessary terms which are used in further recommendations are defined in this section.

PART II: CATEGORISATION/CLASSIFICATION

Section	**3. Categorisation of UAS**
Existing Clause	The UAS shall be categorized as under: (1) Remotely Piloted Aircraft System (RPAS); (2) Model Remotely Piloted Aircraft System; (3) Autonomous Unmanned Aircraft System.
Proposed Change(s)	The UAS shall be categorized as under: (1) Remotely Piloted Aircraft System (RPAS); (2) Model Remotely Piloted Aircraft System; (3) Autonomous Unmanned Aircraft System; (4) Experimental Unmanned Aircraft System
Reason for Proposed Change(s)	Proposing to add a separate category of Experimental Unmanned Aircraft System for recognising Research and Development efforts. Experimental UAS may be sophisticated in nature and hence should not be considered under the same category of Model RPAS. Experimental UAS may be developed to test new designs, new payloads, new configurations, etc and maybe tested by VLOS or BVLOS operations. Current rules do not accommodate for this and hence a new category of UAS is proposed to support innovation and the goal of becoming “Atma Nirbhar Bharat”.

Section	**4. Classification of Unmanned Aircraft.**
Existing Clause	The Unmanned Aircraft (UA) shall be classified based upon the Maximum All-Up-Weight (including payload) of the UA as under: i) Nano: Less than or equal to 250 gram; ii) Micro: Greater than 250 gram and less than or equal to 2 kilogram; iii) Small: Greater than 2 kilogram and less than or equal to 25 kilogram; iv) Medium: Greater than 25 kilogram and less than or equal to 150 kilogram; and v) Large: Greater than 150 kilogram. Explanation. — 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;
Proposed Change(s)	The Unmanned Aircraft (UA) shall be classified based upon the Maximum All-Up-Weight (including payload) of the UA as under: i) Nano: Less than or equal to 250 gram; ii) Micro: Greater than 250 gram and less than or equal to 2 kilogram; iii) Small: Greater than 2 kilogram and less than or equal to 25 kilogram; iv) Medium: Greater than 25 kilogram and less than or equal to 150 kilogram; and v) Large: Greater than 150 kilogram. ~~Explanation.~~ ~~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;~~
Reason for Proposed Change(s)	Nano RPAS should not have such performance restrictions. Detailed comments regarding this are already provided above.

PART III: AUTHORISATION OF IMPORTER, MANUFACTURER, TRADER, OWNER AND OPERATOR

Section	**8. Authorisation Number**
Existing Clause	(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.
Proposed Change(s)	1. Propose to add the following to para (1) for clarity purpose: A single authorisation number can be used to act as an Authorised UAS Importer, Authorised UAS Manufacturer, Authorised UAS Trader, Authorised UAS Owner or Authorised UAS Operator. 2. Propose to reword para (3) as follows for clarity purpose: The Director-General may further lay down conditions and procedures to obtain security clearance (if needed) 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.
Reason for Proposed Change(s)	1. It is not clear if a single Authorisation Number can be used for multiple roles right now. For eg: A manufacturer, importer, trader, owner may be the same individual or organisation. 2. For para (3) the following clarification is required: How will the security clearance happen? Will the DGCA, internally, be obtaining the clearance(as understood by the current draft rules) or will it be the responsibility of the person applying for the authorisation? 3. Requirements and procedures for security clearance(if needed) should be published in the form of Civil Aviation Requirements or Circulars and should not be defined on a case to case basis.

Section	**10. Validity.**
Existing Clause	(1) Unless suspended, revoked or cancelled, an 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: Provided that an expired authorisation may be renewed only after the applicant fulfils the eligibility conditions as specified under rule 7. (2) For renewal of validity of authorisation number, a person may make an application in the manner and procedure as specified in Schedule I.
Proposed Change(s)	Manufacturing authorization should be for a minimum of 10 years.
Reason for Proposed Change(s)	Any manufacturer when setups any plant, he must have long term security of business. Five years permission for any massive manufacturing plant is not commercially viable.

PART IV: IMPORT, MANUFACTURE AND MAINTENANCE OF UAS

Section	**11. General**
Existing Clause	No UAS or part or component thereof shall be imported or manufactured in India unless Certificate of Manufacture is obtained as specified in Schedule II.
Proposed Change(s)	No UAS, either as a whole UAS or as a Knocked Down Kit (Semi Knocked Down Kit or Complete Knocked Down Kit) which may be used directly to assemble a UAS thereof shall be imported or manufactured in India unless Certificate of Manufacture is obtained as specified in Schedule II.
Reason for Proposed Change(s)	It is recommended to remove the proposed restrictions on components altogether.

Section	**12. Import of UAS in India.**
Existing Clause	(1) No person other than an Authorised UAS Importer shall import a UAS or part or component thereof in India. (2) (a) For import of a UAS or part or component thereof, the Authorised 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.
Proposed Change(s)	(1) No person other than an Authorised UAS Importer shall import a UAS, either as a whole UAS or as a Knocked Down Kit (Semi Knocked Down Kit or Complete Knocked Down Kit) which may be used directly to assemble a UAS thereof in India. (2) (a) For import of a UAS, either as a whole UAS or as a Knocked Down Kit (Semi Knocked Down Kit or Complete Knocked Down Kit) which may be used directly to assemble a UAS, the Authorised 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.
Reason for Proposed Change(s)	(1) It is recommended to remove the proposed restrictions on components altogether. (2) (a) It is recommended to remove the proposed restrictions on components altogether. (2) Schedule II requires the mention of Serial Number and Quantity of UAS to be imported. For all compliant UAS, the import clearance should not restrict the quantity of import. A compliant UAS importer should be free to import any number of quantities in India. The importer will anyways have to apply for UIN for all such UAS. The DGCA automatically gets notified about the UAS details as per this process.

Section	**13. Manufacture of UAS in India.**
Existing Clause	No person other than an Authorised UAS Manufacturer shall manufacture a UAS or part or component thereof in India.
Proposed Change(s)	No person other than an Authorised UAS Manufacturer shall manufacture a UAS, either as a whole UAS or as a Knocked Down Kit (Semi Knocked Down Kit or Complete Knocked Down Kit) which may be used directly to assemble a UAS thereof in India.
Reason for Proposed Change(s)	It is recommended to remove the proposed restrictions on components altogether.

Section	**15. 'Certificate of Manufacture' for UAS.**
Existing Clause	… contd (4) (a) to obtain a certificate of manufacture, an Authorised UAS Manufacturer or Importer' shall make an application to the Director- General in the manner and procedure as specified in Schedule II; (b) the applicant may make a choice of the testing laboratories or organisations in the order of preference; (c) after making the application, the applicant shall be allocated a testing laboratory or an organisation by the Director-General. (5) The applicant shall produce the UAS along with design documents to the testing laboratory or organisation allocated under sub-rule (3) in order to demonstrate that the unmanned aircraft system is in compliance with the design aspects and other manufacturing requirements as specified in Schedule II, as may be applicable for each type. (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 Certificate of Manufacture' for the UAS: Provided that this rule shall not apply in case of Unmanned Aircraft in Large class weighing more than 300 kilogram, and for such UAS, the provisions related to airworthiness as provided under Part VI of the Aircraft Rules, 1937 shall be applicable.
Proposed Change(s)	... contd (4) An Authorised UAS Manufacturer or Importer may approach testing laboratories or organisations as per their choice; (5) The applicant shall produce the UAS along with design documents to the testing laboratory or organisation allocated under sub-rule (3) in order to demonstrate that the unmanned aircraft system is in compliance with the design aspects and other manufacturing requirements as specified in Schedule II, as may be applicable for each type.

	(6) The testing laboratory or organisation shall prepare the final test reports and recommendations and issue a 'Certificate of Compliance' to the manufacturer or importer. (7) (a) to obtain the certificate of manufacture, an 'Authorised UAS Manufacturer or Importer' shall make an application to the Director-General in the manner and procedure as specified in Schedule II; (b) the applicant shall submit these test reports, recommendations and the 'Certificate of Compliance' issued by the testing laboratory or organisation to the Director General; based on which the Director-General may issue a Certificate of Manufacture' for the UAS: Provided that this rule shall not apply to Nano RPAS and in case of Unmanned Aircraft in Large class weighing more than 300 kilogram; for UAS weighing more than 300 kilogram, the provisions related to airworthiness as provided under Part VI of the Aircraft Rules, 1937 shall be applicable.
Reason for Proposed Change(s)	Nano RPAS should not require a Certificate of Manufacture. The manufacturer or importer should be free to approach any testing laboratory of their choice for testing of their UAS. During such testing, the testing laboratories or organisations generally provide observations in case the UAS fails to comply. The manufacturer may approach the laboratory multiple times in such cases. Involving the DGCA, for every step in such cases increases complexity and is absolutely unnecessary.

PART V: IDENTIFICATION AND TRANSFER OF UAS

Section	**17. General**
Existing Clause	No Unmanned Aircraft shall be owned or operated in India unless it has been allotted a Unique Identification Number (UIN).
Proposed Change(s)	No Unmanned Aircraft except Nano RPAS shall be owned or operated in India unless it has been allotted a Unique Identification Number (UIN).
Reason for Proposed Change(s)	Nano RPAS should be exempted from this.

Section	**18. Compliant UA.**
Existing Clause	Each UA shall comply with the manufacturing requirements as specified in Schedule II and acquire a valid UIN. Such UA shall be termed as a compliant UA.
Proposed Change(s)	Each UA except Nano RPAS shall comply with the manufacturing requirements as specified in Schedule II and acquire a valid UIN. Such UA shall be termed as a compliant UA.
Reason for Proposed Change(s)	Nano RPAS should be exempted from this.

Section	**19. Registration of UA**
Existing Clause	(1) An Authorised UAS Importer or Manufacturer may make an application in the manner and procedure as specified in Schedule III for obtaining an UIN for an UA. (2) The Director-General on being satisfied about the manufacturing requirements of compliant UA, may grant a Unique Identification Number (UIN) to an UA. (3) Such UIN shall be affixed on the UA in an identifiable and visible manner.
Proposed Change(s)	Propose to rename section to: **19. Registration and Identification of UA** The following enabling clause should be added for Electronic Remote Identification: (4) Electronic Remote Identification: The Director General may notify manners or procedures as deemed necessary for the implementation of Electronic Remote Identification.
Reason for Proposed Change(s)	Electronic Remote Identification standards are being developed all around the world and it may become necessary to implement something similar in India. An enabling clause for the same would help achieve this in the future.

Section	**20. Trading of UAS in India.**
Existing Clause	No person other than an Authorised UAS Trader shall engage in buying or selling or leasing of a UAS or a part or a component thereof in India.
Proposed Change(s)	No person other than an 'Authorised UAS Trader' shall engage in business of buying or selling or leasing of a UAS, either as a whole UAS or as a Knocked Down Kit (Semi Knocked Down Kit or Complete Knocked Down Kit) which may be used directly to assemble a UAS thereof in India. This rule shall not be imposed on Nano RPAS.
Reason for Proposed Change(s)	It is recommended to remove the proposed restrictions on components altogether. Nano RPAS should be exempted from this.

Section	**21. UAS Owner in India.**
Existing Clause	No person other than an 'Authorised UAS Owner' shall own a UAS or part or component thereof in India.
Proposed Change(s)	No person other than an 'Authorised UAS Owner' shall own a UAS thereof in India.
Reason for Proposed Change(s)	It is recommended to remove the proposed restrictions on components altogether.

Section	**22. Transfer of UAS**
Existing Clause	… contd (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.
Proposed Change(s)	… contd (2) No UAS shall be sold or leased or transferred in any other manner unless the transaction between the authorised persons has been processed by the DigitalSky Platform.
Reason for Proposed Change(s)	It may be noted that the transfer of UAS can only happen between authorised persons through the DigitalSky Platform. Because both, the transferor and transferee are authorised, there is no requirement for the Director-General to authorise such transfer. It may happen automatically as a function of the Digital Sky Platform.

Section	**23. Change in ownership**
Existing Clause	(1) The registered owner of the UAS shall forthwith notify to the Director-General in such form and manner and procedure as specified by the Director-General in case of:

	(a) any transfer in the ownership of a registered UAS; … contd
Proposed Change(s)	Remove Point (a)
Reason for Proposed Change(s)	The Director-General is already notified for this during the transfer of ownership as per sub rule (22) of this rule. Hence, no separate notification should be required under this sub rule (23).

Section	**25. Selling of imported or manufactured UAS in India**
Existing Clause	An authorised UAS importer or authorised UAS manufacturer shall not sell a UAS to any person except to an 'Authorised UAS Trader' or an 'Authorised UAS Owner' in India.
Proposed Change(s)	An authorised UAS importer or authorised UAS manufacturer shall not sell a UAS to any person except to an 'Authorised UAS Trader' or an 'Authorised UAS Owner' in India.
Reason for Proposed Change(s)	Nano RPAS should be exempted from this.

Section	**26. Leasing of UAS in India**
Existing Clause	An Authorised UAS importer or manufacturer or trader shall not lease a UAS in India to any person except to an 'Authorised UAS Trader' or an 'Authorised UAS Owner' or an 'Authorised UAS Operator' in India.
Proposed Change(s)	Propose to add the following clause: The Director-General may specify the minimum manner and procedures to be followed for leasing of UAS.
Reason for Proposed Change(s)	It may be required to notify certain clauses like liability in case of incident for lease agreements later.

PART VI: OPERATION OF UAS

Section	**27. General**
Existing Clause	(1) UAS are permitted to fly only in permissible areas identified in the available map on the online platform. … contd (3) UAS shall be operated only by an authorised person assisted by a qualified remote pilot, wherever applicable.
Proposed Change(s)	(1) UAS are permitted to fly only in enclosed premises or in permissible areas identified in the available map on the online platform. … contd (3) UAS shall be operated by a “Authorised UAS Operator” and commanded/flown by a qualified remote pilot with UAS pilot license, wherever applicable.
Reason for Proposed Change(s)	UAS Operations for enclosed premises does not get covered anywhere in the rule. UAS should be operated only by a qualified remote pilot and not under the assistance of a qualified remote pilot.

Section	**30. Permission for each flight**
Existing Clause	… contd (3) After each flight, the Operator shall furnish a log of the flight through online platform in the manner and procedure as specified by the Director-General.
Proposed Change(s)	… contd (3) For each flight, the Operator shall furnish a log of the flight through online platform in the manner and procedure as specified by the Director-General.
Reason for Proposed Change(s)	It is extremely important to note this change. A UAS Operator may be flying in an area without network coverage. In this case NPNT functionality allows flying a UAS, but logs cannot be submitted after each flight. The Director-General may additionally, specify clause like “submission of flight log is compulsory within 7 days of the flight, etc”

PART VII: DRONE PORT

Section	**45. Grant of authorisation or license for drone port**
Existing Clause	… contd (3) If considered necessary, the 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. … contd
Proposed Change(s)	… contd Propose to reword para (3) as follows for clarity purpose: The Director-General may further lay down conditions and procedures to obtain security clearance(if needed) 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. … contd
Reason for Proposed Change(s)	1. For para (3) the following clarification is required: How will the security clearance happen? Will the DGCA, internally, be obtaining the clearance(as understood by the current draft rules) or will it be the responsibility of the person applying for the authorisation? 2. Requirements and procedures for security clearance(if needed) should be published in the form of Civil Aviation Requirements or Circulars and should not be defined on a case to case basis.

PART VIII: UNMANNED AIRCRAFT SYSTEM TRAFFIC MANAGEMENT(UTM)

Section	**47. (1) Unmanned Aircraft System Traffic Management (UTM)**
Existing Clause	… contd The Director-General may grant a license to a person for provision of UAS Traffic Management (UTM) service in the manner and procedure as specified in Schedule X. … contd
Proposed Change(s)	… contd The Director-General may grant a license to a person or organisation for provision of UAS Traffic Management (UTM) service in the manner and procedure as specified in Schedule X. … contd
Reason for Proposed Change(s)	Considering rewording the paragraph as such a UTM license may be given to an organisation in most of the cases.

PART IX: GENERAL

Section	**53. Rules applicable to Model RPAS**
Existing Clause	(1) The Rules contained in Parts III, IV, V (except rules 22 and 23), VI (except rules 34 to 41), VII, VIII, IX (except rules 50,55, 59 to 62 and 64) shall not be applicable to the model RPAS. (2) Any Model RPAS may operate only in accordance with the conditions and in the defined areas as specified by the Director-General.
Proposed Change(s)	(1) The Rules contained in Parts III, IV, V, VI (except rules 34 to 41), VII, VIII, IX (except rules 50,55, 59 to 62 and 64) shall not be applicable to the model RPAS. (2) Any Model RPAS may operate only in Model RPAS Flying Areas or in accordance with the conditions and defined areas as specified by the Director-General.
Reason for Proposed Change(s)	As per the rule, there is no need to register a Model RPAS. Also, there is no authorisation required for operating Model RPAS. Hence, Rules 22 and 23 cannot be applied to Model RPAS. Model RPAS should be free from any registration or authorisation requirements and should be allowed to fly in designated flying areas as per the manner and procedure specified by the Director-General.

Section	**New Clause: Rules applicable to Nano RPAS.**
New Clause	(1) The Rules contained in Parts III, IV, V, VI (except rules 34 to 41), VII, VIII, IX (except rules 50,55, 59 to 62 and 64) shall not be applicable to the Nano RPAS. (2) Any Nano RPAS may operate only in accordance with the conditions and in the defined areas as specified by the Director-General.
Reason for Proposed Clause(s)	As discussed in the General comments section, Nano RPAS should be free from restrictions.

Section	**New Clause: Rules applicable to UAS Swarms**
New Clause	(1) For the purpose of UAS Swarms, the Director-General may specify conditions and other qualifications of personnel involved in operation of such UAS. (2) Any UAS Swarms may operate only in accordance with the conditions and in the defined areas as specified by the Director-General.
Reason for Proposed Clause(s)	UAS Swarms are an important application and are being tested all across the world. It may be important to create an enabling provision for the same.

Section	**New Clause: Rules applicable to Logistics UAS.**
New Clause	(1) For the purpose of Logistics UAS, the Director-General may specify conditions and other qualifications of personnel involved in operation of such UAS. (2) Any Logistics UAS may operate only in accordance with the conditions and in the defined areas as specified by the Director-General.
Reason for Proposed Clause(s)	Logistics UAS are an important application and are being tested all across the world. It may be important to create an enabling provision for the same.

Section	**New Clause: Rules applicable to Passenger UAS.**
New Clause	(1) For the purpose of Passenger UAS, the Director-General may specify conditions and other qualifications of personnel involved in operation of such UAS. (2) Any Passenger UAS may operate only in accordance with the conditions and in the defined areas as specified by the Director-General.
Reason for Proposed Clause(s)	Passenger UAS are an important application and are being tested all across the world. It may be important to create an enabling provision for the same.

Section	**56. Directions by Director-General**
Existing Clause	… contd Provided that the Director General may, in the public interest and by order in writing, dispense with the requirements of inviting such objections and suggestions or reduce the period for submitting such objections and suggestions. … contd
Proposed Change(s)	… contd ~~Provided that the Director General may, in the public interest and by order in writing, dispense with the requirements of inviting such objections and suggestions or reduce the period for submitting such objections and suggestions.~~ … contd
Reason for Proposed Change(s)	Though such clauses are standard, we propose that stakeholder consultation be mandatory in each case while publishing a Civil Aviation Requirement or Circular

Section	**59. Inspection**
Existing Clause	… contd (3) The Director-General may authorise any person, subject to such conditions as may be specified by the Director-General, for the purpose of examining and testing any person or UAS or inspecting any document or facility for the purposes of sub-rule (1) and such authorisation shall specify the functions of the person so

	authorised to perform on behalf of the Director-General and the said authorisation shall be for a period as specified therein. (4) The persons so authorised under sub-rules (1) and (3) shall be issued credentials and shall perform the functions as assigned to them in the authorisation. … contd
Proposed Change(s)	… contd (3) The Director-General may authorise any person, subject to such conditions as may be specified by the Director-General, for the purpose of examining and testing any person or UAS or inspecting any document or facility for the purposes of sub-rule (1) and (2); and such authorisation shall specify the functions of the person so authorised to perform on behalf of the Director-General and the said authorisation shall be for a period as specified therein. (4) The persons so authorised under sub-rules (1), (2) and (3) shall be issued credentials and shall perform the functions as assigned to them in the authorisation. … contd
Reason for Proposed Change(s)	It is recommended that appropriate credentials and authorisation be required for each inspection as mentioned in sub-rule (2) as well.

Section	**63. Classification of Offences**
Existing Clause	(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. (2) No court shall take cognizance of any offence punishable under these rules without the previous sanction in writing by the Director-General.
Proposed Change(s)	Propose to reword the existing clauses: (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 non-cognizable and bailable offences. (2) In case the violation is found intentional, then such violation shall be a cognizable and non-bailable offence. (3) No court shall take cognizance of any offence punishable under these rules without the previous sanction in writing by the Director-General. Propose to add the following clauses:

	(4) The Director General shall, by an order, either give sanction or refuse to give sanction within thirty days of the receipt of the request on this behalf. (5) Any person wilfully and maliciously giving false information and so causing an arrest or a search to be made under these rules shall on conviction be liable.
Reason for Proposed Change(s)	The proposed “cognizable” and “non-bailable” clause for offences makes it too harsh. It makes no differentiation between intentional or unintentional non-compliance. There is no mention of acceptance or rejection of sanction by the competent authority. Similar clauses are mentioned in all other Acts under the Government of India.

Schedule I (Rule 6)

Requirements for Obtaining Authorisation as Importer, Manufacturer, Trader, Owner or Operator

Section	**Clauses in Schedule**
Existing Clause	… contd 7) The Director-General upon his satisfaction may issue the new authorisation or renew the validity of Authorisation Number … contd
Proposed Change(s)	… contd 7) The Director-General may issue the new authorisation or renew the validity of Authorisation Number as per the manner and procedure specified. … contd
Reason for Proposed Change(s)	Rewording this clause assigns accountability to create a time-bound Standard Operating Procedure for such activity.

Section	**Form in Schedule: Part B For a Company or Body Corporate**
Existing Clause	… contd 18. Security clearance from the Ministry of Home Affairs (MHA), Government of India. (for UAS importers/ traders/ manufacturers having their principal place of business in a country other than India) … contd
Proposed Change(s)	… contd 18. Security clearance(if required) from Ministry of Home Affairs (MHA), Government of India. (for UAS importers/ traders/ manufacturers having their principal place of business in a country other than India) … contd
Reason for Proposed Change(s)	Adding the words “(if required)” help achieve more clarity.

Schedule II (Rule 11, 12, and 15)

Section A
Requirements for Obtaining Certificate of Manufacture

Section	**Clauses in Schedule**
Existing Clause	… contd 2. To obtain certificate of manufacture, the unmanned aircraft system shall be equipped with — (i) Global Navigation Satellite System (GNSS) receiver(s) for horizontal and vertical position fixing; (ii) Autonomous Flight Termination System or Return To Home (RTH) option; (iii) Geo-fencing capability; (iv) Flashing anti-collision strobe lights; (v) Flight controller; (vi) flight data logging capability; (vii) No Permission – No Takeoff (NPNT)‘ compliant; (viii) SSR transponder (Mode ‘C‘ or ‘S‘) or ADS-B OUT equipment (if intended to operate beyond 400 feet/120 m AGL); (ix) Reliable Command and Control Link; (x) Real-time tracking system; (xi) Barometric equipment with capability for remote sub-scale setting; (xii) Detect and Avoid capability; 3. The NPNT Hardware and Firmware shall be tamper proof. 4. The equipment specified in clauses (iv), (vi), (vii), (viii), (x), (xi) and (xii) is not mandatory with respect to Nano class unmanned aircraft 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. … contd 7. In addition to above, each unmanned aircraft shall comply with other technical requirements as may be specified by the Director-General for grant of Certificate of Manufacture. … contd
Proposed Change(s)	… contd 2. To obtain certificate of manufacture, the unmanned aircraft system shall be equipped with — (i) Global Navigation Satellite System (GNSS) receiver(s) for horizontal and vertical position fixing; (ii) Autonomous Flight Termination System or Return To Home (RTH) option; (iii) Geo-fencing capability; (iv) Flashing anti-collision strobe lights; (v) Flight controller; (vi) flight data logging capability;

	(vii) No Permission – No Takeoff (NPNT)‘ compliant; ~~(viii) SSR transponder (Mode ‘C‘ or ‘S‘) or ADS-B OUT equipment (if intended to operate beyond 400 feet/120 m AGL);~~ (ix) Reliable Command and Control Link; ~~(x) Real-time tracking system;~~ (xi) Barometric equipment with capability for remote subscale setting; ~~(xii) Detect and Avoid capability;~~ 3. The NPNT Hardware and Firmware shall be tamper proof. 4. The equipment specified in clauses (i), (ii), (iii), (iv), (vi), (vii), (viii), (x), (xi) and (xii) is not mandatory with respect to Nano RPAS. ~~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.~~ … contd 7. In addition to above, each unmanned aircraft shall comply with Equipment Requirements, Airworthiness Standards, Quality Standards and other technical requirements as may be specified by the Director-General from time to time for grant of Certificate of Manufacture. … contd
Reason for Proposed Change(s)	For para (2): clauses (viii), (x), (xii) define technology capabilities which are rapidly evolving. International aviation and standards making bodies like ICAO are still exploring the requirements and regulations of such technologies for unmanned aircraft systems. Also, they have strongly recommended against the use of SSR transponder and ADS-B OUT. For real time tracking systems, such system standards are still being developed all across the world. Hence, these components should not be mentioned in the rule. They can be identified and mentioned in Civil Aviation Requirements as per para 7) of this schedule. For para (4): As discussed earlier, Nano drones should be exempt from such equipment requirements. For para (5): Emergency Recovery Systems are also technology capabilities which are rapidly evolving. International aviation and standards making bodies are still exploring the requirements and regulations of such technologies for unmanned aircraft systems. Hence, these components should not be mentioned in the rule. They can be identified and mentioned in Civil Aviation Requirements as per para 7) of this schedule. It may also be considered that equipment specifications be left to Civil Aviation Requirements.

Section	**Form in Schedule: Form UA-2 Application for Certificate of Manufacture**
Existing Clause	… contd 7. d) Fixed Wing / Rotary Wing … contd

Proposed Change(s)	… contd ~~7. d) Fixed Wing / Rotary Wing~~ … contd
Reason for Proposed Change(s)	Classification of Fixed Wing / Rotary Wing does not include Hybrid VTOL type of UAS. This should be amended or further defined in the CAR.

Schedule II (Rule 11, 12, and 15)

Section B
Requirements for Import Clearance

Section	**Form in Schedule: Form UA-3 Application for Import Clearance of UAS**
Existing Clause	… contd 8. Quantity of UAS … contd 13. Serial Number … contd 15. Fixed Wing / Rotary Wing …. contd
Proposed Change(s)	… contd ~~8. Quantity of UAS~~ … contd ~~13. Serial Number~~ … contd ~~15. Fixed Wing / Rotary Wing~~ …. contd
Reason for Proposed Change(s)	Import Clearance and Import License for Compliant UAS should be a one time activity until the validity of the license and hence should not require quantity of UAS and Serial Number. Classification of Fixed Wing / Rotary Wing does not include Hybrid VTOL type of UAS. This should be amended or further defined in the CAR.

Schedule IV (Rule 22 and 23)

Requirements for Transfer or Change in Ownership of UAS

Section	**Clauses in Schedule**
Existing Clause	… contd 3. The Director-General upon his satisfaction may approve the transfer of UAS and take on record about change in ownership of UAS. ... contd
Proposed Change(s)	… contd 3. The Digital Sky Platform will approve the transfer of UAS automatically and take on record about change in ownership of UAS. ... contd
Reason for Proposed Change(s)	It may be noted that the transfer of UAS can only happen between authorised persons through the DigitalSky Platform. Because both, the transferor and transferee are authorised, there is no requirement for the Director-General to authorise such transfer. It may happen automatically as a function of the Digital Sky Platform.

Schedule V (Rule 24)

Process for acceptance of existing imported or manufactured UAS

Section	Clauses in Schedule
Existing Clause	… contd
Proposed Change(s)	… contd
Reason for Proposed Change(s)	It may be noted that manufacturers may not be able to make existing UAS compliant to requirements under Schedule II since a lot of manufacturers do not have a presence in India and hence cannot provide support for such conversion. Therefore, it may be noted that such UAS can be considered under a grandfather clause and be provided certain exemptions from the requirements defined in Schedule II. Under this clause their operations can be limited under limited operating conditions. <u>Grandfather Clause</u> A grandfather clause is a provision in which an old rule continues to apply to some existing situations while a new rule will apply to all future cases. Those exempt from the new rule are said to have grandfather rights or acquired rights, or to have been grandfathered in.

Section	**Form in Schedule: Form UA-6** **Application for acceptance of existing imported or manufactured UAS**
Existing Clause	…. contd Details of Unmanned Aircraft System: ... d) Fixed Wing / Rotary Wing …. contd
Proposed Change(s)	…. contd Details of Unmanned Aircraft System: ... ~~d) Fixed Wing / Rotary Wing~~ …. contd
Reason for Proposed Change(s)	Classification of Fixed Wing / Rotary Wing does not include Hybrid VTOL type of UAS. This should be amended or further defined in the CAR.

Schedule VI (Rule 29)

Procedure for Issuance or renewal of UAS Operator Permit (UAOP)

Section	**Clauses in Schedule**
Existing Clause	… contd iv. The UAS operator permit holder shall comply with the aviation security regulations issued by Bureau of Civil Aviation Security. … contd
Proposed Change(s)	… contd ~~iv. The UAS operator permit holder shall comply with the aviation security regulations issued by Bureau of Civil Aviation Security.~~ … contd
Reason for Proposed Change(s)	Currently, UAOP issuance is in abeyance because the Bureau of Civil Aviation Security has not released the Aviation Security Regulations since almost two years. This requirement may later be specified in the Civil Aviation Requirements as per the readiness of such regulations.

Section	**Form in Schedule: Form UA-7 Application for Issue or Renewal of UAS Operator Permit (UAOP)**
Existing Clause	… contd Part-B: Details of UAS …. 11. RotaryWing / FixedWing … contd Part-C: Details of Qualified Remote Pilot / UAS Pilot License … contd
Proposed Change(s)	~~11. RotaryWing / FixedWing~~
Reason for Proposed Change(s)	Classification of Fixed Wing / Rotary Wing does not include Hybrid VTOL type of UAS. This should be amended or further defined in the CAR. Clarification required: Is there a requirement to list one qualified remote pilot or all qualified remote pilots of the organisation in the UAOP? It is important to note that the Remote Pilots of an organisation are employees and contractors which may keep changing as a normal process in the company. In such cases, one of the following provisions should be made:

	a) identify only one qualified remote pilot as an accountable manager for the UAOP or; b) maintain an easy procedure to update the name of qualified remote pilots associated with the UAOP.

Schedule VII (Rules 31, 32 and 33)

Section B
Requirements for Remote Pilot's License

Section	**Clause in Schedule**
Existing Clause	… contd
Proposed Change(s)	… contd 9. The Director General may recognise qualified remote pilots with other international UAS Pilot Licenses and may specify the manner and procedure for such qualified remote pilots to operate UAS in India from time to time.
Reason for Proposed Change(s)	It is important to recognise International remote pilot licenses

Schedule IX (Rules 43, 44 and 45)

Requirements for Authorisation or License of Drone port

Section	**Clause in Schedule**
Existing Clause	… contd
Proposed Change(s)	… contd 5. The Director General may specify additional requirements from time to time.
Reason for Proposed Change(s)	There may be a need for providing additional requirements.

Schedule X (Rules 47, 48 and 49)

Section A
Requirements for Unmanned Aircraft System Traffic Management (UTM) Service Provider

Section	**Clause in Schedule**
Existing Clause	… contd 8. The operational requirements shall include, but not limited to, the following: … contd
Proposed Change(s)	… contd 8. The operational requirements shall be as specified by the Director-General from time to time.
Reason for Proposed Change(s)	As the UTM Committee is still working on the need, requirements and the details of such standards. The detailed requirements should be omitted right now.

Schedule XI (Rules 51)

Section	**1. Fees for various services.**
Existing Clause	(a) (i) The fee for authorisation of: … contd
Proposed Change(s)	Propose to add the following: In case a person or organisation applies for more than one category of authorisation then such person or organisation may pay the highest fee as applicable. For eg: If a person or organisation applies to be an authorised manufacturer and an authorised operator with a fleet of 10 or more UAS then the fees applicable should be rupees ten thousand only.
Reason for Proposed Change(s)	A lot of person(s) or organisation(s) may fall into more than one category. For eg: An importer or manufacturer can also be an operator. In such cases, it would be inappropriate to charge the person or organisation multiple times.

Section	**1. Fees for various services.**
Existing Clause	(c) The fee for issue of Unique Identification Number (UIN) for each unmanned aircraft shall be: … contd and (h)The fee for transfer of UAS shall be rupees five hundred only for each UAS.
Proposed Change(s)	Propose to modify clause (h) as follows: (h) (i) The fee for transfer of UAS shall be fifty percent of the fee chargeable under clause (c). (ii) This transfer fee shall not be applicable for the first time when an Authorised Manufacturer is transferring the ownership of the UAS to an authorised person.
Reason for Proposed Change(s)	(i) For a Micro UAS, fees for issuance of UIN is rupees two hundred whereas fee for transfer of ownership is proposed as five hundred rupees. (ii) A manufacturer while selling a UAS will have to first apply for UIN and pay the fees as per clause (c) and then transfer a UAS to the first owner or customer and pay fees as per clause (h). This means that there is a double charge during the first sale of the UAS. This is inappropriate and should be resolved as proposed.

Section	**1. Fees for various services.**
Existing Clause	(d) The fee for grant of permit to operate a UAS shall be: … contd

	(ii) The fee for renewal or any variation in the permit shall be fifty per cent of the fee payable under sub- clause (i) of clause (d).
Proposed Change(s)	Propose to add the following clause as per explanation below: (iii) Such fee shall not be charged in case of change of qualified remote pilots.
Reason for Proposed Change(s)	It is important to note that the Remote Pilots of an organisation are employees and contractors which may keep changing as a normal process in the company. In such cases, one of the following provisions should be made: a) identify only one qualified remote pilot as an accountable manager for the UAOP or; b) maintain an easy procedure to update the name of qualified remote pilots associated with the UAOP. In this case, clause (iii) as per the proposed change should be added.

PROPOSED

PART X : RESEARCH, DEVELOPMENT AND TESTING OF UAS ACTIVITIES

1. To encourage development of new technology, authorised persons may use testing areas for conducting research, development and testing of Experimental UAS and other UAS Activities.

2. The Director-General may notify such testing areas and other UAS operating conditions from time to time.

3. Additionally, unused airstrips, government educational institute campuses may be used for carrying out such UAS testing activities.

4. It shall be the responsibilities of the UAS operators to ensure no other manned or unmanned aircraft is flying during such operations in the intended test area.

5. The Rules contained in Parts III, IV, V (except rules 22 and 23), VI (except rules 34 to 41), VII, VIII, IX (except rules 50,55, 59 to 62 and 64) shall not be applicable for such UAS testing activities.

CONCLUDING NOTE

The Indian drone industry is positive about the UAS rules and hopes that the Ministry of Civil Aviation will consider the comments/observations provided by the collective industry.

We hope that these recommendations help in highlighting the issues of the industry, promote their solutions towards such issues and help make a safer, sustainable and scalable unmanned flying environment in the country.

The Drone Federation of India would be obliged to assist the Ministry of Civil Aviation and Directorate General of Civil Aviation and other Government agencies by means of further consultations as may be required.