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ASSEMBLY — 41ST SESSION

TECHNICAL COMMISSION

Agenda Item 31: Aviation Safety and Air Navigation Standardization

REGULATORY UPDATE ON UNMANNED AIRCRAFT SYSTEM IN INDIA

(Presented by India)

EXECUTIVE SUMMARY

This information paper presents an update on the current regulations in India for civil use of unmanned aircraft system. This paper also provide information about evolution/ transition of regulation from ‘no permission-no take-off’ concept to “no permission required” trust-based approach for rapid growth of drone ecosystem in the country.

<i>Strategic Objectives:</i>	For rapid growth in the Drone Ecosystem in India
<i>Financial implications:</i>	
<i>References:</i>	The Drone Rules, 2021 The Drone (Amendment) Rules, 2022 The National UTM Policy The Certification Scheme for UAS

1. INTRODUCTION

1.1 India initially in 2014 restricted the use of remote piloted aircraft system (RPAS) to only Government Agencies.

1.2 India's first regulations for civil use of RPAS were introduced in November 2017 in the aircraft rules, 1937. Based on which, DGCA issued Civil Aviation Requirements (CAR) Section 3, Series X, Part I on 27 August 2018 for enabling operation of civil RPAS.

1.3 As per the then extant rule, only unique identification number (registration of the drone) and unmanned aircraft operator permit (UAOP) were required and the RPAS has to be "no permission-no take-off" (NPNT) compliant based on the acceptance of self-declaration by the manufacturer. A total 22 models of 16 different manufacturer were provisionally accepted by DGCA that were NPNT compliant. Forty-one UINs were issued and permission artefacts were generated for operations in the designated green zones.

1.4 Govt. of India vide Gazette Notification dated 12 March 2021 issued "The UAS Rules, 2021" which were very exhaustive in nature with the idea of regulating all the involved entities in the drone ecosystem and to enable future endeavours in unmanned aviation in India.

1.5 On 25 August 2021, The UAS Rules, 2021 was repealed by "The Drone Rules, 2021" liberalizing drone operations in India to enable faster growth in the drone ecosystem in the country.

2. DISCUSSION

2.1 The current regulation on UAS, "**The Drone Rules, 2021**" has been built on a premise of trust, self-compliance/ self-regulation and non-intrusive monitoring. The current policy is designed to usher in an era of super-normal growth while balancing safety and security considerations.

2.2 The current Drone Rules, 2021 and its amendment dated 11 February 2022 are applicable for civil users and for drones weighing up-to 500 kg only. Above, 500 kg, manned aircraft approach to be followed in line with the aircraft rules, 1937 and thereby ICAO Standards and Recommended Practices (SARPs)

2.2.1 All type (models) of drones should have a type certificate; based on which series produced conforming to the type design can get UIN. The requirement for type certificate for model RPAS (home built drones < 25 kg) and Nano category UAS (<250 g) are exempted.

2.2.2 All drones need to have a unique identification number.

2.2.3 All remote pilots should undergo training from DGCA authorized remote pilot training organisation and obtain remote pilot certificate. The requirement for remote pilot certificate has been exempted for Nano category UAS (<250 g) and micro non-commercial (UAS MTOW <2kg used for recreational purpose).

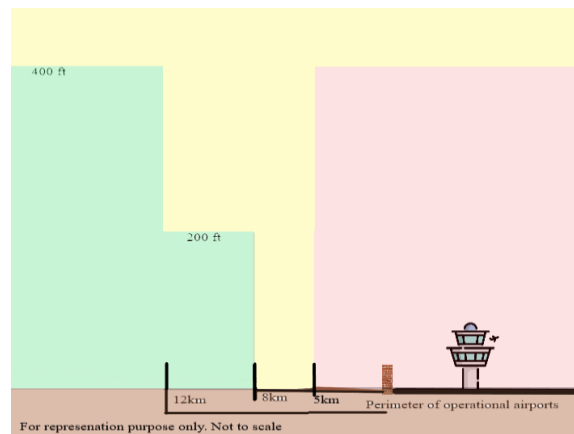
2.2.4 Indian airspace for drone operations is differentiated into three zones and they are colour coded as Green, Yellow and Red, which will define the requirement of operational permission.

2.2.4.1 **Green zone** is the airspace up to 400 feet that has not been designated as a red or yellow zone; and up to 200 feet above the area located between 8 km – 12 km from the perimeter of an operational airport. In green zones, no operator or operation permission is required for operating drones with an all-up weight up to 500 kg.

2.2.4.2 **Yellow zone** is the airspace above 400 feet in a designated green zone; above 200 feet in the area located between 8 km - 12 km from the perimeter of an operational airport and above ground in the area located between 5 km - 8 km from the perimeter of an operational airport.

2.2.4.3 **Red zone** is the ‘no-drone zone’ within which drones can be operated only after a permission from the Ministry of Civil Aviation and the red zone owner.

2.2.4.4 The visual representation of airspace zones in India near an operational airport can be seen below:



2.2.4.5 An Interactive airspace map for PAN India with green, yellow and red zones is available on the digital sky platform at <https://digitalsky.dgca.gov.in/airspace-map/#/app> for access to all users.

2.2.5 Insurance to cover third party damage has been made mandatory for all drone category except for Nano category UAS (<250g).

2.2.6 The current policy strongly encourages research, development and testing activity in the country without any regulatory hindrance.

2.2.7 Safety oversight and penal provisions are available in the current regulatory set up to take action against violators.

2.2.8 For the purpose of regional and international cooperation, provision for accepting foreign manufactured drones that is approved by their regulators (of the contracting states) have been made in the Drone Rules, 2021.

2.3 A dedicated Drone Directorate has been created in DGCA in October 2020. The officials of Drone Directorate can be reached out for drone operation related information at drone.dgca@gov.in.

2.4 Govt. of India has published a Certification Scheme for UAS on 26 January 2022 specifying the minimum criteria for certification of an UAS type and for authorizing testing entities (certification bodies) which will evaluate the design documents for issuance of type certificate by DGCA for an UAS type. The current scope of Certification Scheme is for an UAS type intending to fly in VLOS, Day & Night and below 400 ft AGL. Based on this Certification Scheme, DGCA India has issued type certificates for two UAS types for operation in India.

2.5 DGCA has issued Drone Training Circulars to provide information to applicants regarding infrastructure requirements for RPTO authorization & approval process involved and for development of training & procedure manual and syllabus for remote pilot training.

2.6 For paperless and transparent governance, Digital Sky Platform (DSP) has been developed as a user-friendly single-window system that is accessible to all stakeholders and general public. Efforts are taken to ensure minimal human interface and automated registrations and automated permissions in green zones. Currently, the platform is in Phase-2 developmental stage. All the relevant policies, regulations, circulars, guidance materials & various lists are made publically available in Digital Sky Platform at <https://digitalsky.dgca.gov.in/home>.

2.7 India has published the National UTM Policy Framework detailing, involvement of various stakeholders, UTM Architecture, Real time identification & tracking, UTM deployment plan; and the scope for conducting UTM experiments.

2.8 The envisaged near future work in unmanned aviation is to complete Phase-2 of DSP and in parallel, to conduct UTM regulatory sandbox experiments for development of Phase-3 requirements for DSP. Development of Regulation (Amendment in the Aircraft Rules, 1937) to enable Certification/ Operation of UAS weighing above 500 kg in line with ICAO Standards and Recommended Practices.

2.9 The major portion of low-level airspace of India has been made green zone (wherein no permission required) and the interactive airspace of India has been made available in the DSP. Now, it is the responsibility of the remote pilot to operate within green zone or obtain permission from ATC in case of the yellow zone or from the red zone owners in case of a red zone.

2.10 India believes that liberalizing drone usage will enable exponential growth of the drone ecosystem/ unmanned aviation sector in India.

3. CONCLUSION

3.1 The Assembly is invited to note the information contained in this paper.

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