



Ministry of Civil Aviation



Telangana Government granted exemption to conduct Beyond Visual Line of Sight (BVLOS) experimental flights of drones



Permission for conducting experimental delivery of vaccines

BVLOS trials to help create regulatory framework for drone deliveries

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The Ministry of Civil Aviation (MoCA) & Directorate General of Civil Aviation (DGCA) have granted conditional exemption to the Government of Telangana for conducting experimental Beyond Visual Line of Sight (BVLOS) drone flights for delivery of vaccines. Exemption from Unmanned Aircraft System (UAS) Rules, 2021 has been granted as part of government's constant endeavour to enhance the scope of drone usage in the country and assist the nation to fight the COVID-19 pandemic.

Last month, the Government of Telangana was granted conditional exemption for conducting experimental delivery of Covid-19 vaccines within Visual Line of Sight (VLOS) Range using drones. To accelerate the drone deployment process to formulate application-based models, the grant has been extended to Beyond Visual Line of Sight (BVLOS). The trials may commence by end of May 2021.

This exemption shall be subject to complete adherence to the conditions as stated in Annexure 1 and the directions/ exemptions issued (or to be issued in future) by the Ministry of Civil Aviation (MoCA). This exemption shall be valid for a period of one year from the date of approval of the SOP or until further orders, whichever is earlier.

Earlier this month, 20 consortia were also granted permission to conduct Beyond Visual Line of Sight (BVLOS) experimental flights of drones. BVLOS trials will help create the regulatory framework for drone deliveries and other major applications.

Annexure 1

Conditions for conducting experimental BVLOS drone flights for delivery of vaccines by Government of Telangana.

1. Before the commencement of BVLOS trial flights, each Consortium shall develop and submit the following documents to DGCA for approval:

a) Standard Operating Procedures (SOP) for BVLOS operations

f b) SOP for coordinating with Air Traffic Control(ATC) and Indian Air Force (IAF) in normal situations and contingencies such as Command and Control (C2) lost-link.

2. Security clearance of the entities involved (other than Government entities), personnel involved and the proposed airspaces, shall be obtained from the Ministry of Home Affairs (MHA).

3. The maximum permitted height for drone operations is 400 feet Above Ground Level (AGL). Energy reserve of 15% of flight time should be provisioned for.

4. Before the commencement of BVLOS trial flights, each Consortium should conduct a hazard identification and risk management (HIRM) workshop involving all stakeholders. BVLOS trials should be attempted only after all risks are mitigated to an acceptable level of safety.

5. Drone pilots shall hold a valid certificate of training and have sufficient experience in drone operations. A safe VLOS record of the drone operator and the remote pilot are mandatory requirements.

6. Before commencement of the trials, clearance from IAF and local administration shall be obtained.

7. The Government of Telangana shall post a Single Point Coordinator (SPC) at Shamshabad ATC for the entire duration of the trial flights to ensure smooth coordination with ATC.

8. A Flight Plan should be filed for each trial BVLOS flight with Shamshabad ATC; and Flight Information Centre (FIC) number and Air Defence Clearance (ADC) number shall be obtained.

9. The Government of Telangana shall initiate a Notice to Airmen (NOTAM) in coordination with General Manager (ATM), AAI, Shamshabad.

10. Drone operations shall be limited between local sunrise and local sunset. Visual Meteorological Conditions (VMC) should prevail at take-off and landing sites. Weather limitations stipulated by the drone manufacturer shall be complied with.

11. The drones used for BVLOS trial flights should satisfy the following requirements:

a) Type - Micro or Small category rotary wing drone

b) Valid Drone Acknowledgement Number (DAN).

c) Sufficient endurance for long-range operations

d) Capability to withstand adverse weather

e) Capability to transmit identity and live trajectory information

f) Carriage of a barometric sensor on-board

g) Capability to carry out geo-fencing, Return to Home (RTH) and Automatic Flight Termination.

h) Capability to conduct autonomous operations

i) Conspicuous with bright colours and flashing strobe lights

j) 360-degree Collision avoidance system to avoid terrain and obstacles

k) Detect and Avoid System (DAA) to detect and avoid manned and unmanned aircraft

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l) Display of drone pilot to provide live trajectory, manned aircraft information, DAA information and FirstPerson View (FPV), with visual/ audio alerts

12. Payload should be restricted to the proposed use-case. During the trials, drone shall not drop or discharge substances and shall not transport any hazardous material.

13. Each Consortium engaged in BVLOS trial operations should establish basic UAS Traffic Management (UTM) infrastructure for real-time management of the flights and provide situational awareness data to ATC and IAF units, as required.

14. Each Consortium shall ensure that the UAS operations are insured against any accidents leading to injury/ death of uninvolved persons or damage to property.

15. Government of India and its entities shall not be held liable for any loss or damage to any entity whatsoever, during the conduct of such trials.

16. Each Consortium shall indemnify Government of India and its entities from any loss on account of any claim by third party (including but not limited to cost of litigation) which may arise due to any act of the Consortium during the conduct of such trials.

17. This permission for BVLOS trial flights shall not be used for any commercial purpose.

18. Upon completion of the trials, the Government of Telangana shall submit a detailed Proof of Concept to MoCA and DGCA. It is expected that the level of documentation and supporting justification would be proportionate to the level of complexity of the proposed BVLOS drone operation.

[Link to Public Notice](#)

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