Digital Sky Platform: Drone Regulation 1.0

drishtiias.com/printpdf/digital-sky-platform-drone-regulation-1-0

The guidelines **(Drone Regulations 1.0)** issued by Directorate General of Civil Aviation (DGCA) for commercial use of drones or remotely operated aircraft **came into force from December 1, 2018.**

Drone Regulation 1.0

- Under this regulation, the **Digital Sky Platform** will enable online registration of pilots, devices, service providers, and NPNT (no permission, no take-off).
- The Digital Sky Platform is a unique unmanned traffic management (UTM) system which is expected to facilitate registration and licensing of drones and operators in addition to giving **instant (online) clearances to operators** for every flight.
- The airspace has been partitioned into **Red Zone (flying not permitted), Yellow Zone (controlled airspace),** and **Green Zone (automatic permission)**. The restricted locations are airports, near international border, near coast line, state secretariat complexes strategic locations, military installations.

Drone

- Drone is a layman terminology for Unmanned Aircraft (UA). There are **three subsets of Unmanned Aircraft- Remotely Piloted Aircraft, Autonomous Aircraft and Model Aircraft.**
    - Remotely Piloted Aircraft consists of remote pilot station(s), the required command and control links and any other components, as specified in the type design.
- Remotely piloted aircraft have been divided into **five categories-**
    - **Nano : Less than or equal to 250 grams.**
    - **Micro : From 250 grams to 2kg.**
    - **Small : From 2 kg to 25kg.**
    - **Medium : From 25kg to 150kg.**
    - **Large : Greater than 150kg.**

- All civilian drone operations will be restricted to **only during day time** and a **maximum of 400 feet altitude.**
- There can't be any human or animal payloads, or anything hazardous.
- It cannot in any manner cause danger to people or property and insurance will be mandatory to cover third-party damage.
- **Except nano drones** and those **owned by National Technical Research Organisation and the central agencies,** the rest would be registered and issued Unique Identification Number.

Drone Regulations 2.0

- Meanwhile, the government is already working on **drone regulations 2.0**, focussing on three thresholds:
  - BVLOS (Beyond Visual Line of Sight),
  - Delivery of payloads, and
  - Automate the air traffic management to the extent possible.
- The current policy allows one drone pilot for each drone whereas in the next set of regulations, one pilot can operate any number of drones.
- Under drone regulations 2.0, the drones will be tracked by computers through artificial intelligence.
- However,delivery of products by e-commerce players like Amazon and flying taxis like Uber Elevate are likely to be part of drone regulations 3.0.

Applications

- **Agriculture-** Gather data and automate redundant processes to maximize efficiency, to spray medicines, In a process of planting by distributing seed on the land, etc.
- **Healthcare-** Delivering quick access to drugs, blood, and medical technology in remote areas, transportation of harvested organs to recipients (through drones corridor), etc.
- **Disaster Management-** Surveillance of disaster-affected areas to assess damage, locate victims, and deliver aid.
- **Urban Planning-** Instant mapping and survey of the land which has to be developed avoiding congestion and increasing green cover. **E.g.:** Recently, the Greater Chennai Municipal Corporation (GCMC) became first Municipal Corporation to map Chennai using drones.
- **Conservation of Endangered Species-** Monitor and track the number of animals.
- **Weather Forecasting-** Drones can physically follow weather patterns as they develop to understand the environment and imminent weather trends in a better way.

- **Waste Management-** Identify where the garbage is so that it can be picked up the garbage picking vans. Drones can be used to clean ocean waste as well. UAV like Roomba by RanMarine operates at the vanguard of these initiatives and have helped to clean oceans in past.
- **Mining-** Drones in mining can be used in volumetric data capturing of ore, rock and minerals storage which is extremely difficult to measure manually.

Way Forward

- Drones have immense potential apart from few mentioned above. This new policy initiative will open up many new and exciting applications that can propel India's economy forward. It can provide strong impetus to all players in the drone ecosystem and place India among the global leaders.
- Although drone-enabled deliveries, air taxis, and many other innovations will not be widely available for years, but when available they could be as disruptive as the advent of automobiles. That gives all industry stakeholders impetus to **identify roadblocks and realistically consider potential applications now.**