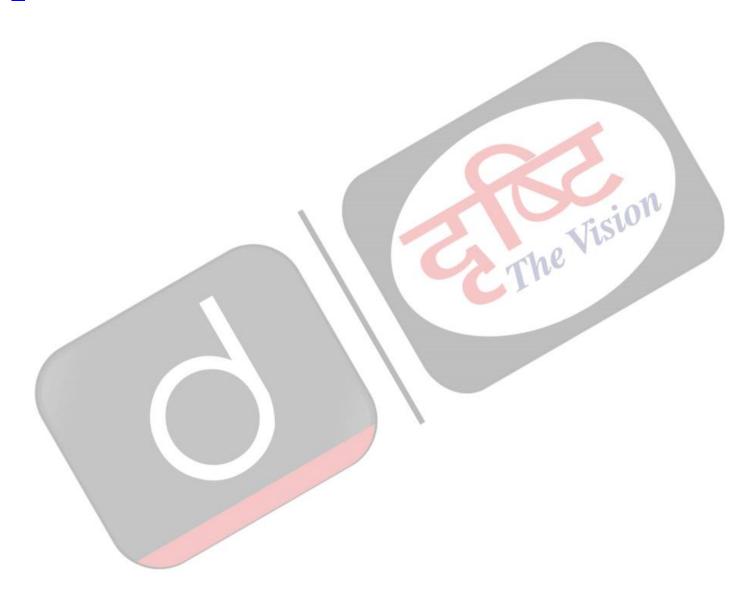


# **Drone Technology**

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# DRONE TECHNOLOGY TECHNOLOGY

Drone is a pilotless flying machine, using aerodynamics for lift, can operate autonomously or remotely, and may carry lethal or nonlethal cargo.



- Unmanned aircraft (UA)
- Control system (ground control station GCS)
- Control link (specialized datalink)
- Other related support equipment

### CLASSIFICATION,

### (as per Drone Rules, 2021)

- Nano: <250 gm
- Small: 25 kg to 150 kg
- Micro: 250 gm to 2 kg
- Large: >150 kg
- Mini: 2 kg to 25 kg

### **APPLICATIONS**

- Mapping & Surveying (asset Inspection, roof inspections)
- Agriculture (bird control, crop spraying & monitoring etc)
- Multispectral/thermal/NIR cameras, Aerial Photo/ videography and Live streaming events
- Emergency Response (search and rescue, marine rescue, fire fighting)
- Disaster (zone mapping, disaster relief etc)
- Mining
- Monitoring Poachers
- Meteorology, Aviation, Payload carrying

### **DRONES IN DEFENCE**

### **Purpose**

- Surveillance and Reconnaissance
- Search and Rescue
- Maritime Surveillance
- Combat Drones
- Offensive (heterogeneous SWARM drones)
- Counter-Terrorism Operations

### India's Counter-Drone System

- Indrajaal (India's inaugural autonomous drone-defense dome)
- Procurement of combat-capable Heron drones from Israel
- Acquisition of MQ-9B Armed Drones from the US

### RELATED REGULATIONS.

- Aircraft (Security) Rules, 2023
- Drones Rules, 2021 and Drone (Amendment) Rules, 2022

## NDIA'S INITIATIVES.

- Digital Sky Platform
- No-Permission-No-Takeoff (NPNT) framework
- PLI Scheme for Drones
- Drone Shakti Scheme

# ISSUES .

- Increased risk of armed attacks
- Data security
- Cheaper cost enables a larger population to procure drones
- Use of drones in warfare (remote warfare)
- Procurement by non-state actors can pose serious threats
- Ease in delivering mass destruction weapons



Read more...

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