

National Counter Rogue Drone guidelines

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Source: *PRS, Monthly Policy Review*

The Ministry of Civil Aviation released the National Counter Rogue Drone guidelines. The guidelines seek to highlight the potential threat from the unregulated use of drones and the measures to mitigate such threats.

Classification of Drones

Drones (for civil use) are classified by their maximum take-off weight, as follows:

- Nano (less than or equal to 250 gm)
- Micro (between 250 gm and 2 kg)
- Small (between 2 kg and 25 kg)
- Medium (between 25 kg and 150 kg), and
- Large (greater than 150 kg)

Key features of the guidelines

Rogue applications: While the illegal use of micro-drones may be limited to photography and surveillance, the small to large drones may be misused for carrying explosives with surveillance capacities. Such misuses may also include:

- Delivering weapons
- Airspace interference
- Attacks on people or property
- Conveying signals and propaganda messages, and
- Delivery systems for weapons of mass destruction

Types of rogue drones: Drones used for illicit targeting may include:

- **Autonomous drones** (controlled by on-board computers to navigate to a fixed target)
- **Drone swarms** (several drones controlled together as one unit), and
- **Stealth drones** (these can reduce their radar signature making it difficult to detect them).

Countering rogue drones: An effective system to counter such drones should be able to detect and continuously track drones with certain peculiarities such as:

- Minimal infrared signatures
- Limited radio frequency, and
- Low acoustic emissions. However, challenges to detecting such drones include difficulty in differentiating regular and rogue drones and less reaction time.

Institutional set up:

- Multiple agencies (such as Ministries of Defence, Home Affairs, Civil Aviation) are involved in protection against sub-conventional aerial threats. Therefore, a **Steering Committee** should be set up at the national level to evolve a counter rogue drone framework and advise the concerned Ministries.
- The **Committee will also regulate commercial civil drone applications** in the country. **It will include members from the:**
 - Indian Air Force
 - Ministries of Home Affairs and Civil Aviation, and
 - Intelligence agencies.
 - It will be assisted by an Implementation Committee for regular monitoring of threats and implementation of the counter rogue drone measures.