

DRONE POLICY

A step towards making India a global drone hub by 2030



“ मेरा भी यही सपना है कि
भारत में हर हाथ में स्मार्टफोन हो,
हर खेत में ड्रोन हो और
हर घर में समृद्धि हो। ”

प्रधानमन्त्री श्री नरेंद्र मोदी

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भारत ड्रोन महोत्सव, नई दिल्ली



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Introduction

Like most emerging technologies, the development of drone technology was propelled due to its potential military use. In fact, the first use of drones dates back to as early as 1849 when an attempt was made to attack the city of Venice by loading unmanned balloons with explosives. Drones have been used for the past few decades for surveillance, reconnaissance and other applications in the defence sector.

However, in the past two decades, there has been an exponential increase in the adoption of drones for commercial purposes as well. Drones are increasing the efficiency of various tasks such as fertiliser and pesticide spraying, crop health monitoring, inspection of roads, railways, dams, mining surveys, medicine delivery and more.

Drone technology can be a significant creator of employment and economic growth due to their reach, versatility, and ease of use. Countries across the world have realised the strategic and economic importance of drones and are investing in the growth of drone innovations.

Drone technology is a game changer and India has the potential to be a global drone hub given its strength in Information technology, vast base of engineers and huge domestic demand cutting across sectors.

Drone technology potential

Drones can be used for high resolution surveying and mapping for various applications such as land record creation, accurate stockpile volume calculation in mining and inspections of infrastructure like roads, railways, dams etc.

Drone-based pesticide & fertiliser spraying decreases exposure to chemicals with humans while saving both water & pesticide requirements dramatically.

Drones can be used for delivery of critical medicines and vaccines strengthening the healthcare supply chain for remote areas and hilly regions of the country.

Drones can be used for surveillance, reconnaissance, combat for strengthening border and internal security.

Recently, drones have played a key role in significant global events. Over 1 million COVID-19 vaccines have been delivered in Ghana via drones, NASA's Ingenuity drone has taken its first flight on Mars and drones have been used by armed forces during the Azerbaijan - Armenia conflict.

The significant benefits or strengths brought in by drone technology during these events have helped the world recognise the importance of the drone sector.

Interventions needed for becoming a global leader

Realising the importance of drone technology - government, industry and academia came together to chart out a roadmap and following interventions were proposed:

- 1. Ease of Doing Business:** The existing policy framework needed a change in thought process and drones needed to be looked at as an opportunity rather than as a potential threat. It was important to liberalise the existing policies without compromising safety and security.
- 2. Financial Incentives:** While ease of doing business would create a conducive environment for business, India still needed to cover up for the time lost in realising the importance of drones. This would mean infusing capital and attracting large business towards drones.
- 3. Widespread Adoption:** Drones can bring in immediate efficiency and time saving in several use cases like monitoring of roads, railways, highways, spraying pesticides and delivering critical medicines in rural areas. It was thought that since the government is a key stakeholder in these areas, it could be one of the major users and early adopters.

Further, the Hon'ble Prime Minister Shri Narendra Modi set the vision to become a global drone hub by 2030.

Ease of doing business

1. Drone Rules 2021 based on a premise of trust, self-certification, non-intrusive monitoring were notified on 25th August 2021.
2. The number of forms were reduced from 25 to 5 and types of fees were reduced from 72 to 4.
3. The need for pilot certificates for operating drones up to 2 kg weight (non-commercial) and all drones weighing less than 250 grams was abolished.
4. The need for security clearance before any registration or licence was replaced with Aadhaar & Passport.
5. The Indian Airspace was segregated into 3 zones - green, yellow and red and published on the Digitalsky platform.
6. The size of a yellow zone was reduced from 45 km to 12 km from the airport perimeter.
7. Approximately 90% of airspace is notified as a green which needs no permission to fly drones up to 400 feet.
8. Further Drone (Amendment) Rules were notified on 11th February 2022 abolishing the need for drone pilot licence. A Remote Pilot Certificate issued by a DGCA-authorized drone school shall be adequate for operating drones.
9. Research, design and testing of drones was completely liberalised with no compliance burden.
10. These rules cover drones weighing up to 500 kg including drone taxis.

Financial incentives

1. With the aim to boost domestic manufacturing of drone and drone components a production linked scheme was notified on 30th September 2021.
2. A total incentive of INR 120 crore which was nearly double of the present industry revenue was allocated for three financial years.
3. The minimum value addition norm was kept 40% of net sales for drones and drone components instead of 50% as defined in other PLI schemes.
4. A constant rate of 20% incentive was notified which is one of the highest among other PLI schemes.
5. Eligibility norm for MSME and startups was kept at nominal levels to benefit early stage startups.
6. PLI for a manufacturer is capped at 25% of total annual outlay to allow widening the number of beneficiaries under the scheme.
7. In case a manufacturer fails to meet the threshold for the eligible value addition for a particular financial year, they are allowed to claim the lost incentive in the subsequent year if they make up the shortfall in the subsequent year.
8. A provisional list of 23 PLI beneficiaries released including 12 drone manufacturers and 11 drone component manufacturers.

Widespread adoption

1. 6,60,000 villages are being mapped using drones under SVAMITVA scheme for creating land entitlement records.
2. The National Highway Authority of India has started using drones for construction progress monitoring of all new highways being constructed across the country.
3. Mines over the size of 50 hectares or having annual excavation plans of more than 1 million tonnes are mandated to conduct drone surveys.
4. The Ministry of Agriculture & Farmers Welfare announced a subsidy of INR 10 lakhs per drone on purchase of agricultural drones. Agricultural institutes under the central and state governments are conducting drone demonstrations to promote the use of kisan drones.
5. The Jharkhand state government is using drones to monitor forest fires and movement of wild tuskers.
6. The Bihar state government is using drones for detecting illegal liquor manufacturing.
7. Indian Oil Corp started deploying drones to check fuel thefts from pipelines from August 2021.
8. Surveillance drones are being deployed by the Army for monitoring high altitude border areas in the north.
9. Heavy payload carrying transport drones are being deployed by the Army for delivering essential supplies to soldiers at hilly terrains.

Success stories

1. Survey of 1,90,000+ villages completed by drones under SVAMITVA scheme for creating land entitlement records.
2. 4200+ drones registered on DigitalSky platform.
3. 1400+ drone pilots have been trained by 35 DGCA approved drone training schools across the country.
4. Annual revenue of the drone industry increased from INR 88 crores in FY 2020-21 to INR 319 crores in FY 2021-22.
5. Over 5,000 crores of investment is expected in the next 3 years in drone and component manufacturing.
6. Over 10,000 direct and 1 lakh indirect jobs are expected to be created in the drone industry over the next 3 years.
7. Drones were used to control locust infestations in the states of Punjab, Rajasthan and Haryana.
8. Drones have been used for delivering critical medicines in the states of Maharashtra, Telangana, Himachal Pradesh, Meghalaya and Manipur.
9. Drones are being used by almost all union ministries and state governments for good governance, project monitoring and bringing impact in the life of citizens.