

GOVERNMENT OF INDIA
MINISTRY OF SCIENCE AND TECHNOLOGY
DEPARTMENT OF SCIENCE AND TECHNOLOGY
RAJYA SABHA
UNSTARRED QUESTION NO. 2202
ANSWERED ON 21/12/2023

Making India a drone manufacturing hub

2202# Shri Aditya Prasad:

Will the Minister of Science and Technology be pleased to state:

- (a) whether it is a fact that future era is the era of use of drones and high technology in Science and Technology sector;
- (b) if so, the schemes that Government is working upon for research and new inventions in this sector, the details thereof;
- (c) the number of schemes being formulated by Government for the youths belonging to middle class and extremely backward families to make career in this sector, the details thereof; and
- (d) the assistance or work being done by Government to make India a drone manufacturing hub and for its excellent performance, the details thereof?

A N S W E R

MINISTER OF STATE (INDEPENDENT CHARGE) FOR THE
MINISTRY OF SCIENCE AND TECHNOLOGY
(DR. JITENDRA SINGH)

(a) Yes Sir, drones offer tremendous benefits to almost all sectors of the economy, such as agriculture, mining, infrastructure, surveillance, emergency response, transportation, geospatial mapping, defence, law enforcement, etc. The Ministry of Civil Aviation has notified the Drone Rules 2021 for the effective use of drones for research, development, and testing purposes, as well as for commercial use across various sectors.

(b) Under the scheme "Agriculture Production and Post-Production Mechanization Augmented with Innovative Technologies for Sustainable Agriculture Development" of the Indian Council of Agricultural Research (ICAR), research and new innovations in drones and high technology in the science sector for crop monitoring and spraying, automation, use of robotics, and sensors in agriculture have been carried out.

To support innovators and entrepreneurs in fostering new innovations in various technological domains, including drone technology, DST has set up NIDHI-PRAYAS (Promoting and Accelerating Young and Aspiring Innovators and Startups) centres, Technology Business Incubators, and NIDHI Seed Fund, through which financial assistance has been provided to innovators and entrepreneurs for Proof of Concept (PoC) and to convert their ideas into prototypes and products.

The Union Government, through the iDEX (Innovations For Defence Excellence) program under the Ministry of Defence, has supported and funded startups and innovators and has supported the development of advanced, indigenized drone technologies for national defence and security.

(c) In order to support young innovators and entrepreneurs through the NIDHI-inclusive Technology Business Incubator (iTBI) program, DST has established startup incubation centres in Tier-II and Tier-III cities. Through these centres, mentoring and financial support have been provided to startups for the development of prototypes/products. The program has supported youth from Tier-II and Tier-III cities, irrespective of their social status, to opt for entrepreneurship.

The Ministry of Electronics and Information Technology (MeitY), through the ‘Gen-Next Support for Innovative Startups (GENESIS)’ scheme, has accelerated the fast-rising tech startup ecosystem in Tier-II and Tier-III cities.

(d) The Department of Science & Technology (DST), under the National Mission on Interdisciplinary Cyber Physical Systems (NM-ICPS), has established 25 Technology Innovation Hubs (TiHs) in institutes of national importance across the country in advanced technology verticals. These TiHs focus on sectors like Deep Tech, Artificial Intelligence, Machine Learning, Robotics, Cyber Security, Data Science, and other related areas. The I-Hub Foundation for Cobotics, established by DST at IIT Delhi under NM-ICPS, has provided support to various innovative startups in the realm of drone-based technologies. These startups have designed and developed drones equipped with AI pilot systems for autonomous navigation, eliminating dependence on GPS (Global Positioning System). Noteworthy projects include Elasticopter, a flexible drone capable of adapting its shape to match the payload's configuration, and the manufacturing of drones tailored for logistics operations, such as medicine delivery. DST's Innovation Hub on ‘Autonomous Navigation and Data Acquisition System’, established at IIT Hyderabad, has been successful in utilizing autonomous Unmanned Aerial Vehicles (UAVs) for defence and space applications.

To promote the indigenous drone industry, the Union Government has notified the Production Linked Incentive (PLI) scheme for drones and drone components with a financial outlay of Rs. 120 crore in the year 2021.

The Defence Research and Development Organisation (DRDO) has been working towards the development of unmanned aerial vehicles (Drones) for applications like drone-based surveillance systems, agricultural applications such as insecticide spray, counter-terrorism, agriculture, geo-imagery, drone swarming for surveillance, etc. The union government schemes have provided funding and incubation support to startups, where the startups have been supported from the ideation stage to the commercialization stage for manufacturing drones.
