

Aerospace

A New Dawn: The Indian Drone Policy

September 8, 2021



by Dr. Sanat Kaul

The Drone policy has taken a convoluted journey in India.

While military drones have been in use effectively for the last two decades or more, the civil drones' industry, which was earlier very heavily regulated and constrained, has finally opened up, a welcome turn of events which indicate contradictions within the government. Prior to 2014, India had no drone policy; anyone flying a drone fell under a grey area between a kite and an aircraft. There were, however, presence of small civil drones, largely for photography and sport. Policy for RC aircraft and helicopters was equally undefined. India adopted the easy way out and took an ostrich like policy by banning all civil drones in 2014, considering the damage a drone can cause.

It took seven years to upturn this policy by the notification of 2021. In the interim, from 2018 when the first official policy was published, a number of government orders were issued making it difficult to buy or manufacture a drone by introducing complicated hurdles. The author's palm size drone ordered online a few years back is perhaps, still with the Indian customs. New concepts of Digital Platform, Digital Sky, Geo-Fencing, No Permission- No Takeoff (NPNT) were introduced. In manufacturing, the Airline ownership concept of 'Substantial Ownership and Effective Control' (SOEF) for a Drone manufacturing company was introduced. While the majority of potential drone manufacturers were grappling with pre-manufacturing problems caused by the several policy restrictions, some local manufacturers were happy as NPNT dissuaded some major international brands to sell in India.

The government did not fully appreciate the role this new technology could play in aiding civil sectors both private and government and whether they outweigh the disadvantages. Besides the obvious application of delivery of parcels and blood, the application is exhaustive. Developed countries, have managed to allow the growth and manufacturing of drones and are now tightening the regulations of their country

having built up the drone eco-system. There is a long list of applications in the civil sector, which we have missed out so far because of very restrictive initial regulations. For example, in disaster management application for locating trapped people, in agriculture for checking soil moisture, in mining for surveillance and land survey, thermal imaging for the construction and infrastructure applications, high tension line maintenance, inspection of aircrafts, ships, multi-storied buildings, survey of oil tanks and refineries, identification of underground and over ground pipelines, forest and wildlife management including control of forest fires using drones with sprays, traffic management etc. to name a few. Some government departments did purchase drones for applications but without meeting the DGCA regulations. Most of the applications discussed above fall within the VLOS (Visual Line of Sight) category of drones. However, BVLOS (Beyond Visual Line of Sight) category of drones opens up a much larger market opportunity with a wide-variety of drone use cases for several applications. BVLOS approval is currently very hard to obtain and is granted on a case-by-case basis to qualifying consortiums.

From an absolute ban on all drone activity in the civil airspace by DGCA in 2014 to the issue of revised regulations in July of 2021 is a welcome development, in spite of the recent drone attack on the Air Force base in Jammu. While the last drone regulations of December 2018 did open the sector for drones, the industry was unable to take off, due to the large number of limitations. The 2018 regulations brought in the concept of Digital Sky with NPNT and limitations such as not flying beyond visual sight, geo-fencing, five categories of drones by weight, import restrictions, issues of 'SOEF' for drone manufacturing companies, approval of Ministries of Home Affairs and Telecommunications, operators and pilot licensing constraints, constraints on R&D activity related to drones etc.

While it was a step in opening the sector, the conditions were too restrictive. The new rules published in August 2021 have reversed the process of suspicion and can be best described as based on "Trust, Self-Certification and non-intrusive Monitoring". It has abolished the need for various approvals, including certification of conformance maintenance and import clearance and a reduced fee. The Digital Sky Platform will have an interactive airspace map dividing the country into green, yellow and red zones with no permission needed to fly up to 400 ft. in green zones and 200 ft. between 8 to 12 kms of an airport. A pilot's license is no longer a requirement for flying a nano drone or for R&D activities. Further, it is proposed to develop air corridors for cargo delivery. This sudden liberalisation of Drone regulations will certainly have a tremendous impact on Indian Drone ownership and a bright future for local manufacturing.

The Press Note issued on 26th August 2021 on this subject acknowledges for the first time that the Drones or UAS, offer tremendous benefits to almost all sectors of the economy including defence and law enforcement. It also acknowledges that Drones can be significant creators of employment and economic growth. This

sudden realisation has metamorphosed the ‘ostrich like’ approach to a ‘forward looking’ approach.

The new regulations are welcomed with caution. Drones are an evolving threat as they are a dual use technology. Liberalisation of the policy should not mean misuse. Therefore, the need for protecting our vulnerable institutions becomes critical. It is thus important to consider use and upgradation of anti-drone technology and foster the growth of the ecosystem. The need to beef up anti- drone technology is important. All airports, vital installations, important government buildings need anti-drone systems. Few countries are working on the issue, thus cooperation and technology share should be encouraged. JARUS (Joint Authorities for Rulemaking on Unmanned Systems) the inter-governmental group of experts around the world including ESA and Euro control, are involved in setting up technical, safety and operational guidance material for the safe operation of unmanned vehicles. While India has joined the association, it is yet to participate actively, making it an urgent need to begin sharing apprehensions and experiences of various other participants.

About the author: Dr Sanat Kaul is Chairman, International Foundation for Aviation, Aerospace and Drones.