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A FLIGHT PATH WITH OBSTACLES

Relevant for: Indian Economy | Topic: Infrastructure: Airports

At Agroscope, the ‘Swiss centre of excellence for agricultural research’, in Nyon, Switzerland, agriculture scientists fly a drone to study nitrogen level in leaves, not for a farm as a whole, but for each individual plant. The drone takes a large number of images, which when fed into a computer model with data on soil condition, weather, time of the year and other information helps analyse which plants are deficient in nitrogen, enabling farmers to add corrective fertilizer only where necessary. Sensefly, a Swiss drone manufacturer, has customers around the world whose use of drones has resulted in higher yield (more than 10% in observed case studies) and significantly lower usage of fertilizers and herbicides.

For a country with a population of over eight million, Switzerland has an enormous number of people interested in flying drones and developing drone-based applications. Simon Johnson, the Vice-President of the Drone Industry Association Switzerland, envisions the use of drones in public transport in the not too distant future, as well as setting up drone hubs — mini airports, where drones carrying people and cargo can congregate.

While the rest of the world has been soaring ahead in making the futuristic promise of unmanned flying vehicles a more immediate reality, India has largely been dragging its feet. Up until the end of August, flying a drone was mostly illegal here. With the publication of the drone regulations in late August, the Ministry of Civil Aviation has attempted to give some structure to the development of drone infrastructure in India. While announcing the publication of these guidelines, Civil Aviation Minister Suresh Prabhu made two points, the contradictions of which also highlight India’s lack of clarity on what it should do with drones. For one, he estimated the potential of the “drone market” in India to be $1 trillion. And in the next breath he said India’s security environment necessitated extra precautions.

It is with such a heavy eye on the precautions that the regulations have been drafted, that flying a drone is a task wrapped tightly in immense paperwork. The abbreviations themselves are more than a page long. India’s regulations separate drones into five categories — nano, micro, small, medium and large. There is very little regulation for flying a nano up to 50 metres height, except for not flying near airports, military sites or in segregated airspace.

The paranoia kicks in from the micro category, starting with the application for a unique identification number (UIN) for each drone, with a long list of documentation including security clearances from the Ministry of Home Affairs (MHA) in several cases. Once the UIN is obtained, operators get to move to the next step — of having to apply for an Unmanned Aircraft Operator Permit (UAOP), implying more forms, more annexures and more submissions. Even to fly a micro drone below 200 ft, users have to intimate the local police station 24 hours prior. (One application requires that it be submitted with seven copies.)

Manufacturers of drones as well as technologists and researchers making applications using drones have to test fly these frequently, often several times a day. The structure of these regulations makes the possibility of a red tape-free flight very slim.

With so many government authorities involved in allowing permission and keeping an eye, it is inevitable that operators could be slapped easily with real and perceived violations. In an effort to make things slightly easy, the regulation provides a a list of identified areas for testing and demonstration. Flying drones in these areas comes with less paperwork. However, the locations provided are so far from technology and development hubs that it is unclear how practical these

will be. In Karnataka, for example, the identified areas are Chitradurga, Coorg and Ganimangala village (which does not even appear on Google maps), all of which are around 200 km from Bengaluru entailing nearly four hours of travel one way.

The security and privacy risks of allowing drones to fly in an unregulated manner are high. It may be recalled that in August, a drone was used in an attack on Venezuelan President Nicolás Maduro during a public meeting. However, if India is to reach even the fraction of the $1 trillion potential that Mr. Prabhu sees, it needs to figure out a more balanced manner of regulation. The current rules are a start, but only in the sense that they free all drones from their previous illegality. The real impact of drones will be in the many applications they will be put to. Agriculture is just one such. They are likely to be the disaster prevention systems, rescue operation leaders, and even public transport providers in the not too distant future. Missing out on working on these applications early enough will likely have serious repercussions to India's future competitiveness in the field.

China's drone economy — manufacturing and development — will be worth $9 billion in 2020, while the U.S's commercial drone market is expected to be $2.05 billion by 2023 (Global Market Insights). For India to compete against these giants, it already has a lot of catching up to do. Filing a series of applications in multiple copies and waiting for various government departments to respond is not the best way to get started.

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Last week Ram Kadam, a BJP MLA from Maharashtra, told the men in an audience that if they were interested in women who didn't reciprocate the feeling,

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