



## Drones set to crowd Indian skies

Shobha John, TNN Jul 24, 2013, 07.39PM IST

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**Tags:** unmanned aerial vehicle | UAV | Sci-fi | Hindustan Aeronautical Limited | HAL | Civil Aviation Organisation

NEW DELHI: How about a pizza being delivered at your home by an UAV ( Unmanned Aerial Vehicle)? Or getting a courier through this flying machine? Or spying with a UAV as small as a butterfly which perches itself on a windowsill? Sounds like sci-fi? Experts say this could well become a reality.



(In India, UAVs are mainly...)

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Aerospace

While UAVs have been widely used in the West for policing, oil pipeline inspection and detecting illegal immigrants, in India, they are mainly used by the armed forces (eg, Heron, Lakshya, Nishant) for intelligence gathering and surveillance. But this is changing. Increasingly, they're being used for civilian purposes and are akin to God's eye in the sky.

Teal Group Corporation, a US aerospace consultancy, predicts that UAVs will be the most dynamic growth sector of the aerospace industry, with spending going up from the current \$5.2 billion annually to \$11.6 billion, totaling over \$89 billion in the next decade. Philip Finnegan, director of corporate analysis, Teal Group, told TOI via email, "We see a growing market in India – 50 medium-altitude, long-endurance (MALE) UAVs, 60 Navy UAVs, 70 Air Force tactical UAVs, 100 Army tactical UAVs and 980 mini-UAVs over the next decade."

Recently, UAVs kept vigil as Narendra Modi flagged off the Jagannath rath yatra. They were also deployed in Kaziranga National Park to protect one-horned rhinos from poachers and have been procured by Mumbai police. Earlier, only government agencies such as DRDO, National Aeronautical Laboratory and Hindustan Aeronautical Limited (HAL) made UAVs, but now even private companies are jumping on the bandwagon.

Mumbai-based Idea Forge has made 'Netra', a UAV weighing less than 1.5 kg. Amardeep Singh, its chief marketing officer, says, "We have given over 200 demonstrations to various companies. UAVs can be made to hover over an area, zoom in and stream live video. Netras can fly 2-3 km away and up to 300 m high."

In HAL, a special team has been formed to design, develop and market them. "We have sold 35 UAVs so far. They can fly a distance of 100 km and an altitude of 6.5 km," says a source. Their costs vary from tens of millions of dollars ('Global Hawk') to a few thousands.

According to Air Vice Marshal Manmohan Bahadur VM (retd), Distinguished Fellow, Centre for Air Power Studies, Delhi, "There are many classes of UAVs – HALE which flies above 30,000 ft; MALE which flies between 20-30,000 ft; micros which can be carried by one person and minis which fit into a palm. The US Air Force has more personnel training to be UAV operators than pilots. Even International Civil Aviation Organisation is framing rules to permit UAVs to fly international."

With UAVs sending data without loss of lives, a cockpit or a pressurised cabin, they are easy come, easy go. While the next step for India will be UCAVs (unmanned combat aerial vehicles) or drones, Bahadur says UAVs can be used here for aerial news broadcasting, crop monitoring, aerial shots in films and infrastructure inspection of nuclear sites.

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**Ramesh Narendrarai** (Vadodara)  
25 Jul, 2013 09:04 PM

UAVs are an exciting prospect. My grandson, Arjav is part of a group of students of DTU who have made a UAV and are conducting a variety of experiments. At the present time, he is in Switzerland on his summer internship with a project to explore use of a UAV to trap wind at high altitudes in the mountains and send it to the ground for generating power. I am sure, many more uses would be found for the UAVs

**shivkumar mohite** (rajkot)  
25 Jul, 2013 03:18 PM

Crowded skies with UAVs that can reach an altitude of 6.5km; already there is a danger of bird hits to the commercial airliners, will not these flying machines be dangerous to them? Surely the private operators will not adhere to the norms set by the DGCA for all aircrafts in the country. Serious accidents can result if private UAVs are allowed to roam about our skies.

**Indian ()**  
25 Jul, 2013 01:10 PM  
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**SivaShankar Devarasetty** (Srikakulam)  
25 Jul, 2013 09:51 AM

There are advantages as well as disadvantages with UAVs. Surveillance & security are major advantages on other hand loss of privacy is major disadvantage.

**Saratchandran** (Australia)  
25 Jul, 2013 05:40 AM

That is how the 'ruling class' turn the population to 'lab-rats' under observation. The difference between in jail and out of jail is the matter of privacy and anonymity. Both will be lost when such massive surveillance is employed by the State. Of course, security will be the argument used to favor such intrusion into the privacy and a nation rattled by terrorism will agree to anything to minimize the malice and bestow such powers to the State with a mistaken belief that they will be safe! And the rulers will relish the new found power in hand to use it as they please! Great future ahead !!

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