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Successful flight tests of Rustom-II and other indigenous UAVs

The Defence Research and Development Organisation (DRDO) was created to make India self-reliant in the defence sector. On February 25, 2018, DRDO successfully flew its Rustom-II, a medium-altitude, long-endurance (MALE) unmanned aerial vehicle at its aeronautical test range located at Chalakere, Chitradurga.

This was the twin-engine Rustom-II's first flight in user configuration with higher power engine. With an endurance of 24 hours, the drone will carry out surveillance and reconnaissance (ISR) missions for the Indian armed forces. The payload of the UAV will include synthetic aperture radar, electronic intelligence systems and situational awareness payloads.

This new drone is emblematic of several other UAVs showcased at DefExpo India, showing a strong will of the Indian public and private sectors to acquire an indigenous autonomy in the drone sector, however not aiming at challenging combat-proven UAVs like General Atomics' ones, for example. The drone sector appears as an iconic one for the "make in India" policy.



The Rustom-II appears to be an iconic success of the "Make in India" policy in the UAV sector (Picture source: Army Recognition)

http://www.armyrecognition.com/defexpo_2018_india_news_show_daily/successful_flight_tests_of_rustom-ii_and_other_indigenous_uavs.html

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Combat drones to get lift from Govt

Unmanned Aerial Vehicles (UAVs), or drones, will play a major role in the contactless wars of the future, NITI Aayog member VK Saraswat said, adding that the Centre is in the process of firming up a roadmap to develop capabilities in the area.

Saraswat, who was the former head of the Defence Research and Development Organisation (DRDO), said miniaturisation will be the key to all future vehicles. "We want smart systems and it can only be possible by using Artificial Intelligence (AI) in a big way. There is need to pursue research in hypersonics, propulsion, stealth and other technologies," he said, addressing a technical meet of the Aeronautical Society of India (AeSI). DRDO's labs have developed indigenously a UAV called Rustom (warrior). In addition, the Defence Ministry is in talks with Israel for procuring some advanced versions and more of the Heron, which it already has in its arsenal.

Seconding Saraswat's views G Satheesh Reddy, Scientific Adviser to the Defence Minister and D-G, Missiles and Strategic Systems, said: "The miniaturization of sensors and technologies will tremendously transform futuristic aeronautical systems. The systems will be smart, collaborative and lead to a large amount of sensor data, paving way for AI & machine learning of complex systems."

Global industries are looking to India for collaboration in manufacturing and domestic industries need to rethink their business models and adapt accordingly, said Reddy, who is the Chairman of the AeSI.

Vice-Chief of the Naval Staff, Ajit Kumar, said naval aviation was poised for expansion in numbers and technology. At present, the Navy operates a wide variety of aircraft that includes deck-based fighters and the latest P8i Long Range Maritime Aircraft.

The domestic industry has tremendous scope in providing home-grown solutions, and expertise in training personnel to maintain and operate assets, he said.

<https://www.thehindubusinessline.com/news/combat-drones-to-get-lift-from-govt/article23549862.ece>

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IAF to propose Rs 6500 crore defence system to thwart 9/11 style attacks in New Delhi

The Indian Air Force would soon move a proposal for a Rs 6,500-crore multi-layered air defence system to thwart any 9/11-style attacks in the national Capital, government sources have told Mail Today.

As part of the plan, five to six units of the missile network would be deployed at various locations across the Capital, in a bid to provide 360-degree protection from all sides. During the 9/11 attacks, Islamic terrorists hijacked multiple passenger jets in the United States and used them as weapons to hit several important American symbols of power such as the World Trade Center twin towers in New York, Department of Defense headquarters in Pentagon and the Capitol Hill in Washington, DC.

"A proposal for acquiring the missile defence system from an American firm is expected to be discussed at a high-level meeting of the defence ministry in the next few weeks. If cleared, this will be a government-to-government deal for preventing 9/11-type attacks," the sources said.

The air defence system comprises various kinds of missiles for taking down targets at different altitudes and distances, including the Advanced Medium-Range Air-to-Air Missile (AMRAAM) and Stinger missiles, which have different capabilities.

The missile grid would replace the Russian air defence systems that have been in service for several decades and have become obsolete, the sources said.

The new missiles would be capable of tracking multiple targets at a time and would be integrated with radar systems used by both military and civilian organisations that are used to manage the airspace, said officials.

"The missile system would be able to automatically identify any rogue aircraft deviating from its designated aerial route or moving towards any other direction and can engage it in a few seconds after warnings are issued to the erring plane," the sources said.

This programme would run concurrently to the indigenous ballistic missile defence shield project, under which protection would be provided to key cities such as Delhi and Mumbai from incoming ballistic missiles.

Under the DRDO project, the plan is to take down ballistic missiles coming in from long ranges, up to 2,000 km or more at heights of 30 to 120 kilometres in the air, and the twin-layer system is in advanced stages of development.

In the last few years, India has been taking significant steps to improve its air defence capabilities as a number of new mechanisms to take on hostile aerial action have been inducted and many more new systems would be joining in the near future.

India recently started inducting the long-delayed Rs 20,000 crore Spyder missile systems into the Air Force and some of them have already been deployed on the western frontier to thwart any misadventure from the Pakistani side.

The Spyder (Surface-to-air Python and Derby) is a low-level, quick reaction missile (LLQRM) to neutralise hostile targets up to 15 km away and at heights between 20 and 9,000 metres. The Python-5 is currently the most capable air-to-air missile (AAM) in Israel's inventory, while the Derby is an active radar homing AAM that provides the SPYDER missile system with a fire-and-forget option. India has also signed a deal worth Rs 17,000-crore for the Medium-Range Surface-to-Air Missile (MRSAM) system with Israel to equip the army Air Defence Corps to take out enemy planes and drones at ranges of up to 70 kilometres in the air.

The DRDO has also started a programme to develop a Quick-Reaction Surface-to-Air Missile system for the armed forces to bolster the air defence capabilities in both the western and the eastern sector.

<https://www.indiatoday.in/mail-today/story/iaf-to-propose-rs-6500-crore-defence-system-to-thwart-9-11-style-attacks-in-new-delhi-1212973-2018-04-16>