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MP-IDSA

Commentary

India and the MQ-9B Sky/Sea Guardian Deal

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June 04, 2025

Summary

MQ-9B Sky/Sea Guardian drone procurement is a significant milestone for India's unmanned combat capability.

Unmanned Aerial Vehicles (UAVs) or drones have revolutionised the way wars are being fought. Over just a few years, the advancement of Artificial Intelligence (AI) and automation has changed the nature of conventional warfare. In 2020, the US used the MQ-9 Reaper weaponised drone with AGM-114 Hellfire missiles to carry out a targeted decapitation operation for the assassination of Qassem Soleimani in Baghdad with minimal collateral damage. Since 2022, swarm and suicide drones have been used in the Russia–Ukraine war. These relatively cheap equipment have been able to neutralise expensive military equipment. In 2024, militant groups like Hezbollah penetrated cutting-edge systems such as the Israeli Iron Dome.

The October 2024 deal with the US for the acquisition of the MQ-9B Sky/Sea Guardian Remotely Piloted Aircraft System (RPAS) by India holds significant implications for the country's Intelligence, Surveillance, Reconnaissance (ISR) capabilities. The MQ9-B will allow precision strike and real-time intel across diverse borders, and can be deployed by the Indian Army, Navy and Air Force. The MQ-9B HALE drones are being procured from General Atomics at a price of US$ 4 billion (around Rs 32,000 crore). The deal includes 16 Sky Guardian variants (8 each for Indian Army and the Indian Air Force) and 15 Sea Guardian variants for the Indian Navy. The first deliveries are scheduled for January 2029 and will conclude by September 2030.[1]

India has so far relied on Israeli-origin drones like Searcher and Heron, which are medium-altitude, long-endurance (MALE) platforms. Indigenous UAVs such as the TAPAS-BH-201 and the Defence Research and Development Organisation (DRDO) Rustom are also MALE UAVs designed for surveillance and reconnaissance with different payload capacities. The procurement of the MQ-9B will enable the transition to high-altitude, long-endurance (HALE) UAVs. The HALE UAVs can generally last for more than 32 hours compared to the 24-hour endurance of MALE. In terms of applications, the MALE is largely limited to ISR and emergency response, but given the height and endurance of HALE flight, these UAVs can provide persistent surveillance, communication relays and in some cases, even precision strike.[2]

The MQ-9B HALE drone operates at altitudes of over 40,000 feet, has an endurance of up to 40 hours in continuous flight, and has features such as detect-and-avoid systems, automatic take-off and landing along with encrypted communications and secure GPS.[3] Its armament and payload include the AGM-114 Hellfire missiles and

[1] **"India to Assemble 21 MQ-9B Predator Drones: Vivek Lall"**, *Bharat Shakti*, 19 March 2025.

[2] Mandip Singh, **"Global MALE & HALE UAV: Key Developments Across Global Top 10 Defence Spenders"**, *European Security and Defence*, 10 January 2023.

[3] Vivek Mishra and Kartik Bommakanti, **"MQ-9B Deal: A Capacity Upgrade for India-US Relations"**, Observer Research Foundation, October 2024.

the GBU-39 Small Diameter Bombs. It has advanced Signals Intelligence (SIGINT) systems, Electro-Optical/Infrared (EO/IR) sensors and Synthetic Aperture Radar (SAR) for surveillance.[4]

This MQ-9B deal holds significant advantages for the Indian forces to upgrade the effectiveness, efficiency and accuracy of military operations. With its extended surveillance and reconnaissance capability, the MQ-9B offers persistent and long-range surveillance and monitoring capabilities.[5] As regards maritime security, the UAV can help monitor enemy naval movement, smuggling, unauthorised intrusions, illegal fishing, piracy, and enables surveillance over India's Exclusive Economic Zone, especially in the Indian Ocean Region.[6]

The RPAS can facilitate real-time intelligence sharing with command centres, and allows seamless integration of network-centric warfare systems.[7] It can act as a force multiplier, and can allow for more significant information sharing, interoperability and joint training as it is used by QUAD allies. General Atomics plans to establish a global MRO (maintenance, repair and overhaul) centre in India, to fulfil its offset obligations and enable long-term maintenance of the fleet.[8] Another aspect worth highlighting is that as this drone fleet will be used by the Army, Navy and Air Force, it could enhance tri-service integration and coordination and enable joint operational architecture and combined force operations.

Challenges

The indigenous technological lacunae that the deal highlights, though, is hard to miss. The cost of acquisition and long-term maintenance (spare parts, ground stations, training, upgrades, and so on), could pose a challenge. India will also be reliant on the US OEM (original equipment manufacturer) for software updates, tech support and US supply chains. The data systems and core control algorithms remain proprietary. This can lead to data security concerns, as sensitive intel and data could be exposed if transmitted through US-linked communication protocols.

Moreover, integration of the UAV will require upgradation of communication links and infrastructure. Deliveries are set to begin only in 2029, when threat landscapes

[4] **"MQ-9B SkyGuardian"**, General Atomics Aeronautical.

[5] **Ibid.**

[6] **"Armed with Missiles and Bombs, MQ9-B Drones to Bolster India's Surveillance Capability"**, *The Economic Times*, 7 February 2024.

[7] **"MQ 9 Reaper"**, US Air Force, January 2025.

[8] **"Strategic Significance of India's MQ-9B Predator Drone Acquisition"**, *Indian Aerospace & Defence Bulletin*, 16 October 2024.

might evolve and technology may become slightly outdated and face greater competition.[9] Additionally, the MQ-9Bs have limited stealth capability, and thus their survivability in contested airspace with advanced air defence systems is questionable. While they may be suitable for permissive environments like maritime zones, their success in deep strike missions in anti-access or area denial environments is susceptible.

Finally, counter-UAS systems are getting advanced with time, and laser-based systems, radar tracking, radio-frequency jammers, and so on pose greater threats. Further, the use of drones by non-state actors and terrorists has also been on the rise. Recent reports which note that an US MQ 9 drone has been shot down by the Houthi rebels, shows that this technology is also not fool-proof.[10] Better operational advantages, though, could accrue from the next generation MQ-9B drones.

Conclusion

MQ-9B drone procurement is a significant milestone for India's unmanned combat capability. It will add to India's network-centric warfare capabilities. As for indigenous projects, the GHATAK Unmanned Combat Aerial Vehicle (UCAV) is being developed by the DRDO.[11] The further aim should be to develop an advanced stealth HALE. As illustrated by Operation Sindoor, an enhanced indigenous drone infrastructure, especially with stealth technology, will continue to be crucial for maintaining the critical edge in combat operations.

[9] Kartik Bommakanti, **"Despite MQ9B Purchase, the Indian Air Force and Indian Navy Revive TAPAS"**, Observer Research Foundation, 13 September 2024.

[10] **"U.S. Military Stunned as Houthi Rebels Down 7 High-tech Reaper Drones in Weeks, Costing Over $300 million and Raising Eyebrows"**, *The Economic Times*, 26 April 2025.

[11] **"ADE Advances 13-Ton Ghatak UCAV Development Amid Funding Wait, Builds on SWiFT-TD Success"**, Indian Defence Research Wing, 21 March 2025.

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