

EMERGING FRONTIERS FOR DEVELOPMENT OF MILITARY UAVS: AN INDIAN PERSPECTIVE

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Abstract

Unmanned Aerial Vehicles (UAV) are major force multipliers for modern day armed forces. While the past UAVs were designed for benign and tactical applications with limited intelligence, surveillance and reconnaissance (ISR) capabilities, more recent medium altitude long endurance (MALE) UAVs are designed with advanced ISR features including electronics and communication intelligence payloads. Apart from these traditional ISR missions, UAVs worldwide are also being considered for more aggressive military operations. Weaponization of MALE UAVs is being considered as a serious option for neutralization of opportunistic targets. Similarly, unmanned bombers (typically flying wing platforms) are also being developed for deep penetration strategic bombing missions. In light of these possibilities, the paper briefly narrates the present Indian scenario for development of indigenous military UAVs for ISR applications, and deliberates on the approaches for development of unmanned strike / combat air vehicles (USAV / UCAV) for future, with special emphasis on a few critical low readiness technologies.

Keywords: UAV, ISR, UCAV, Stealth