# Shift in Drone Warfare Dynamics: Non-State Actors Targeting MALE Drones



### Drone Warfare Dynamics Shift as Non-State Actors Target Unmanned Aircraft

Recent developments indicate a significant shift in the dynamics of drone warfare. Medium-altitude, long-endurance (MALE) drones, such as the Reaper used in US-led conflicts in Iraq and Afghanistan, are increasingly being targeted by non-state actors.

According to available reports, since October 2023, the US has potentially lost approximately four Reaper drones, each valued at $30 million, to attacks by Houthi rebels in Yemen and Iran-backed militias in Iraq. Similarly, Israel has lost at least four Hermes drones to Hezbollah in Lebanon, while Turkey has seen one of its Anka drones shot down by Kurdish militants.

These drones are typically operated remotely from bases such as Creech Air Force Base in Nevada, approximately 12,000 kilometers away. The drones’ protracted airborne capability makes them essential assets, although their slow speed and large radar cross-section present vulnerabilities in contested environments.

The vulnerability of these drones has become more apparent through various conflicts. For instance, early successes of Ukrainian forces using Turkish Bayraktar TB2 drones were short-lived as the Russian military adapted its tactics, resulting in Ukraine losing at least 24 drones worth $5 million each. Similar challenges are faced by Houthi and Hezbollah forces, albeit with less sophisticated air defenses compared to Russia.

MALE drones like the Reapers and Hermes are distinct from one-way attack drones, quadcopters, and smaller reconnaissance drones, which are less sophisticated and serve a different tactical purpose. Critics of MALE drone usage argue they increase the risk of civilian casualties due to the detachment of operators from the battlefield, citing incidents such as the 2021 Kabul drone strike that killed ten civilians.

Despite their vulnerabilities, MALE drones have shown significant impact in crises such as the Nagorno-Karabakh conflict, Libya's civil war, and the Syria-Turkey clash in 2020. Moving forward, experts predict continued use and possible tactical shifts, including fitting drones with systems to detect missiles and developing more disposable models prepared for loss, as these drones remain crucial assets for intelligence, surveillance, and reconnaissance (ISR).

Additionally, there is a concern about the potential compromise of drone technology when drones are downed and captured by adversaries. Iran, for instance, has based several of its drone models on captured US equipment.

Future conflicts might see a balance between using advanced yet vulnerable MALE drones and integrating more cost-effective and disposable drone systems to mitigate losses while maintaining ISR capabilities.