

**UNKNOWN FRONTIER: INTEGRATION OF ISR ASSETS IN RUSSIAN GREY  
ZONES**

by

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## Abstract:

The United States has long been occupied with placing MQ-9 ISR assets exclusively in COIN roles, to which all modern doctrine has reflected. While the MQ-series was envisioned, trained and equipped around this mission set, the dynamics in political and combat battlefields have shifted to Russia as Afghanistan, Iraq, and Syria are no longer the primary strategic threat they once were. These Russian “grey zones” are becoming a frontline focus of foreign policy and ISR assets must adapt accordingly. The MQ-9 community has the capability but must adjust training and equipment to work at peak efficiency. This training must include joint-integration both within Air Force ISR assets and other co-located services; the framework of which has been neglected. As geopolitical and national objectives shift, the MQ-9 community must train, collaborate, and utilize technology in ways that will redefine the enterprise in its competition with Russia.

From its inception, the MQ-9 was almost exclusively used as a COIN asset: with active conflicts in Afghanistan, Iraq, and Syria, training and TTPs have reflected this. Fully loaded with Hellfires and GBUs, the airframe was exceptionally well-adapted for CAS and ISR and training at the formal training units (FTUs) focused heavily on the combat mission set – but this is no longer necessary. The drawdown of combat missions in COIN environments rotate the MQ-9 into AORs where efficient and precise ISR is required, while fulfilling “any number of mission sets.”<sup>1</sup> Where the airframe and aircrew are prepared to tackle the challenges, specific training and integration with other services is lacking. As the national strategic foci evolve to address these AORs – grey zones – in Russia, the ISR community must do the same. Through training the next generation of students (and existing aircrew) how to effectively integrate with other services, including other Air Force assets, and efficiently prosecute target decks and utilize existing technology, this is not only possible but required.

### **Shift in Priorities**

Formal training for MQ-9 pilots has seen an enormous emphasis on surface attack and close air support, a direct reflection of the tactical and strategic needs required by operational squadrons and COCOMS. The most extensive portions of syllabi concentrate on weapons, tactics, and ISR. Those that included the use of Synthetic Aperture Radar (SAR), strike coordination and reconnaissance (SCAR), and air interdiction (AI)<sup>2</sup> were glossed over, sometimes skipped altogether - though blame does not lie with instructors. Big Air Force needed RPA pilots in combat situations and accordingly must be efficient. Even the hub of all RPA

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<sup>1</sup> Karas, *As Contested Battlespace Grows, MQ-9 Explores New Roles*

<sup>2</sup> Wright, *Fighter Vs. RPA: Crew Resource Management*

operations, Creech AFB, lists on their website that “ISR is a secondary role” of the airframe (Creech.af.mil).

However, the fields of battle are shifting to near-peer contested areas where weapons are no longer the primary focus. The long-term conflict now rests in grey zones, contested by an aggressive Russian military vying for control in areas such as the Black and Caspian Seas,<sup>3</sup> to include Kaliningrad. These zones are heavily patrolled and utilized for testing, with experimental missiles and secretive trade deals that are of implied strategic importance to the United States. Operating in these high-stakes environments, aircrews must have as much situational awareness and training as possible to provide the architects of our global strategy with critical information. Lt Col Moschella writes: “The U.S. Intelligence Community should develop indicators and warnings that span all instruments of power in order to identify Russian efforts to destabilize the current balance of power across the globe.”<sup>4</sup> As one of those instruments of power, ISR must contribute to the effort and this begins at the formal training stage, fortified by instruction that does not skip or negate the possibilities the aircraft and crew are capable of.

### **Isolated Jack of All Trades**

As a platform, the Reaper has immediate benefits in this contested environment: no risk to controlling aircrew, long-duration flight time, and a multitude of sensors on board. However, crews are isolated, limited to an island; in these grey zones, each crew is responsible for the execution of targets decks which can be upwards of 100 points of interest (POIs) for a single sortie. These targets can be beyond effectively surveillance range due to contested borders, attributing to lost time with scant information. Compounding this, there is little direction for

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<sup>3</sup> Oliver, *Eyes in the Sky: Russian Navy Continues Airborne ISR Growth*

<sup>4</sup> Moschella, *Making Sense of Russia's Annexation of Crimea and What It Means to U.S. Policy Makers*

priorities and crews tend to divide flight time equally among each POI and work entirely solo: aircrew are largely unaware of missions other local ISR assets are executing, capable of, and prioritizing. Naval assets, both Russian and NATO, are persistent in grey zone waters, the overwatch of both being crucial. Disjointed, singular operations are the reality of large portions of ISR while AOCs believe assets to be working together, the historical assumption of which led to the intelligence disasters in 1979.<sup>5</sup> The daily taskings leave crews isolated and eliminate the ability to dynamic/ad hoc task, a strength showcased in COIN environments.

In these grey zones, critical ad hoc taskings must be readily available due to contention, volatility and of importance of these areas to both national security and strategy. Russia has been known to back militias militarily, materially and politically and has invaded several neighboring countries, most notably Ukraine, Georgia and the Crimean Peninsula;<sup>6</sup> the Donbas region of Ukraine is also currently battling Russian-backed separatists, attempting to lay claim to lands allegedly belonging to Russia.<sup>7</sup> In these gunpowder regions, readily available ISR must be able to respond and collect on troop movement, supply depots, SAM sites and military tests and drills. While the provided target decks absolutely correspond to POIs of national interest, the MQ-9's strengths must be heavily utilized to gain the informational upper hand.

### **ISR: Integrated Surveillance Request**

To increase efficiency, ISR communities must leverage strengths each asset provides to eliminate weaknesses in others. High altitude and electromagnetic aircraft are able to provide coverage on long range targets, signals and POIs, enabling the MQ-9 to assist with ad hoc

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<sup>5</sup> Downs, *In Pursuit of 21st Century Distributed Intelligence Surveillance and Reconnaissance Operations*

<sup>6</sup> Moschella, *Making Sense of Russia's Annexation of Crimea and What It Means to U.S. Policy Makers*

<sup>7</sup> Melnyk, *From the 'Russian Spring' to the Armed Insurrection: Russia, Ukraine and Political Communities in the Donbas and Southern Ukraine*

taskings and local navies, as contemporary commanders have requested.<sup>8</sup> Utilizing its on-board sensors, Reapers provide freedom of movement, high-resolution FMV, and battle tracking high altitude aircraft may lack. When targets of pronounced significance appear, all should be used to provide the clearest possible picture, working in integrated operations providing coverage for each other. Russian aircraft also have a propensity to harass coalition aircraft and backing up other assets is highly valuable when misperceptions are common on national stages.<sup>9</sup> There must be a flow of communication between the operators, working together to create a shared mental model that eliminates gaps in collection and threats. This communication node exists but is executed poorly, if at all. The primary reason being a fundamental lack of knowledge on where the complementing assets are, capable of, and willing to task – a symptom of doctrinal gaps in training and TTPs.<sup>10</sup>

### **Seas Unknown**

This gap is not limited to Air Force assets. Joint operations notoriously have conceptual gaps in understanding other service's procedures and abilities. Naval forces frequent contested grey zones and historically experience harassment from Russia and China. While aircraft carriers are more than capable of intercepting and self-assisting, cruisers and destroyers do not have the luxury. Having taskable airborne assets within an arm's reach provides needed top cover, real-time FMV, and battle tracking that could save a volatile situation. Naval assets too have taskings and situational awareness on POIs and threats, but this is typically not transmitted to Air Force ISR. There is potential for redundant tasking, missed/uncommunicated threats and poor interoperability. Yet again, a large portion of ISR aircrew are unfamiliar with the gaps in Naval

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<sup>8</sup> Karas, *As Contested Battlespace Grows, MQ-9 Explores New Roles*

<sup>9</sup> Oriana, *Russia's Reckless Acts*

<sup>10</sup> Conwell, *Evolution of Human Systems Integration for Remotely Piloted Aircraft Systems*

ship abilities, shortcomings, and taskings. This can be mitigated by integrating joint training early, whereby aircrew can continue to build and expand throughout their careers. There is no need for each service, asset, or aircrew to be an island.

With integration of Air Force ISR and Naval assets, not only can target decks be efficiently executed, but now there is a flexible facet ingrained with this ISR “package.” Critical to the future of grey zones, this facet must be ready to rotate into supportive combat operations at any time, effectively employing SCAR and AI while maintaining overall situational awareness. The MQ-9 is a prime candidate for both mission sets: targets, airspace and borders can be accurately tracked with a multitude of systems, FMV can cross-cue in seconds, and remains airborne for up to 21 hours at a time. While not the only asset capable of this mission set, it is or will be the most prevalent airframe in grey zone environments as COIN missions wind down. Though instructed at the FTU, SCAR would take approximately one month for typical squadron compliance;<sup>11</sup> this makes not only theory of, but proficiency in multiple mission sets critical for future crews.

### **Conclusion**

While practiced at FTUs, skill sets required by yesterday’s requirements are rarely expanded upon; ditched in favor of combat and weapons training as with integrated joint-operation fundamentals. As mission set changes, students must be proficient with the use of SAR, SCAR, AI, and flexibly working combined ISR taskings to avoid required molding to push ISR where it should be, rather than where it is.<sup>12</sup> This underscores FTU criticality as we transition to contested Russian grey zones where ISR assets have long been present but in

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<sup>11</sup> Karas, *As Contested Battlespace Grows, MQ-9 Explores New Roles*

<sup>12</sup> Downs, *In Pursuit of 21st Century Distributed Intelligence Surveillance and Reconnaissance Operations*

singular capacity. By joining the AOR, MQ-9s bring strengths – recognized and unknown – to the fight, but weaknesses begin at formal training by instructing students to continue the trend of isolated ISR prosecution. Airborne and naval assets must find, innovate, or expand on avenues of communication to open an increased flow of information for exponentially more efficient target prosecution. To be sure, joint operational training with the Navy may further eliminate knowledge gaps while contributing to precise mission completion. Building this foundation allows for heightened freedom of movement, thereby allowing centralized control with decentralized execution. This future must be recognized by all involved parties as we collectively move to confront a near-peer adversary engaged in geopolitical, strategic and military aggression.



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