Control of the Syrian airspace: Russian geopolitical ambitions and air threat assessment

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Russian Geopolitical Ambitions and Air Threat Assessment

Can Kasapoğlu

Russia has mounted its anti-access/area denial (A2/AD) footprint in the Levant and also boosted the Syrian Arab Air Defense Force's capabilities. Syrian skies now remain a heavily contested combat airspace and a dangerous flashpoint. Moreover, there is another grave threat to monitor at low altitudes. Throughout the civil war, various non-state armed groups have acquired advanced man-portable air defense systems (MANPADS), which pose a menacing challenge not only to the deployed forces, but also to commercial aviation around the world. In the face of these threats, NATO needs to draw key lessons-learned from the contemporary Russian operational art, and more importantly, to develop a new understanding in order to grasp the emerging reality in Syria. Simply put, control of the Syrian airspace is becoming an extremely crucial issue, and it will be a determining factor for the war-torn country's future *status quo*.

Russia's integrated air defense footprint in Syria was mounted gradually following its intervention, which began in September 2015. That year, the Armed Forces of the Russian Federation established the Hmeimim Air Base in the Mediterranean gateway city of Latakia, adjacent to the Basel al-Assad International Airport, named after the late heir apparent of Hafez al-Assad.

Russia "Flying High" in the Syrian Airspace

When Turkey downed a Russian Su-24 aircraft in November 2015, Moscow responded by beefing up its surface-to-air missile (SAM) capabilities in Syria. In this regard, advanced defensive strategic weapon systems, such as the S-400s and the S-300V4s, were deployed to the Hmeimim Air Base. This formidable posture was reinforced by high-end offensive assets, such as SS-26 Iskander short-range ballistic missiles and Su-35 air superiority fighters. In addition, Russian tactical bombers (e.g., Su-34s) started carrying air-to-air missiles during their missions. Finally, the Krasukha-4 electronic warfare system, which almost blinded eastern Ukraine, was also spotted in Syria in 2015. All in all, NATO's Supreme Allied Commander Europe at the time, General Philip Breedlove, depicted the Russian efforts as an attempt to build an "A2/AD bubble" in the Eastern Mediterranean.

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Strikingly, an engagement that took place in late 2017 starkly illustrated the present *status quo*. On December 13, a US Air Force F-22 stealth fighter deployed flares against two Russian Su-25s. While Washington explained that it was the Russians who crossed over the east of the Euphrates, Moscow insisted that the F-22 violated the de-confliction zone westwards, and an Su-35 air superiority fighter confronted it to protect the two Su-25 attack aircraft. Regardless of which argument was accurate, the political-military exchange highly resembled that of two neighbor states quarreling over a disputed national airspace issue.

Furthermore, one particular incident encouraged the Russians to invest more in the Syrian air defenses. On April 7, 2017, the US Navy's *USS Porter* and *USS Ross* Arleigh Burke-class destroyers struck Syria's al-Shayrat Air Base from the Eastern Mediterranean waters with a salvo of 59 Tomahawk Land Attack Missiles. The attack came after the regime's chemical weapons use in the town of Khan Shaykun, Idlib. At the time, the global defense community had a huge debate discussing whether the Russian air and missile defense contingent was capable of intercepting the incoming Tomahawk Block IVs or not, or whether Moscow sent orders not to do so to avoid an escalatory response.

Following the US strike, which targeted one of the most important bases of the Syrian Arab Air Force — where some Russian platforms were also deployed, but apparently Moscow was warned right before the operation — the Russian Defense Ministry bluntly announced its plans to bolster the Syrian air defenses. Some argue that the recent downing of the Israeli F-16I was a result of these efforts.

Downing of the Israeli F-16I: Putting an End to the Operation Orchard Legacy?

A major breakthrough in the Syrian Arab Armed Forces' air defense capabilities would produce key geopolitical results that would go well beyond "simple" military modernization. Robust air defenses had already transformed the Syrian skies from a permissive combat airspace into a contested combat airspace. Such a shift could limit Israel's surgical interventions. This would challenge "the Begin doctrine," namely preventing hostile strategic weapons proliferation beyond borders, which culminated with Operation Orchard, when Syria's secret nuclear reactor in Deir ez-Zor was hit by the Israeli Air Force in 2007.

Nevertheless, Israeli military planners can come up with a solution such as using tactical ballistic missiles or guided rockets to intervene in Syria. An alternative might be to assign the newly received F-35 stealth multirole fighters. However, the opportunity to test new SAM systems on F-35s, which will form the backbone of NATO's future tactical aviation, could whet the Russians' appetite, and could lead to additional arms transfers to Damascus. In fact, the Arab-Israeli conflicts during the Cold War offered good opportunities to make comparative assessments between American and Soviet weaponry. Moscow, having already tested more than 200 new weapon systems on the Syrian battleground, would not refrain from such a bonanza, which would also pave the way for further lucrative arms sales. Besides, since state orders constitute a substantial proportion of the Russian defense industry's workload at present, Syria is serving as an important reference for the Kremlin's military modernization plans.

"Minefields" at Low Altitudes: The Cases of the Su-25 and the T-129

As explained earlier, apart from the defensive strategic weapon systems risk at high- and mid-altitudes, the lower echelons of the Syrian airspace are also dangerous.

On February 3, 2018, on a mission in Idlib, a Russian Su-25 attack aircraft was downed, allegedly by MANPADS fire. Hay'at Tahrir al Sham, an al-Qaeda-affiliated group, claimed the responsibility.

MANPADS in the hands of terrorists pose a grave threat not only to military platforms, but also to commercial aviation. These weapons are shoulder-fired missiles — weighing some 15—20 kg — used against low-flying aircraft. MANPADS technology has achieved impressive improvements, in particular in the guidance systems and in avoiding countermeasures. Depending on certain technical features, a MANPADS' engagement envelope — the danger zone — is at an altitude of 10,000—15,000 feet, and it has a range of 3 to 7 kilometers.

It is estimated that up to 750,000 MANPADS might be present in the world. Open-source intelligence suggests that a broad array of non-state armed groups have managed to lay their hands on these dangerous weapons throughout the Syrian Civil War. Interestingly, although many of the Syrian Arab Army's stockpiles were looted, the types of MANPADS that Damascus did not possess, such as the Chinese FN-6, were also spotted in Syria, hinting at the possibilities of a dangerous gray and black market flow.

The Turkish T-129 incident is another case showing that flying at low altitudes in the Syrian airspace resembles an infantry platoon walking through a minefield. On February 10, 2018, Turkey lost a T-129 attack helicopter during Operation Olive Branch. There is no visible sign of MANPADS having been used in Turkey's gunship crash. Yet, there is the likelihood that the attack helicopter might have been hit by anti-aircraft gunfire.

In fact, rotary-wing platforms have become more vulnerable in contemporary hybrid conflicts. Since Operation Iraqi Freedom in 2003, each loss has made helicopter survivability in modern warfare more questionable. Keeping these platforms safe in the 21st century's contested airspaces is hard. After all, performing evasive maneuvers while flying very low in order to avoid MANPADS makes helicopters more prone to anti-aircraft gunfire. Unfortunately, there is no silver bullet solution for choppers, or even for light attack aircraft.

Syria As a Military Testbed

All in all, there is a significant showdown over the Syrian airspace, and the winner(s) will shape the country's future. What did not happen in and around this airspace? Following is a brief recap of the past six years.

In 2012, a Turkish RF-4E Phantom reconnaissance aircraft was downed by the Syrian air defenses; in the same year, the rebels downed a Syrian Mig-23 fighter aircraft at low altitude, marking the first aircraft loss for the regime. Again in 2012, the regime launched Scud missiles onto the rebel positions in Aleppo. Consequently, NATO deployed three missile defense contingents in Turkey. In 2013, the Turkish Air Force downed a Syrian Mi-17 helicopter. In 2014, an Israeli Patriot downed a Syrian Su-24 over the Golan Heights. In the same year, a Jordanian F-16 crashed near Raqqa — some claimed it was downed by ISIS — and the pilot was later executed, tragically. In 2015, notably, a NATO nation, Turkey, downed a Russian aircraft violating its airspace. Then, Russia established a robust A2/AD posture in Syria. In the same year, Assad's forces allegedly downed an American MQ-1 Predator drone over Latakia. In 2016, Russia sent the *Admiral Kuznetsov* aircraft carrier to the Eastern Mediterranean for combat operations, which was a highly symbolic move signaling to the West. In 2017, the United States hit Syria's al-Shayrat airbase with Tomahawks, downed a Syrian Su-22 attack aircraft, and intercepted several Iranian drones.

Finally, at the time of writing, a Russian Su-25 attack aircraft, an Israeli F-16I multirole fighter, a Turkish T-129 attack helicopter, and an Iranian surveillance drone were added to the record only within a week. All of these incidents reveal the tension in the Syrian airspace.

Key Takeaways and Policy Recommendations

Firstly, the Syrian skies can no longer be assessed through the lens of Operation

Orchard. Rather, Moscow's A2/AD contingent in the country, which remains there to stay for at least half a century, along with the boosted Syrian air defense capabilities, have turned the country's permissive airspace into a heavily contested one. Under these conditions, no Western aircraft — even the high-end stealth platforms such as the F-22s and the F-35s — can fly confidently within the engagement envelopes of the SAM systems in Syria, let alone non-stealth ones.

Furthermore, Russia has come into the picture as the new boss in the Syrian airspace — definitely so in the western axis of the country. For example, Ankara, being a NATO member, had to pursue top-level diplomatic talks with Moscow before launching Operation Euphrates Shield to al-Bab, and Operation Olive Branch to Afrin. This tellingly sets forth the new strategic balance. Moreover, the Russian contingent's A2/AD capabilities have provided it with the key advantage of influencing the operational tempo of the Turkish Air Force during cross-border campaigns.

The Syrian Arab Army vitally needs the Russian air cover and close air support to operate, whereas the Syrian Arab Air Force and the Syrian Arab Air Defense Force strongly depend on the Russian defense industry to sustain their combat readiness.

Strikingly, at the time of writing, the head of the State Duma Defense Committee, Vladimir Shamanov, hinted at the prospects of denying the Syrian airspace to foreign actors that did not receive permission from Damascus. Although it is not the official stance of Moscow, yet, the idea was speculated upon by one of the most influential figures of the Russian military establishment. Thus, the operational security of Operation Inherent Resolve might become problematic, should the tensions between the West and Russia continue to mount.

Secondly, NATO's decades-long dichotomy of eastern and southern flanks has been militarily rendered abortive. Simply put, many of the Russian weapon systems that the Baltic States might be worrying about have had their combat debuts in Syria. The Russian military-industrial complex is now able to test the detection and tracking limits of their radar systems, sensors, and integrated air defenses on various NATO aircraft in the Syrian front. In addition, Russian military planners now better understand the comparative analyses between several key platforms, including the US Air Force's F-22s and the Russian Su-35s (and the recently deployed Su-57s), under real battlefield conditions.

Consequently, NATO needs a holistic strategy to cover both flanks, and even more importantly, a thorough intelligence effort to understand the real meaning of Moscow's military scorecard in Syria. After all, open-source pieces of evidence suggest that, as of late summer 2017, the relatively small Russian Air Force group managed to strike some 90,000 targets and flew approximately 28,000 missions with negligible losses. According to Russian defense experts, this marked a true breakthrough, keeping in mind that the Soviets lost one combat aircraft on average for every 750 sorties flown in Afghanistan.

Thirdly, despite the emphasis on strategic weapon systems, tactical game-changers below 10,000—15,000 feet should be monitored carefully, especially regarding threats from terrorists and foreign fighters. The efforts in hunting down the Libyan MANPADS following the 2011 intervention were not effective. Some of these low-altitude air defense weapons, or their components, were spotted across a broad axis, ranging from Mali to Egypt. Furthermore, when it comes to Syria, we are talking about advanced MANPADS.

All in all, the geopolitical showdown over the Syrian airspace will determine the future of the war-torn country, as well as the further fallout for regional and global security.

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