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**Russia in Foreign Skies:
Assessing Russian Air Operations in Syria
and Violations of Turkish Airspace**

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Executive Summary

- Iraq has been enlisted to the alliance between Russia, Iran and Syria. While it is unlikely for Iraq to abandon its security cooperation with the US, Russian intelligence cooperation with Iraq will complicate this process. Moscow and Tehran have inched closer to their goal of presenting themselves as inalienable parts of the fight against ISIS, and Russian and Iranian influence and military presence in Iraq may have long-lasting consequences over the geostrategic balance in the region.
- Russian and Iranian presence in the Syrian battleground has been augmented. Against the Russian legitimization that it is there to fight against ISIS, the strikes have focused more on other Syrian rebels, including those backed by the US and Turkey, that pose a more acute threat to the survival of the regime.
- Russian operations in both Syria and Ukraine have incorporated a peculiar and essential diplomatic/political component. In both cases, Russia took bold, unexpected and comprehensive military action and imposed a new fait accompli. By manipulating the strategic calculations of its adversaries by taking the initiative, Russia has aimed to manipulate their decision-making to fall in line with Russia's preferred course of action. The latest example of this has been Moscow's sudden arrival in the Syrian battleground and then calling for cooperation with Washington to avoid "unintended incidents".
- While the US has agreed to maintain some level of communication with Russia, Washington has neither signaled that it is willing to cooperate with Moscow fully, nor that it is willing to disengage in Syria and Iraq. EDAM's current analysis suggests that such developments are unlikely to happen in the absence of a significant shift in the US' Middle Eastern policy.
- Recent violations of Turkish airspace and harassment of Turkish aircraft may be a result of a multiplicity of Russian and Syrian goals that have military and political implications for both Turkey and its NATO Allies. The most beneficial policy for Ankara at this point would be to clearly demonstrate Turkey's redlines and deter Russia and Syria from violating them – yet this would be a monumental task. Even if Moscow chooses to abide by Turkey's sensitivities for the time being, Russia's continued presence and activity in Syria would bring along the likelihood of other incidents in the future depending on the relationship between the sides, Russia-NATO competition and the geopolitical context.

- Both Syrian and Iraqi Kurds stand to benefit from cooperating with both Russia and the US, and it is in their best interest for Washington and Moscow to reach a level of understanding that would allow Kurds some freedom of movement without having to choose one or the other. Yet Russia's support for the Iraqi Kurds may cause Turkey to lose a significant ally in the region. The recent developments in Syria and Iraq, and the outright support of the US, and now Russia for the PYD, suggest that unless Turkey is able to stop the ongoing cycle of violence with the PKK and resolve the now frozen peace negotiations quickly, the process will most likely end up emboldening the terror organization, both militarily and politically.
- ✓ Turkey faces with airspace violations and harassment to the Turkish Air Force's combat air patrols in three categories. Type-1 category refers to open and identified violation by Russian fighter jets, while the type-2 category remains "unidentified nationality" violations by Mig-29s. Finally, the type-3 category is tantamount to the harassment by Syrian air defenses as a tool of escalation and provocation.
- ✓ One of the major problems is the overlap of inventories of the Syrian Arab Air Force and the Russian Air Force. We observe this overlap in Su-24, Mig-29, and recently delivered Mig-31 aircrafts.
- ✓ Airspace control planning and defensive counter-air operations are complex tasks that necessitate real-time data tracking and sharing, and combining several advanced sensors, command & control capabilities, radars, IFF capabilities, weapons and platforms.
- ✓ Recent violations probably aim response-time & capability testing and also reflect an effort to roll back Turkey's rules of engagement and air defense identification procedures that were altered in 2012 following the downing of a Turkish RF-4E 2020 Phantom jet.
- ✓ Turkey has reliable air defense assets at low and, to some extent, medium altitudes; while principle defensive counter-air operations depend on the Turkish Air Force's air-to-air combat capabilities.
- ✓ At this point, critical importance of Turkey's NATO membership should be better understood both politically and militarily.
- ✓ Should the Russian violations continue in a mounting volume, then NATO's dichotomy of eastern and southern flanks could disappear, and we might see a similar pattern with the Baltic airspace at Turkey's doorstep.

- ✓ A firm NATO answer to the threat could be deployment of F-22 Raptors at the Incirlik Base, and enhanced continuation of the Patriot mission in Turkey.
- ✓ Current Russian air strikes are mostly targeting rebel-held pockets that threaten lines of communication in the regime's core geopolitical axis, rather than an effort to confront ISIS.
- ✓ Involvement of Russia's Caspian Fleet in the operations and evidence suggesting the deployment of advanced electronic warfare assets adds complexity to the ongoing campaign.
- ✓ As the Russian air campaign unfolds, we might see a major regime offensive to clear rebel-held pockets and bastions in Hama – Homs axis.
- ✓ In case of a follow-on regime offensive, we will probably see Russian Su-25 attack aircrafts and Mi-24 attack helicopters as principal close air-support assets. Yet, such a course of action would necessitate Russian liaison personnel and military advisers attached to Syrian units at tactical levels. In this regard, managing the fire support coordination line for close air-support and air-interdiction missions will be critically important to keep interoperability between the Russian and the Syrian forces, and to ensure utmost operational effectiveness.

Introduction

On October 5, 2015, the Turkish Ministry of Foreign Affairs issued a statement indicating that a fighter aircraft belonging to the Russian Federation violated the Turkish airspace on October 3 at 12:08, over south of the Yayladagi / Hatay region that borders Syria¹. Then it is surfaced that consecutive violations also took place on October 4, 2015. Following the incident, top Turkish leadership voiced a harsh rhetoric criticizing Russia and reminding countermeasures based on Turkey's rules of engagement that were shifted following the downing of a Turkish RF4-E Phantom jet by Syrian air defenses in 2012. In this regard, President Recep Tayyip Erdogan stressed Turkey's NATO identity when firmly reacting to the violations and warned Moscow that it might be about to lose a friend which would really mean a lot². Prime Minister Ahmet Davutoglu indicated that even a "flying bird" that violates the Turkish airspace will

¹ Turkish Ministry of Foreign Affairs, Press Release no: 269, http://www.mfa.gov.tr/no_-269_-05-october-2015_-press-release-regarding-the-violation-of-turkish-airspace-by-a-russian-federation-aircraft.en.mfa, Accessed on: October 5, 2015.

² <http://www.sabah.com.tr/gundem/2015/10/07/sabretmemiz-mumkun-degil>, Accessed on: October 8, 2015.

have to face with dire consequences emanating from Turkey's rules of engagement³. However, harassment by Syrian air defenses, and violations by "unidentified nationality" Mig-29s have continued in the meantime.

As the Russian air operations unfold, there is a better chance to understand Moscow's and the Baathist regime's true intentions and capabilities. Yet, current target set, deployed assets, and manner of conduct suggest something way different from "simply" anti-ISIS operations. The trajectory of events has already been translated into a Russia – NATO crisis, as well as a top-topic of the Turkish domestic politics on the eve of parliamentary elections in coming weeks.

Russian Presence near NATO's Southern Flank: A Political Analysis

EDAM's previous analysis on Russian involvement in Syria⁴ highlighted four important geopolitical conclusions:

- a) Russian deployments in Syria are not solely aimed at countering ISIS, as Russia argues, but is a part of a bigger picture that includes assisting the Assad regime's survival and ensuring a pro-Russian entity; the former is coupled with increased Iranian presence in Syria.
- b) Russian involvement comes as part of a long-term Russian interest to regain its influence in its perceived hinterland, and emerges as a new front of the competition between Russia and the West.
- c) Russia stands to benefit from the recalcitrance and internal divisions among NATO members, and will aim to utilize its current involvement as a means of breaking the international isolation imposed on Moscow due to its annexation of Ukrainian territories.
- d) Russian involvement runs contrary to Ankara's policies and interests regarding Syria and may cause rifts in the Russian-Turkish relationship.

The developments since the [publication of EDAM's analyses](#) have come to confirm their validity. In a major development, it was reported on September 27th that Russia, Iran, Syria and Iraq had reached an agreement to share intelligence over ISIS, and had set up an

³ <http://www.hurriyet.com.tr/gundem/30237874.asp>, Accessed on: October 8, 2015.

⁴ Kasapoglu, C; Ergun, D, (2015, September 22) "Act of Desperation or Game Changer? Russian Deployments in Syria"

intelligence coordination center in Baghdad. This was followed Iraqi Prime Minister Haidar al-Abadi's remarks on October 1st that he would welcome Russian airstrikes in his country⁵.

Although it is very unlikely that Baghdad will completely abandon its security cooperation with the United States in the near future, increased Russian involvement in Iraqi decision-making and military planning will complicate the nature of Washington's ongoing cooperation with Iraq. Washington is not keen on sharing its intelligence with neither Russia nor Iran, and will have to ensure that the intelligence it will share with Iraq, which is essential to couple the operations of Iraq Security Forces on the ground and US-led coalition effort up in the sky, is not transferred to Kremlin or Tehran. By enlisting Iraq in the coalition between the Assad regime, Russia and Iran, the bid for the survival of the Assad regime has been strengthened and Moscow and Tehran have inched closer to their goal of presenting themselves as inalienable parts of the fight against ISIS. In the meantime Washington's attempts at convincing Baghdad to restrict its airspace to the Russian air-bridge to Syria have been foiled. Increased Russian and Iranian influence and military presence in Iraq may have long-lasting consequences over the geostrategic balance in the region, and runs contrary to the interests of Turkey, the Gulf States, the United States and potentially Israel.

With regards to Syria, it was suggested that Iran had also increased its presence in the Syrian battlefield, with the potential participation of Iranian troops assuming combat missions and Iraqi Shia militias backed by Iran, as well as increased presence of the Lebanese Hezbollah⁶. In fact, it has been reported that the commander of the Iranian Quds Forces, Qassem Soleimani has been actively cooperating with Moscow to plan Russia's engagement in Syria and continues to oversee ground operations against the Assad regime's opponents⁷. Russia has also furthered its deployments and operations, as discussed in the military analysis of this report. Although some Russian operations have targeted ISIS, a considerable amount has targeted other opposition forces that pose a more direct threat to the survival of the Assad regime. Furthermore, it has also been suggested that Russia is interested in expanding its

⁵ Radio Free Europe Radio Liberty (2015, October 2) "Iraqi Leader Says Would 'Welcome' Russian Air Strikes In Iraq"

⁶ Institute for the Study of War (2015, October 1) "Warning Update: Iran and Iraqi Shi'a Militias Deploy Ground Forces to Syria" Accessed on 7 October 2015 at: <http://iswresearch.blogspot.com.tr/2015/10/warning-update-iran-and-iraqi-shia.html>

⁷ Reuters (2015, October 6) "How Iranian general plotted out Syrian assault in Moscow"

naval base in Tartus⁸ and purported evidence of Russian nationals fighting in tandem with Syrian regime forces has been floated around the media. Hence the last few weeks have underscored the conclusion that Russian objectives in Syria are not limited to combating ISIS, but include a number of goals which, if successful, will ensure the permanence of Russian presence and influence in Eastern Mediterranean. Once again, increased Iranian presence, and Iran's cooperation and coordination with Russia in Syria stand as some other worrisome developments for Turkey, the Gulf States, the United States and potentially Israel.

Against all of this, Russia tries to portray its operations in Syria, and its coalition with Iran, Iraq and the Assad regime as the only viable alternative against ISIS. This is aimed at both gaining some international recognition and legitimacy for Moscow's broad range of engagement in Syria, convincing the international community, and especially the West, for the necessity of keeping Assad in his seat, and having an influence over both the fight against ISIS and the future of Syria in the long-term. As such, Russia has tried to manipulate the information regarding its operations in Syria, for example through claiming that its initial strikes were against ISIS whereas they clearly targeted areas without ISIS presence. Therefore Russian engagement in Syria has an information warfare component to support its political and diplomatic objectives, much akin to Russian engagement in Ukraine.

In fact, Russian operations in both Syria and Ukraine have incorporated a peculiar and essential diplomatic/political component. In both cases, Russia took bold, unexpected and comprehensive military action and imposed a new *fait accompli*. In both cases, accepting the *fait accompli*, which was in itself contrary to the interests of Russia's rivals, was presented as the alternative with the lesser risks and costs compared to competing with Russia or attempting to reverse the actuality. In other words, by manipulating the strategic calculations of its adversaries by taking the initiative, Russia has aimed to manipulate their decision-making to fall in line with Russia's preferred course of action⁹. Against the rather more traditional use of military force as a diplomatic tool in what is termed as gun-boat diplomacy, the Russian utilization depends on the initial use of military force (rather than its implied use as in gun-boat diplomacy) to craft a new reality, and then invite, or rather, oblige its adversaries to both follow the Russian line and cooperate with Russia for what is presented as

⁸ Institute for the Study of War (2015, September 30) "Warning Update: Russia Expanding Facilities at Tartus Naval Base" Accessed on 7 October 2015 at: <http://iswresearch.blogspot.com.tr/2015/09/warning-update-russia-expanding.html>

⁹ Snegoyava, M. (2015, September) "Putin's Information Warfare In Ukraine: Soviet Origins of Russia's Hybrid Warfare" *Institute for the Study of War*

a mutually beneficial scenario. The latest example of this has been Moscow's sudden arrival in the Syrian battleground – including the notification of the US just an hour before its air strikes in Syria – and then calling for cooperation with Washington to avoid “unintended incidents”. As will be discussed below, Moscow has done the exact same thing after violating Turkish airspace, and called on Ankara to discuss the issue and cooperate to avoid future incidents. A side goal of Moscow in utilizing this strategy was to force the West to abandon isolating Russia over its annexation of Crimea and ongoing meddling in Ukraine, as has been discussed in depth in the previous EDAM report¹⁰.

The initial Western response to the Russian overture in Syria appeared to play into the hands of Kremlin, with many European nations, as well as the US and even Turkey suggesting for a moment that Assad can play a role in a transition period. Yet there continues to be considerable distaste on the side of Washington over Russia's *fait accompli*, and mutual mistrust between the sides. Washington has criticized Moscow's involvement in the Syrian Civil War on numerous occasions, and almost daily since Russia's recent deployments. Against Moscow's calls for an active collaboration (for implicit motives listed above), Washington has argued that their talks will be limited to “basic technical discussions”¹¹ aimed at preventing accidents. In fact, there have been multiple reports of close-encounters between Russian and US planes; in one instance Russian jets closed to 20 miles from US operated F-16s¹², and in another where Russian jets made intercept tracks to US Predator drones, which means purposefully flying close enough to make their presence known without impeding flight¹³.

At the time of writing, there is little to give credence to the suggestions voiced in parts of the Turkish and international media that the US and Russia have agreed on how to resolve the Syrian Civil War. Washington and its allies continue to have many interests in the region that conflict with Russia's goals, and hence have many potential sources of friction for the future, including but not limited to Assad's future, the opposition groups that they back, Russia's continued presence in Syria, Iran's and Hezbollah's influence, the treatment of the moderate Syrian opposition, to name a few. In fact, reports suggest that in some of its recent airstrikes

¹⁰ Kasapoglu, C; Ergun, D, (2015, September 22) “Act of Desperation or Game Changer? Russian Deployments in Syria”

¹¹ The New York Times (2015, October 7) “A Semantic Downgrade for U.S.-Russian Talks About Operations in Syria”

¹² The Aviationist (2015, October 6) “U.S. F-16s came within 20 miles from Russian Su-34s in Syria”

¹³ Fox News (2015, October 7) “EXCLUSIVE: Russian jets 'intercept' US predator drones over Syria, officials say”

which were done in tandem with Syrian regime forces on the ground, Moscow targeted opposition forces that were supported by the US – purportedly destroying the main arms depot of Falcons of Mount Zawiya Brigade (Liwa’ Suqour Jabal al-Zawiya) in Damascus¹⁴. So far, Washington has neither signaled that it is willing to cooperate with Moscow fully, nor that it is willing to disengage in Syria and Iraq. EDAM’s current analysis suggests that such developments are unlikely to happen in the absence of a significant shift in the US’ Middle Eastern policy, for example, under a scenario where the next administration following the Presidential elections favors disengagement from the region.

The Kurdish Wildcard:

Iraqi Kurds (under KRG) became important partners of the US in the Second Gulf War that began in 2003. Syrian Kurds (under PYD) have proved to be the most reliable partners of Washington on the ground in its operations against ISIS. In the face of the inadequacies regarding Iraqi Security Forces and in the absence of a strong, reliable alternative in the Syrian battleground, both forces are now Washington’s primary partners on the ground in its operations against ISIS in both Iraq and Syria.

On the other hand, EDAM’s previous analysis has highlighted the implicit understanding between the Assad regime and PYD. While PYD has suggested at times that it desires Assad to leave his seat upon the resolution of the Syrian Civil War and has in fact clashed with regime forces in some areas – the sides have also refrained from clashing for the most part and the regime has allegedly relinquished control over some of its areas to Kurdish forces. In fact recently, Bashar al-Assad has argued that as long as Syrian unity is maintained, he would have no vetoes towards Kurdish demands, and these could be discussed after ISIS, al-Nusra and the rest of the opposition groups are defeated¹⁵. To compliment this, PYD leader Saleh Muslim suggested that “if the [Assad] regime collapses because of the Salafis [fundamentalist Islamic militants] it would be a disaster for everyone”¹⁶. In his address to the UN General Assembly on September 28th, President Putin also showed his support towards Syrian Kurds, stating: “we should finally acknowledge that no one but President Assad’s armed forces and

¹⁴ Radio Free Europe Radio Liberty (2015, October 8) “Russian Warships Launch Missiles Against IS In Syria”

¹⁵ Rudaw (2015, September 16) “Assad: we do not have a veto on any Kurdish demand”

¹⁶ The Independent (2015, September 24) “Syria civil war: Kurdish leader says collapse of Assad regime ‘would be a disaster’ despite its treatment of his people”

(Kurdish) militia are truly fighting the Islamic State and other terrorist organizations in Syria”¹⁷.

Both the KRG¹⁸, which has been a newfound ally for Turkey, and the PYD have lit a green light to Russian involvement against ISIS. For the Kurds, the most desirable outcome is cooperation, or at least a level of understanding between Russia and the US that would allow the Kurds to reap the benefits of cooperating with both sides. Except for the rather unlikely case in which the US and Russia engage in a direct competition over Syria and Iraq in a scenario that would resemble a proxy war, both Kurdish parties would probably have a freedom of movement with regards to their relations with Washington and Moscow. This would likely enhance their international recognition, augment their military capabilities and ensure their survival as governing entities in their respective areas of control¹⁹.

This would be another hard pill to swallow for Turkey. If Russia’s influence over the KRG increases considerably, Ankara would lose its sole remaining ally in its hinterland. On the other hand, any development that strengthens the PYD and its bid for autonomy is seen as a natural threat for the traditional Turkish establishment. In his latest remarks, President Erdogan has once again underlined PYD’s ties to the PKK²⁰ with which the country has been battling for over 30 years. Turkey’s recent anti-terror operations against the PKK have been criticized by Iran, Iraq and the Arab League (with the exception of Qatar), and Turkey’s allies in NATO have been wary, if not outright critical, towards the resumption of the fighting between the sides and Ankara’s current position. Turkey’s opposition to the PYD has already been a thorn in its relations with the US and Ankara’s negotiations for being a part of the anti-ISIS coalition. The recent developments in Syria and Iraq, and the outright support of Russia and the US for especially the PYD, suggest that unless Turkey is able to stop the ongoing cycle of violence with the PKK and resolve the now frozen peace negotiations quickly, the process will most likely end up emboldening the terror organization, both militarily and politically.

¹⁷ Reuters (2015, September 29) “Obama, Putin spar over Syria”

¹⁸ Reuters (2015, October 3) “Iraqi Kurdish leader urges Russia, U.S. to coordinate in anti-IS fight”

¹⁹ Taştekin, F. (2015, October 6) “Kürtlerin tercihi Ruslar mı Amerikalılar mı?” *Radikal*

²⁰ Bila, F., (2015, October 8) “Cumhurbaşkanı Erdoğan Japonya Yolunda Gündeme İlişkin Değerlendirmelerde Bulundu” *Milliyet*

Russian Violations of NATO Airspace: Implications for Turkey and the Transatlantic Alliance

Russian violations of Turkish, and hence NATO airspace have served as clear wakeup calls for those in the transatlantic community that hoped for cooperation with Moscow in Syria. In three separate incidents on October 3rd and 4th Turkish airspace was violated by a Russian SU-30 and a Mig-29 with unidentified origin, and Turkish air patrols were harassed by Syrian air defenses. Aside from the military implications that will be analyzed in depth in the subsequent sections, such harassments may have the following political objectives:

- A Russian attempt to humiliate, provoke and test the resolves and responses of Turkey and NATO.
- An attempt (possibly Syrian in the case of the unidentified Mig-29) to render Turkey's "rules of engagement" irrelevant and cause Turkey to scale back its military, political and diplomatic engagement in the Syrian Civil War out of fear of Russia's recent involvement and the subsequent uncertainties.
- Muscle flexing to signal Ankara that its support for rebel forces and its plans for establishing safe-zones will not be tolerated and that Moscow will actively and firmly defend the Assad regime.
- Signaling that Russia and Syria will have the ultimate control over Syrian airspace and would hinder other forces from operating in Syrian airspace if they deem necessary.
- Violating and contesting NATO airspace as part of the Russia-NATO competition, similar to the ongoing situation over Eastern Europe and an assertion of Russian military presence near NATO territories.
- Russian assertion that the West and the international community have to take Russian interests into consideration while formulating their policies regarding the Syrian Civil War.

Turkey and its NATO Allies have dismissed Russian explanation which claimed the violation was accidental and due to weather conditions, and exchanged messages of solidarity amongst the Alliance²¹. Still, had Turkey responded to Russian and potentially Syrian brinksmanship by applying its rules of engagement and downing the aircraft, it would certainly result in a major diplomatic crisis and further escalation in NATO's southern flank. Since the violations,

²¹ The Washington Post (2015, October 6) "Russia offers to reopen, broaden military talks with the U.S. over Syria"

statements from Ankara, especially those made by Prime Minister Ahmet Davutoglu and President Recep Tayyip Erdogan, have followed a calm yet firm tone. In his latest remarks, President Erdogan adopted a calmer tone, expressing Turkey's resentment, underlining Turkey's place in NATO, dismissing Russian claims that its operations are aimed against ISIS, expressing once again the need to establish "a safe zone cleared from terror" near Turkish borders, along with the establishment of a no-fly zone and construction of housing to host Syrian refugees and internally displaced persons²². Erdoğan also claimed while Turkey has appreciated cooperating with Russia in major energy projects, Russia could be replaced and that it would suffer more than Turkey in the event that the partnership of the sides are damaged. Erdoğan's stance displays once again that even though Turkish leaders may push for an independent and even contrasting foreign policy with their Western partners time and again, in moments of crisis, Ankara is quick to remember the value of its Alliance and. In the meantime, while echoing the calm tone, Prime Minister Davutoğlu has remarked "Let me put it bluntly: Turkey's rules of engagement are valid for Syria's, Russia's or another country's warplanes. The Turkish Armed Forces have been issued with open instructions"²³.

It is unclear whether Ankara is displaying its resolve or bluffing. There have been multiple instances where Turkish policymakers made bombastic statements of Turkish might and resolve but took no action to back these inflated remarks – causing some to argue that Ankara is all bark and no bite. In other instances however, such as the downing of Syrian aircraft under its rules of engagement or its comprehensive anti-terror operations against the PKK, Ankara has surprised spectators and has indeed showed its deterrent resolve.

Still, Russian presence in Syria presents multiple dilemmas for Ankara. If Turkish rules of engagement have actually been bent or shelved due to the recent violations, then Ankara will appear weak, lose prestige and lose influence over both the Syrian Civil War and regional politics. Furthermore, it would be tantamount to acknowledging the increasing influence of Russia and Iran – Turkey's two historical rivals – over the region. Unless it is part of a very unlikely scenario of a complete reversal of Turkey's Syria policy and withdrawal in all aspects of the civil war, and the preference of more isolationist and West-oriented policies resembling the pre-2000 Turkish foreign policy, this would considerably damage Turkish interests in the short and long terms.

²² Bila, F., (2015, October 8) "Cumhurbaşkanı Erdoğan Japonya Yolunda Gündeme İlişkin Değerlendirmelerde Bulundu" *Milliyet*

²³ Bekdil, B. E. (2015, October 8) "Turkey Now A Theater of West-Russia Dispute Over Syria" *Defense News*

If Ankara indeed protects its airspace by downing identified Russian aircraft or unidentified aircraft which may turn out to be of Russian origin in the future, then both Turkish-Russian relations and NATO-Russia relations will be significantly damaged. If its NATO Allies back the Turkish position tangibly, then NATO's southern flank will be an area of intense competition between NATO and Russia – though with little risk of an open conflict between the sides. If NATO does not back Turkey and instead leaves Turkey alone (which would possibly be the worst-case scenario for Ankara), then Turkey would have to face both a significant diplomatic crisis with Russia, potential escalations and spillovers near its border, and would be left unable to shape regional events on its own.

The most beneficial policy, yet also the hardest to attain for Ankara would be to clearly demonstrate Turkey's redlines and deter Russia and Syria from violating them. While there are some means that Turkey can potentially employ – for example militarily through increased Turkish presence near the border, the deployment of NATO air defenses, the downing of Syrian aircraft, radar locks on Russian aircraft in operating in close proximity to the border, as well as diplomatic, political and economic means – none of these means would have a certainty of success of convincing Russia to disengage. Furthermore, while Moscow may prefer to abide by Turkey's sensitivities for the time being, Russia's continued presence and activity in Syria would bring along the likelihood of other incidents in the future depending on the relationship between the sides, Russia-NATO competition and the geopolitical context.

In either scenario, Turkey will have to suffer the adverse effects of Russian support towards the Assad regime. Russia has confirmed the analysis that its operations are targeted not just against ISIS, but mainly towards rebel organizations, some of which Turkey has backed. It has even been argued that if Russia, Iran and the regime forces make gains in the long run, this may result in the influx of both refugees and militants to Turkey²⁴. If Assad regains his power, he will continue to be a bitter enemy of Turkey, which in the past has been reflected in ways including Damascus' active support towards the PKK terror organization and hosting of its leader Abdullah Öcalan. The same scenario will be true if the elite of the Baathist dictatorship, with or without the presence of the Assad family, retain their control over Syria, as Turkish-Syrian relationships are at the point of no return. In general, Turkey's historical and strategic rivals, Russia and Iran, may end up making tangible gains as a result of their

²⁴ Taştekin, F. (2015, October 8) "Leyleklere selam olsun!" *Radikal*

continued presence beyond Turkey's southern borders. In sum, Moscow's actions so far have clearly displayed that Russian involvement in Syria will be precarious for Turkish and Transatlantic interests for the foreseeable future.

A Military Assessment of the Russian Air-Ground Campaign in Syria

First of all, it should be underlined that the Russian operations over the Syrian skies enjoy a much more sustainable and efficient logistical infrastructure than the US-led anti-ISIS coalition. The Russians are the only foreign nation flying from bases located within the Syrian territory, and thereby, they need no air-refueling tanker-aircraft sorties for conducting air-ground strikes. This advantage enables lower operational costs and also increases on-station times and high sortie-rates of the Russian Air Force especially against pop-up, mobile targets. This is the primary reason that made the Russian military planners to prefer tactical aviation for the airstrikes instead of relying on bombers, as forward (close) basing supports tactical aircrafts with relatively lower combat radius. Especially given fighter aircrafts' limited payloads when compared to bombers, forward basing comes into the picture as a major advantage for tactical military aviation operations²⁵. Besides, having the support of the Baathist regime, the Russian campaign has clear advantages in target acquisition and intelligence capabilities. The only high operational cost of the Russian campaign, albeit in mid to long term, would probably be sustaining the air-bridge between the Russian mainland and the forward operating base in Latakia through constant strategic airlifting.

On the other hand, forward basing, especially a high-risk one in a civil war-torn country, brings about operational security risks at the same time. This is why the Russians and the Baathist regime have to pay utmost attention to the security of the forward operating base and adjacent areas. In this respect, Russian sources report regular and intensive Mi-24 gunship patrols around the base over Latakia²⁶. On the other hand, since the outset of the civil war, the Syrian battleground has become a major arena of MANPADS threat at low-altitudes. Although Mi-24 *Hind* gunships are robust assets, they are not untouchable. Monitoring regional and global conflicts and defense trends, EDAM military assessment noted several

²⁵ For a comprehensive assessment between different air operations concepts see: Forest, E, Morgan. *Crisis Stability and Long Range Strike: A Comparative Analysis of Fighters, Bombers, and Missiles*, RAND Corporation, Santa Monica, 2013.

²⁶ <https://www.rt.com/news/317841-latakia-airbase-mi24-gunboats/>, Accessed on: October 8, 2015.

Mi-24 *Hind* shot down cases as recently as 2014 in Armenian – Azerbaijani border²⁷ and eastern Ukraine²⁸. Last but not least, it should be underlined that the Soviets put the number of helicopter losses in Afghanistan at 329 with 127 of those attack helicopters²⁹, at the hands of Afghan Mujahedeen equipped with much less capable low-altitude air defenses when compared to the current groups in Syria. Without a doubt, modern *Hinds* are equipped with more effective countermeasures against low-altitude air defense systems; however, MANPADS technology has also improved along with rotary-wing platforms' survivability on the battlefield.



A Mi-24 *Hind* during patrol mission over Latakia, Russia Today. <https://www.rt.com/news/317841-latakia-airbase-mi24-gunboats/>, Accessed on: October 8, 2015.

From a military standpoint, we see that the Russian Air Force is now running air-ground missions over Syria in four geostrategic axes. The first and initial axis of the campaign (September 30 – October 1) focused on the rebel-controlled areas between Hama and Homs³⁰. Although being challenged by ISIS, these pockets are occupied by other groups in the Syrian civil war and threaten the lines of communication between the Hezbollah and the regime controlled border areas, as well as geopolitical integrity between the Mediterranean gateway of the regime and Hama-Homs region. Secondly, also during the initial phase of the

²⁷ <http://theaviationist.com/2014/11/13/video-armenian-mi-24-shot-down/>, Accessed on: October 8, 2015.

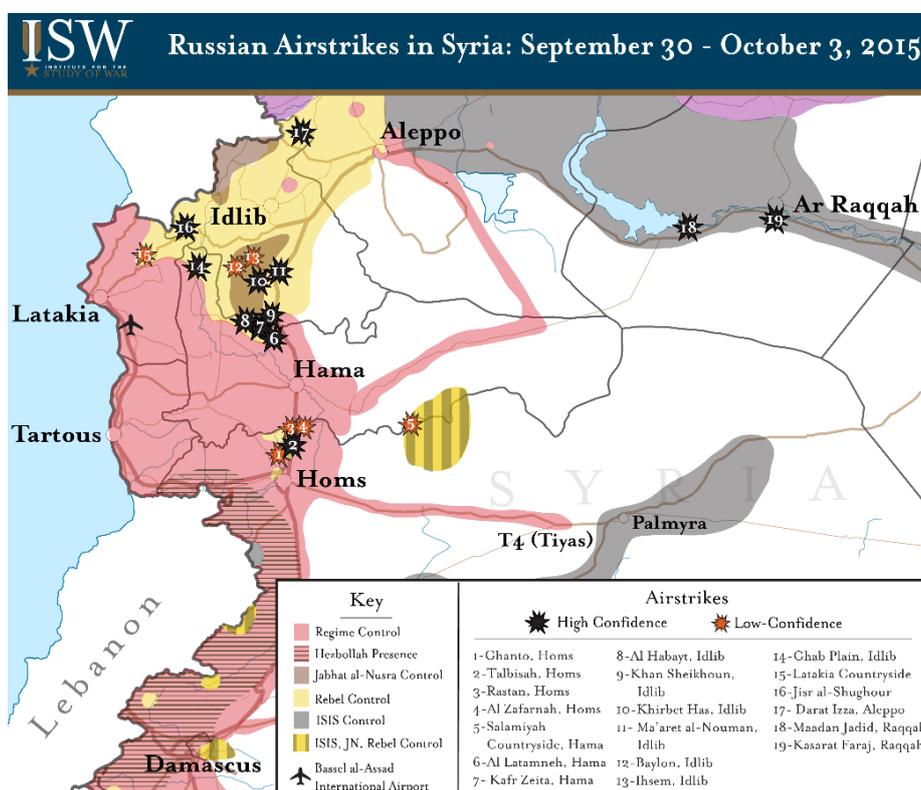
²⁸ <http://theaviationist.com/2014/05/02/hinds-shot-down-donetsk/>, Accessed on: October 8, 2015.

²⁹ Andrew, S. Groenke, *CAS, Interdiction, and Attack Helicopters*, Thesis-Naval Postgraduate School, Monterey-California, 2005, p.20.

³⁰ ISW, Russian Air Strikes in Syria: September 30 – October 1 2015, http://www.understandingwar.org/sites/default/files/Russian%20Airstrikes%2030%20SEP%20-%2001%20OCT-01_11.png, Accessed on: October 6, 2015.

campaign, Idlib – Aleppo axis including Jisr al Shughour –albeit excluding many rebel-held positions in Aleppo– were targeted by the Russian Air Force. Resembling the Hama-Homs axis, this region is controlled by rebel groups other than ISIS, and constitutes a barrier between Aleppo and other regime-held main areas. In the meanwhile, the Russians also conducted a few air strikes targeting ISIS-stronghold Raqqa³¹. As the Russian airstrikes continued between October 1 – October 3 period, we have monitored intensification of operations over the ‘non-ISIS rebel’ held areas in Hama – Homs axis as well as Idlib³².

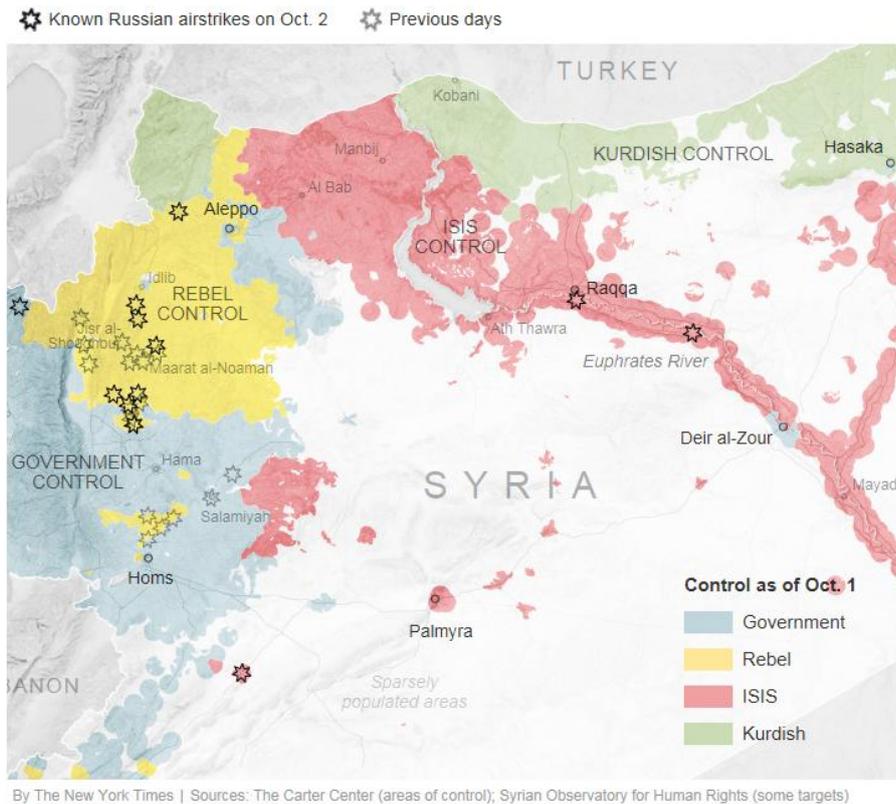
A detailed and comparative mapping of the Russian strikes in Syria and control of territory suggest that the Russian operations cannot be depicted as “anti-ISIS airstrikes”, but more of an advanced military support to the Baathist regime in conjunction with Assad’s forces’ geostrategic priorities.



http://www.understandingwar.org/sites/default/files/Russian%20Airstrikes%2030%20SEP%20-%20003%20OCT-01%20%283%29_3.png, Accessed on: October 6, 2015.

³¹ Ibid.

³² ISW, Russian Air Strikes in Syria: September 30 – October 1 2015, http://www.understandingwar.org/sites/default/files/Russian%20Airstrikes%2030%20SEP%20-%20003%20OCT-01%20%283%29_3.png, Accessed on: October 6, 2015.



http://www.nytimes.com/interactive/2015/09/30/world/middleeast/syria-control-map-isis-rebels-airstrikes.html?_r=0,

Accessed on: October 6, 2015 (The New York Times citing the Carter Center for areas of control and Syrian Observatory for Human Rights for identifying some targets)

Assessing the Underlying Military Objectives of the Russian Airstrikes

As seen in the correlative mapping of control of territory in Syria and initial concentration of the Russian air strikes, and given the Russian Air Force's operational tempo and target set up until now, EDAM military assessment concludes that:

- ✓ The Russian air-ground operations' main military objective is to consolidate the Syrian Baathist regime's lines of communication by clearing rebel-held pockets and bastions between the core regime strongholds.
- ✓ Such a military objective is in conjunction with Assad's forces' geostrategic reading of the conflict. Besides, the Russian courses of action in Syria could further facilitate establishment of a Micro-Alawite Baathist state with a gateway to the Mediterranean.

- ✓ Without a doubt, we are not seeing an anti-ISIS operation in Syria, and airstrikes in Raqqa should be seen through the lens of the Russian strategic tradition's deceptive operational art, in Sovietology terms, *maskirovka*.
- ✓ As the airstrikes unfold and start eroding the rebel-held positions, we will probably see new regime offensives especially around Hama and Homs areas. In this regard, some sources also report prospects of a regime rescue mission to relieve the besieged Kweiris Airbase that would also serve as a symbolic victory³³.
- ✓ Any sign of offensive positioning and concentrations by the regime's elite *praetorian* units, especially the 4th Armored Division and some subunits of the 3rd Corps, which are expected to act as principal maneuver assets within the strategy mentioned above, would give important hints about the timing of a possible regime offensive.
- ✓ As underlined in [previous EDAM reports](#), the Baathist regime relies on a 'selective deployment' strategy under which it uses a number of politico-militarily reliable units. Therefore, should Assad's forces manage to clear the rebel-held pockets that threatens the regime's core territories' geopolitical integrity, it would relieve an important proportion of the regime's units for advancing in other fronts, for example a further offensive to recapture Palmyra.
- ✓ In case of a follow-on regime offensive, we will probably see Russian Su-25 attack aircrafts and Mi-24 attack helicopters as principal close air-support assets. Yet, such a course of action would necessitate Russian liaison personnel and military advisers attached to Syrian units at tactical levels. In this regard, managing the fire support coordination line for close air-support and air-interdiction missions will be critically important to keep interoperability between the Russian and the Syrian forces, and to ensure utmost operational effectiveness.

Russian Airstrikes and Violations of the Turkish Airspace

Apart from the Russians' operational and strategic intentions, another key issue is the violations of the Turkish, and thereby NATO, airspace.

³³ Stratfor, "Syria Braces for New Offensives", <https://www.stratfor.com/sample/analysis/syria-braces-new-offensives>, Accessed on: October 8, 2015.

Planning for Airspace Control and coordinating effective control mechanisms, especially during military contingencies, is not an easy task. From a doctrinal standpoint, airspace control planning necessitates key principles such as: interoperability of equipment-personnel-terminology, mass and timing of airspace control operations, unity of effort between different bodies, integrated planning cycles, and a careful consideration of degradation factor that could emanate from several parameters like combat losses, cyberspace operations, communication problems, electronic warfare, and environmental conditions³⁴.

Contemporary (US) doctrinal approaches handle the methods of airspace control in two categories ranging from *positive control* to *procedural control*. Briefly, positive control methods aim to positively identify and track air assets by using radars, “identification friend or foe” (IFF) systems, other sensors, digital data links, selective identification feature, and other communications systems. On the other hand, procedural control methods “*relies upon previously agreed to, and distributed, airspace control procedures and measures*” such as, comprehensive air defense identification procedures and **rules of engagement**, aircraft identification maneuvers, fire-support coordination measures, an airspace coordinating measures³⁵.

At this point, *rules of engagement (ROE)*, a key term that has been widely discussed but hardly understood in Turkey, come into the picture. ROE is a set of directives issued by authority to delineate limitations and circumstances under which forces (of a state) will initiate and / or carry on combat engagement with other forces encountered³⁶. In airspace control, ROE and air defense identification procedures are designed to give air and missile defense forces a framework of freedom to engage hostile aircraft (both manned and unmanned) as well as missiles. These procedures are established in airspace control plan (ACP) and promulgated in the airspace control order (ACO)³⁷.

In doctrine, defending airspace against hostile aircraft and missile penetration falls under *Defensive Counterair Planning and Operations (DCA)*. DCA depends on a complex system of systems that consists of active and passive air and missile defense measures and joint command & control infrastructure, as well as a mix of sensors, communications, and weapons. Enemy threats are categorized as manned and unmanned aircraft and cruise

³⁴ The US Joint Chiefs of Staff, *Joint Airspace Control – Joint Publication 3-52*, 2014, pp. III-3 – III-4.

³⁵ *Ibid.* p.III-8.

³⁶ The US Department of Defense, *Dictionary of Military and Associated Terms*, Joint Publication 1-02, 2010 (amended through 2011).

³⁷ The US Joint Chiefs of Staff, *Joint Airspace Control – Joint Publication 3-52*, 2014, pp. III-5.

missiles, along with ballistic missiles as category-2 threats. Such a complex threat calculus necessitates continuous surveillance, and data-tracking-evaluation-dissemination³⁸. Furthermore, DCA is supported by *Joint Intelligence Preparation of the Operational Environment (JIPOE)* and *Intelligence Preparation of the Battlespace (IPB)*. Briefly, *JIPOE* is used to support Counterair planning by identifying hostile missile and air capabilities and their employment conduct; while *IPB* helps visualizing the operational environment, analyzing hostile air and missile capabilities, and identifying probable hostile intent and attack locations³⁹.

The Real Meaning of Turkey's New Rules of Engagement

In the light of the military doctrinal discussion above, briefly, what we should understand from the shift in Turkey's rules of engagement following the downing of an RF-4E Phantom jet boils down to, more or less, the following steps:

- ✓ After the 2012 incident, Ankara altered the conditions for its military assets to initiate and carry on combat engagements with Syrian aircrafts and missiles (but not in a manner to cover the SAM threat, as we understand), namely rules of engagement and related procedures.
- ✓ This shift was planned and executed under Turkey's airspace control plan and airspace control order to particularly oversee the Turkish airspace in the vicinity of Syrian territory.
- ✓ According to the new airspace control plan and related rules of engagement and air defense identification procedures, Ankara revisited its Defensive Counterair Operations Planning. In this regard, the Turkish Armed Forces concentrated low and mid air defense assets, namely Stinger-mounted Zipkin and Atilgan systems for covering low altitudes and (improved) Hawk air defense systems for covering mid-altitudes⁴⁰.
- ✓ Turkey also revisited combat air patrols to ensure 24-hours airspace cover and constant rotation of flying fighter jets, as Turkish defensive Counterair operations and capabilities are mostly based on air-to-air combat capabilities, especially at

³⁸ The US Joint Chiefs of Staff, *Countering and And Missile Threats – Joint Publication 3-01*, 2012, p.xxi.

³⁹ Ibid. p.xx.

⁴⁰ <http://www.hurriyet.com.tr/gundem/21253207.asp>, Accessed on: October 8, 2015.

mid-high and high altitudes, rather than air defenses that Turkey lacks and pursues to handle through the ongoing T-Loramids project.

- ✓ All the aforementioned parameters led to the downing of Syrian assets (a Mig-23 aircraft, a Mi-8 transport helicopter and an unmanned aerial vehicle) by Turkish aircraft and brought about a warning and deterrence mechanism that starts at beyond Turkey's airspace.

Therefore, the current Russian and Syrian challenges posed to Turkey aim to cause a roll back effect on the aforementioned set of procedures and related conduct and / or tries to test the Turkish Armed Forces' reaction times and capabilities, as well as Ankara's political will and intentions. More importantly, as Turkey is a North Atlantic Treaty Organization member nation, the Russian challenge in the southern flank of the Alliance is becoming more similar to the airspace violations in the eastern flank of NATO, a development that adds fuel on fire.

Assessing Recent Airspace Violations and Harassment

Categorically, we can talk about three different "types" of violations and harassments that Turkey has had to encounter recently.

The first category refers to the violations conducted by identified Russian aircraft. With regard to the identified and open Russian violations, say two consecutive violations in recent days, EDAM military assessment can easily confirm the responsible nation because the violator aircraft was reported as Su-30SM 'Flanker'⁴¹ that the Syrian Arab Air Force does not operate⁴². Moscow's decision to deploy Su-30 SM 'Flanker' air superiority fighters in Syria was not a secret due to early IMINT evidence, as a [previous EDAM report discussed in detail](#). The Russian explanation for the violation was "navigational mistakes", an unconvincing one given Moscow's manner of conduct in the eastern flank airspace of NATO.

Jane's Defence explains the presence of Su-30 SM 'Flankers' in Syria within the context of escort missions to protect other tactical fighter-bombers (*Su-24, Su-34*) and attack aircraft (*Su-25*). Although Jane's Defence's explanation makes sense to a considerable extent, EDAM military assessment also considers a long-term geopolitical planning that incorporates a possible mission of protecting a Russian-satellite micro-Baathist state in the Levant-Syria

⁴¹ <http://www.hurriyet.com.tr/abd-disisleri-bakani-kerry-turkiye-rus-ucagini-dusurebildi-30235078>, Accessed on: October 8, 2015.

⁴² For comprehensive list of inventories see: IISS, *Military Balance 2015*, Routledge, London, 2015.

core. In fact, NATO's Supreme Allied Commander Europe (SACEUR), General Breedlove, voiced his concerns about the Russian plans of building an "anti-access area-denial (A2-AD) bubble" in the Eastern Mediterranean⁴³.

Therefore, the 'type-1' category airspace violations could signal the harbingers of a broader NATO – Russia competition over the Turkish airspace resembling the Baltic airspace and NATO's eastern flank. Ankara's early reactions to the Russian violations and rhetoric voiced by the Turkish elite suggest that the Turkish foreign policy will seek for more robust NATO support to counter the Russian threat coming from the Syrian territory, due to the strategic balance in Turkish – Russian political-military capacities which is clearly in favor of Moscow.

The second category of violations remains the 'ambiguous and unidentified' ones that Turkey could not confirm whether the violator aircraft is operated by the Russian Air Force or the Syrian Arab Air Force. In this respect, the most important incident was noted on October 4, 2015. The Turkish General Staff reported that Turkish F-16s flying along the Turkish – Syrian border were harassed by a Mig-29 of an "unidentified nation" by locking on the Turkish F-16s⁴⁴. Indeed, both the Syrian Arab Air Force and the Russian Air Force operate Mig-29s. Syria first acquired its Mig-29s in 1987 during the last years of the Cold War. Damascus was set to receive Mig-29M Fulcrum advanced variant, and initiated plans to upgrade its older Mig-29s in 2009 before the civil war erupted⁴⁵. Open-source military intelligence suggests that the Baathist regime has some 30 Mig-29 variants organized in two fighter squadrons as of 2015⁴⁶, while the Russian Air Force, along with naval aviation, enjoys Mig-29 variants in hundreds⁴⁷.

The main hardship in the 'type-2' category violations is the tactical ambiguity that leads to strategic uncertainty. Clearly, identifying a Mig-29's "nationality" is not an easy task, especially if the violator aircraft intentionally aims to create ambiguity through several measures such as flying unmarked or false-flagged, keeping radio-silence, or flying transponders switched-off as many Russian flight incidents have been reported over the Baltic

⁴³ <https://www.washingtonpost.com/news/checkpoint/wp/2015/09/29/top-nato-general-russians-starting-to-build-air-defense-bubble-over-syria/>, Accessed on: October 8, 2015.

⁴⁴ <http://www.milliyet.com.tr/tsk-mig-29-lar-taciz-etti-gundem-2127230/>, Accessed on: October 8, 2015.

⁴⁵ IHS Jane's, *Jane's Sentinel Security Assessment-Eastern Mediterranean – Air Force: Syria*, June 2012, p.3.

⁴⁶ IISS, *Military Balance 2015*, Routledge, London, p.353.

⁴⁷ *Ibid.* p.191.

region⁴⁸. Furthermore, such Russian and / or Syrian manner of conduct causes the scramble of Turkish jets for identification missions that could end up with unforeseen engagements due to risky identification maneuvers and radar lock-on situations, especially under the current rules of engagement.

[Russian deployments in Syria were never reported to incorporate Mig-29s](#), given open-source reports, visual evidence, or IMINT assessment. In fact, relying on a well-balanced set of air-superiority fighters, tactical fighter-bombers / interdicator aircrafts, attack aircrafts, and attack helicopters, Moscow would not need additional Mig-29s over the Syrian skies. Thus, probably the Mig-29s, which harassed the Turkish combat air patrols and violated the Turkish airspace, were flown by the Syrian Arab Air Force. And most probably, the Syrians wanted to operate under the Russian cover to try a roll back in the Turkish rules of engagement in order to resume air-ground operations along the northern and northwestern border areas of the country.

Nevertheless, overlap in Syrian and Russian inventories remains the most challenging aspect of the ‘type-2’ violations and harassment. So much so that, in September 2014, Israeli Patriot batteries shot down a Syrian Su-24 that violated the Israeli controlled airspace some 800 meters at an altitude between 10,000 – 14,000 feet⁴⁹.



Reported snapshot of the Su-24 shot down by Israeli Patriot batteries, the aviationist, <http://theaviationist.com/2014/09/24/su-24-shot-down/>, Accessed on: October 8, 2015

⁴⁸ <http://theaviationist.com/2015/04/13/su-27-aggressively-intercept-rc135/>, Accessed on: October 8, 2015.

⁴⁹ <http://theaviationist.com/2014/09/24/su-24-shot-down/>, Accessed on: October 8, 2015.

Since the Russian air-ground campaign has begun in Syria, Su-24M aircrafts are being used as a principal platform by the Russian military planners⁵⁰. Thus, Su-24M missions close or adjacent to the Turkish and / or Israeli airspaces could lead to further incidents.

Another important and menacing overlap between the Syrian and Russian inventories can be seen in the Mig-31 interceptor-fighters case. Recently, six Mig-31 *Foxhound* interceptor-fighters were reported to be delivered to the Syrian regime by Russia under a deal signed for a total of eight aircraft in 2007. Mig-31s enjoy impressive advantages in air-to-air combat with good beyond-visual-range capabilities and high maneuverability⁵¹. Resembling the “unidentified-nationality Mig-29 case”, the Russian Air Force operates four regiments and four squadrons with several Mig-31 variants⁵². However, we have seen no open-source visual intelligence or IMINT evidence so far [that could suggest Russian deployment of Mig-31s in Syria](#). Therefore, how would Ankara decide what to do in case Turkey detects an ‘unidentified nationality’ Mig-31 violating the Turkish airspace and even engaging in high-risk maneuvers with the Turkish combat air patrols? As noted earlier, the hardships when answering this question is the very challenging fact with the ‘type-2’ violations. Should the Syrian Baathist regime senses a loosening in Turkey’s rules of engagement practice, then it would probably go for more ‘type-2’ unmarked or false-flag violations.

Last but not least, the ‘type-3’ category harassment, namely Syrian surface-to-air missile systems’ (SAM) radar lock-on Turkish combat air patrols, comes into the picture as the escalation unfolds. Differently from the ‘type-1’ and ‘type-2’ categories, ‘type-3’ category challenges are stemming from the Syrian territory towards the adjacent areas along the Turkish – Syrian border. Furthermore, harassment (and even one downing in 2012) of Turkish fighter jets by Syrian air defenses have remained a tangible threat since 2012, and ‘type-3’ category escalations commenced well before the Russian deployments in Syria⁵³. EDAM has explained the [technical details and inventory assessment](#) of the Syrian [integrated air defense system](#) in previous reports.

Briefly, although the Syrian Baathist regime does not operate high-end air defenses, such as the S-300 variants, Assad’s forces enjoy aged yet dense and multi-layered integrated air defense architecture. Open-source military data suggests that the both the Syrian Arab Army,

⁵⁰ <https://www.rt.com/news/317709-video-russia-syria-strike/>, Accessed on: October 8, 2015.

⁵¹ IHS Jane’s Defence Weekly, <http://www.janes.com/article/53660/syria-reportedly-receives-mig-31-interceptors-from-russia>, Accessed on: October 8, 2015.

⁵² IISS, *Military Balance 2015*, Routledge, London, 2015, p.190.

⁵³ <http://www.hurriyet.com.tr/gundem/26137550.asp>, Accessed on: October 8, 2015.

and the Defense Forces Command, which is a separate branch under the Syrian doctrinal order of battle, possess mobile systems such as SA-8 Gecko, SA-9 Gaskin, SA-13 Gopher (*very mobile systems that can easily relocate and are difficult to be hunt down*), SA-11 (*Gadfly with multiple-target engagement capability*), SA-22 (*Russian reporting name Pantsir S1, reportedly responsible for downing of the Turkish Phantom in 2012*), SA-17, SA-5 Gammon (*static system with very long range, higher level command post*) SA-6 Gainful (*self-propelled*), SA-3 Goa, SA-2 Guideline (*both towed, [an SA-2 site was detected near the Latakia air base](#)*) along with some 4,000 anti-aircraft artillery pieces⁵⁴. Of the aforementioned systems, SA-5 Gammon is a very long range (*about 250km max*) yet static system that was deployed in Homs and south of Dumayr Airfield before the civil war. The system is supported by a network of early warning, height finder, acquisition, and tracking & guidance radars, Vozdukh-1M and Vector System command & control centers, along with other shorter range SAM assets and anti-aircraft artillery for the protection of the static SA-5 sites from very low altitude penetrating threats⁵⁵. Last but not least, both SA-11 and SA-17 belong to the *BUK* missile line⁵⁶, and these mobile and swift systems can pose unpredictable threats at short ranges especially under a constant-relocation concept, resembling the troubles caused by the Serbian air defenses in Kosovo 1999 to NATO aircrafts⁵⁷.

The ‘type-3’ threats are important in several ways. First, the Turkish Air Force cannot use its excellent air-to-air combat capabilities against SAM systems, but has to rely on its *suppression of enemy air defenses (SEAD)* capabilities. The Turkish Air Force’s principal *SEAD* unit is the 151st Squadron based in Merzifon equipped with AGM-88 high speed anti-radiation missiles⁵⁸. Although AGM-88 enjoys a good range, still, radar-locks and harassment by several Syrian air defense systems could necessitate Turkish aircrafts to enter the Syrian airspace. So far, Ankara refrained from such a course of action, and despite the Turkish elite did not hesitate to change the rules of engagement against Syria, which led to the downing of a Mig-23 aircraft and Mi-8 helicopter, we haven’t recorded any SAM site targeting by the Turkish Air Force. Secondly, using air defense assets as a muscle flexing tool is a low-cost

⁵⁴ For detailed assessment see: IHS Jane’s, *Jane’s Sentinel Security Assessment- Eastern Mediterranean: Syria Air Force*, 28 Jan 2012, and; IISS, *Military Balance 2015*, Routledge, London, 2015.

⁵⁵ For a detailed assessment of the Syrian integrated air defense network see: Anthony, Cordesman and Abdullah Toukan., *Israeli – Syrian Air and SAM Strength Analysis*, CSIS, 2008.

⁵⁶ IHS Jane’s, *Jane’s Sentinel Security Assessment- Eastern Mediterranean: Syria Air Force*, 28 Jan 2012.

⁵⁷ Andrew Krepinevich, et al. *Meeting the Anti-Access and Area-Denial Challenge*, CSBA, Washington D.C. 2003, pp.21-25.

⁵⁸ IHS Jane’s *World Air Forces: Turkey – Air Force*, April 2015, Accessed on: October 8, 2015.

conduct for the Baathist regime. Thirdly and finally, ‘type-3’ category harassments serve as a provocative tool against Turkey that aims to put pressure on the Turkish decision-makers, and trigger low-risk & high-value escalations that the Baathist regime would prefer.

Adding Complexity to the Operations: Russian Electronic Warfare Assets

At the time of writing, a snapshot during the 6th second of an uploaded YouTube video, actually intended to show a Su-25, attracted attention⁵⁹. As seen below, probably a Krasukha-4 electronic warfare (EW) system appears on the screen. The system is reported to be capable of suppressing spy satellites, ground-based radars, and airborne systems AWACS. It is believed to cover an object from radar detection at 150-300 km, and reported to be capable of damaging the enemy’s radars, along with electronic warfare and communication systems⁶⁰. In fact, the Russians also deployed the system in eastern Ukraine before Syria⁶¹.



https://www.youtube.com/watch?v=YQtsEvAYBWk&feature=player_embedded, Accessed on: October 8, 2015.

⁵⁹ https://www.youtube.com/watch?v=YQtsEvAYBWk&feature=player_embedded, Accessed on: October 8, 2015.

⁶⁰ KRET, <http://www.kret.com/en/product/12/>, Accessed on: October 8, 2015.

⁶¹ Roger, N. McDermott, *Brothers Disunited: Russia’s Use of Military Power in Ukraine*, FMSO, 2015, p.30.

From a military standpoint, the Krasukha-4 EW system can be used both offensively and defensively. More importantly, operating such a system could potentially risk the US-led anti-ISIS coalition and / or Turkey's combat air patrols, radars, and early warning capabilities.

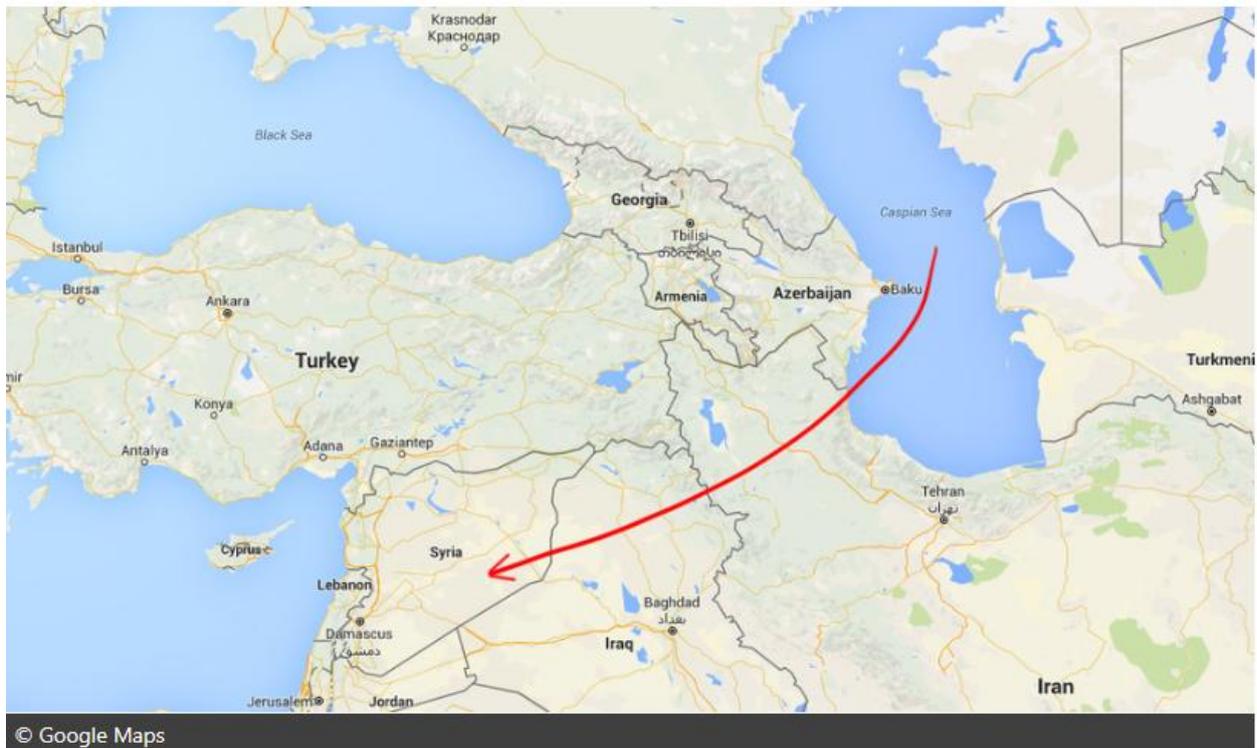
Russian Operations Extending to the Caspian Sea

At the time of writing, Russian sources reported that the operations were extended to naval surface platforms through cruise missiles launched from one frigate and three corvettes of the Russian Federation's Caspian Fleet. According to the reports, 26 the missiles, launched from *vertical launch cells* at 11 targets, flew over Iranian and Iraqi airspaces respectively, and then entered Syria to execute the strike mission⁶².



Russia Today, <https://www.rt.com/news/317864-russian-warships-missiles-launch/>, accessed on: October 7, 2015

⁶² <https://www.rt.com/news/317864-russian-warships-missiles-launch/>, Accessed on: October 7, 2015.



Russia Today, <https://www.rt.com/news/317864-russian-warships-missiles-launch/>, accessed on: October 7, 2015

Russia's move to extend operations to the surface platforms of the Caspian Fleet should be assessed both militarily and politically. Russia was one of the only three states during the Cold War, along with the US and France, that were producing –yet, not exporting– land-attack cruise missiles (LACM). Although military trends in the 2000s put an end to this dominance, Russia is still a major actor in the LACM segment⁶³.

Unlike ballistic missiles, cruise missiles are not categorized based on their range, but by mission and launch mode (*such as anti-ship cruise missiles, air-launched land-attack cruise missiles, land-attack cruise missiles*). Land-attack cruise missiles, which are technically armed unmanned vehicles, use three different guidance systems in three flight phases, so they are very accurate assets with pinpoint precision that makes them effective against small targets even when tipped with conventional warheads⁶⁴. A LACM uses inertial navigation systems during the launch, when it comes to mid-course phase more advanced guidance, such as radar-based terrain contour match and GPS (in the Russian case *Glonass*), comes into the picture, and finally, during the terminal phase the missile uses radar or optical-based terminal

⁶³ Thomas, G. Mahnken. *The Cruise Missile Challenge*, CSBA, 2005, p.22.

⁶⁴ The US National Air and Space Intelligence Center, *Ballistic and Cruise Missile Threat*, 2013, p.26.

seekers or accurate scene matching systems. Such a complex guidance enables cruise missiles to fly below enemy radars and use terrain to hide⁶⁵.

From the military angle, long range land-attack cruise missiles, which are launched from naval platforms, could lead us to several explanations. They are generally used at the initial phases of a campaign to eliminate high-priority targets, such as air defenses within the context of *SEAD* missions, that can pose significant threats to pilots and manned aircrafts. Secondly, military planners can prefer land-attack cruise missiles over areas that they don't want to fly their pilots, such as deep and highly hostile territory. Clearly, manned aircraft could always face with mechanical or electronic problems that could end up with "ejected pilot" situations. In such case, performance and geographical proximity of combat search & rescue teams would be critically important to save the pilot(s) and to prevent an ugly 'captured pilot' situation. During the 2011 Libya campaign, a US Air Force F-15 crashed due to a failure, not by Libyan air defenses. The pilot and the weapons system officer were rescued by the Marines flying with an MV-22 Osprey conducting combat search & rescue mission⁶⁶. This incident once more proved the very fact that even uncontested airspace could pose risks to pilots, and in this respect, tragic death of a Jordanian pilot at the hands of ISIS was notable to reflect how far political-military limits of a captured pilot situation can go. In other words, even ISIS and other non-state armed groups on the Syrian battleground enjoys only low-altitude-short range air defenses –especially MANPADS–, deep hostile territory still remains a challenge to an air-ground campaign's force protection aspects.

Thus, in the light of the aforementioned brief military discussion, most probably the underlying reasons of Russians' preference to use land-attack cruise missiles emanates from a risk-averse manner of conduct over high-risk, deep and hostile territory. Yet, land attack cruise missiles would have their limitations too. Firstly, they are very costly assets when compared to other munitions that can be launched from air platforms. Therefore, they cannot be used in high operational tempo for long durations. Secondly, in the recent Russian case in which LACMs were launched from naval platforms over 1,500km range, they would be mostly effective against fixed targets, instead of fluid, pop-up targets that most non-state armed groups on the Syrian battleground would offer. Therefore, the Russians could face with inadequate target set for long range LACM strikes from the Caspian Sea in the future.

⁶⁵ Ibid.

⁶⁶ <http://edition.cnn.com/2011/US/04/27/f15.crew.libya.rescue/>, Accessed on: October 7, 2015.

Politically, launching LACM from naval platforms in the Caspian Sea necessitates coordination with the Iraqi and the Iranian governments to determine flight patterns, and thereby, it serves as a tool of politically signaling to the West. Besides, operating from very long range with advanced land-attack cruise missiles is a military show of force.

Conclusion

As Russian deployments and air operations in Syria unfold, it is becoming clear that Moscow has multiple interests in its involvement in Syria beyond its declared goal of fighting ISIS. In a pattern that has followed Russian course of action in Ukraine, Moscow took the initiative in Syria with military overtures aimed at creating a *fait accompli*, and then attempting to manipulate the strategic calculations of its adversaries with the aim of manipulating their decision-making to fall in line with Russia's preferred scenario.

In its latest move, Russia violated Turkish, and hence NATO, airspace with a multiplicity of potential military and political objectives. Moscow's actions so far have clearly displayed that Russian involvement in Syria will be precarious for Turkish and Transatlantic interests for the foreseeable future. Furthermore, increased Russian and Iranian influence and military presence in both Syria and Iraq may have long-lasting consequences over the geostrategic balance in the region.

For Turkey, Russian engagement in Syria has brought along a myriad of risks. Once again after the Cold War, Turkey may end up being at the heart of the friction, if not outright competition, between NATO and Russia. As Moscow and Tehran become more influent in the region, Turkey runs at the risk of losing geostrategic ground to its historical rivals. Moreover, Kurds in both Syria and Iraq may transform into a wild card that have the backing of both the US and Russia and which may have direct and grave consequences for Turkey's war with the PKK unless Ankara resolves its domestic Kurdish issue in a peaceful manner rapidly.

In sum, the Russian campaign is a promising one to be a game-changer in the trajectory of the Syrian civil war. Yet, there are still important parameters that remain to be seen.

The first one is operational tempo. In other words, EDAM will be monitoring whether the Russians can keep a consistent uptrend in their strikes and sortie rates. This would depend on

a number of factors such as target acquisition, logistics, maintenance of air platforms, and other politico-military variables.

Secondly, in order to be sure about the emergence of a game-changer in the Syrian civil war, a gradual shift in the operational characteristics must take place. Clearly, if we can see a transition from air-ground bombardment to close-air support & air interdiction missions coupled with massive regime offensives, then we might be able to talk more precisely about Moscow's true intentions and performance in Syria. Without a doubt, this would necessitate Russian personnel attached to the regime's units at tactical level for coordinating fire support coordination line and calling-in close air-support.

Last but not least, Ankara's current position once more proved the importance of the North Atlantic Alliance for Turkey's national security. Clearly, Turkey needs NATO for a number of reasons ranging from high-altitude & long range air and missile defense to counterbalancing a strategic nuclear power, Russia. Thus, the most important politico-military outcome of the Russian violations of the Turkish airspace is the emergence of almost natural reflexes voiced by the Turkish elite that called NATO for help and support. In other words, Moscow's campaign in Syria has been somehow helpful to show Turkey's true political-military axis in the international system.