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Operation Euphrates Shield and the al-Bab Campaign: A Strategic Assessment

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EXECUTIVE SUMMARY: IMPORTANT FINDINGS

- Operation Euphrates Shield stems from Ankara's political – military necessities and defense imperatives of securing operational depth to confront the rocket threat posed by ISIS terrorist organization, as well as to prevent the PKK terrorist organization – and its PYD / YPG affiliates in Syria – from establishing a fait accompli situation along Turkey's borders. Thus, geopolitically, EDAM assesses that the operation is well grounded and necessary for Turkey's national security. In this respect, clearing al-Bab from terrorist threats remains a critical threshold for achieving the aforementioned goals. Such an advancement will be significant for turning the tactical and operational progress of Operation Euphrates Shield into permanent strategic gains.
- The Jarablus-Cobanbey phase of the operation and the ensuing control of Dabiq are noteworthy military successes, especially in the context of operational tempo and joint operations performance.
- As Operation Euphrates Shield started to push into al-Bab, the characteristics of the conflict have gradually changed. Regional security factors also played an important role in this shift.
- ISIS' defensive approach in al-Bab is centered on a terror strategy to increase the burden of the operation, instead of holding and defending the territory. This manner of conduct was widely observed in other defensive encounters of the terrorist group.
- EDAM's military analysis of the al-Bab campaign suggests that ISIS' operational center of gravity rests on a triangle consisting of suicide vehicle-borne improvised explosive devices (SVBIED), man portable anti-tank guided missiles (ATGM) and subterranean/tunnel warfare. Overcoming these critical capabilities would disrupt the terrorist organization's defensive balance, and eventually bring along the success for the first phase of the operation. It is estimated that in the second phase of the operation – namely, clearing al-Bab from ISIS presence – will result in the emergence of a second operational center of gravity that would consist of intensive urban warfare concepts and improvised explosive devices (IEDs). The required force generation for the second phase would differ from that of the ongoing first phase.
- Despite all the challenges, achieving victory in al-Bab operations is well within Turkey's capabilities. Such an achievement would mark an important success in War Studies and military sciences literatures on joint military operations in urbanized terrain against non-state threats.
- The Operation Euphrates Shield and the al-Bab campaign have brought about certain differences of opinion between Turkey and the US-led anti-ISIS coalition. The divergences are mainly rooted in disagreements on the PKK terrorist organization's affiliates in Syria (PYD/YPG), the depth of the campaign, as well as its timing. It is seen that as a result of these disagreements, Turkey has not received the military support that it expected from the coalition forces. This situation has complicated bilateral relations, to the extent that the use of Incirlik air base has come under debate.
- As illustrated below, at the time of writing, open-source data analysis^{1 2} on the campaign suggest that

1 Fabrice, Balanche, "The Battle for al-Bab Is Bringing U.S.-Turkish Tensions to a Head", The Washington Institute for Near East Policy, <http://www.washingtoninstitute.org/policy-analysis/view/the-battle-for-al-bab-is-bringing-u.s.-turkish-tensions-to-a-head>, Accessed on: January 15, 2017.

2 <https://twitter.com/hashtag/Kabasin?src=hash>, Accessed on: January 15, 2017.

the Turkish offensive is focused on taking full control of the critical high ground of Aqil Mountain and the Hospital district in the west through joint combined arms operations, while conducting envelopment assaults targeting the ISIS lines of communication located in Qabasin and Bza'a, as well as outflanking maneuvers in adjacent areas in the northeast. Recent offensives are promising, and while it would take time, fall of al-Bab remains a very high probability for the success of Operation Euphrates Shield.



INTRODUCTION: AN EVALUATION OF OPERATION EUPHRATES SHIELD AND AL-BAB CAMPAIGN

On August 24, 2016, Turkey declared³ that it was exercising its rights of self-defense codified under the UN Charter Article 51, and launched the Operation Euphrates Shield. The National Security Council's press release (November 30, 2016), stated that the operation's objectives were to maintain border security and confront ISIS terrorism within the framework of the UN charter; it was also emphasized that the PKK

terrorist organization, as well as its affiliates PYD/YPG, will not be allowed to establish a corridor of terror at Turkey's doorstep.⁴

In his speech before the Turkish Parliament on December 22, 2016, Minister of National Defense, Fikri Işık, explained that, as of the 121st day of the Operation Euphrates Shield, 1005 ISIS and 299 PKK/PYD militants were neutralized. Minister Işık stated that 4 tanks, 29 artillery pieces, 97 vehicles, 621 buildings and 61 defensive positions, 28 command & control centers, 17 weapon storages, and 11 VBIEDs – all belonging to ISIS – were destroyed during the opera-

3 Republic of Turkey Prime Ministry, http://www.basbakanlik.gov.tr/Forms/_Article/pg_Article.aspx?Id=2a0e4e31-1a6d-4d65-9074-cc8b7097d0f6, Date accessed: 5 January 2017.

4 National Security Council, <http://www.mgk.gov.tr/index.php/30-kasim-2016-tarihli-toplant>, Date accessed: 5 January 2017.

tions.⁵ Furthermore, in late December 2016, when the clashes intensified, 226 ISIS militants were killed in the al-Bab campaign.⁶

The campaign, especially in its initial stages, captured its operational targets rapidly starting from Jarablus. In this context, Euphrates Shield cleared an area of 1,100 square kilometers within its first 50 days, and subsequently, secured an area of 2,000 square kilometers at the time of writing. In October – November 2016, capture of the territories to the east of Azaz-Mare, and Dabiq – a center of resistance for ISIS’ morale and motivation⁷ – has played an important part in paving the way towards al-Bab. Gaining this depth has been very important for Turkey’s defense in preventing ISIS’ rocket attacks, and for overcoming the ISIS terror threat posed by 122mm BM-21 Grad rockets launched by mobile 4x4 and 6x6 platforms, and similar projectiles.⁸

Furthermore, the shift of the operation southwards following the military achievements in Dabiq has been a critical maneuver in hindering⁹ the efforts of PKK terrorist organization, and its PYD/YPG affiliates, aimed at linking the eastern territories under their de facto control with ‘Afrin’ in the west.

The abovementioned operational advancements have been fairly satisfactory in terms of operational tempo and military-geostrategic progress. Furthermore, Ankara’s enhancement of its area of influence in the north of Syria has visibly paid off with more room for

diplomatic maneuvering. On the other hand, as the Euphrates Shield reached its al-Bab stage in November-December 2016, there have been changes in the characteristics of the conflict which brought along increases in Turkish casualties. This was mainly due to the fact that al-Bab has remained ISIS’ stronghold in the west of the Euphrates River. Moreover, the slow-down of anti-ISIS coalition operations in Raqqa and Mosul has made it easier for the terrorist organization to relocate its forces. In addition, inability of besieging al-Bab and destroying ISIS’ lines of communication completely are among other factors that have complicated the situation.

Against the transforming threat, the Turkish Armed Forces (TAF) has altered its force generation strategy for the Operation Euphrates Shield^{10 11} and deployed elements from its elite units that have gained experience in counter-terrorism operations against PKK.

As will be explained in depth in the subsequent section of this report, while successful completion of the al-Bab campaign will take time, it is well within Turkey’s capabilities through the elimination of ISIS’ operational center of gravity. The most critical matter at this point, remains the prevention of terrorist attacks within Turkish soil and denying both PKK and ISIS terrorist organizations the opportunity to put pressure on the Turkish public. Furthermore, it is essential for Ankara to make effective use of diplomacy to back military power and to foster political capacity with as many options as possible.

5 Grand National Assembly of Turkey, https://www.tbmm.gov.tr/develop/owa/genel_kurul.cl_getir?pEid=55804, Date accessed: 28 Aralık 2016.

6 Sabah, <http://www.sabah.com.tr/gundem/2016/12/26/cumhurbaskanligi-sozcuzu-ibrahim-kalin-konusuyor>, Date accessed: 28 Aralık 2016.

7 For the operation’s progression trends see: Al Jazeera, <http://www.appaljazeera.com/interactive/harita-firat-kalkani/index.html>, Date accessed: 4 January 2017.

8 Can, Kasapoglu. “Turkey’s War of Attrition With the Islamic State: The Rocket Threat”, The Washington Institute for Near East Policy, PW 2618, May 2016.

9 For the operation’s progression trends see: Al Jazeera, <http://www.appaljazeera.com/interactive/harita-firat-kalkani/index.html>, Date accessed: 4 January 2017.

10 Hurriyet, <http://www.hurriyet.com.tr/500-komando-el-baba-sevkedildi-40317279>, Date accessed: 4 January 2017.

11 Haberturk, <http://www.haberturk.com/gundem/haber/1341423-deaspkk-taktigine-gecti>, Date accessed: 4 January 2017.

ANALYSIS OF THE AL-BAB CAMPAIGN

The al-Bab campaign will primarily consist of two main combat phases, and a subsequent ‘holding the town’ phase. The first combat phase refers to the current situation in which ISIS is showing an aggressive resistance in immediate areas surrounding al-Bab, whereas the second combat phase would begin after this resistance is broken. Most probably, the second combat phase will consist of clashes through which the terrorist organization aims to increase the costs of the campaign by using disruptive means such as improvised explosive devices (IED) and tunnels, and attempts to provoke the local populace. Due to the sensitivity of the current situation, this report focuses on the first combat phase.

The limited amount of literature on ISIS’ military strategy suggests that while the terrorist organization is very lethal at the tactical level, it has major vulnerabilities in defending the territory it holds at the operational level. These sources argue that the vulnerabilities at the operational level stem from the differences in the composition of the groups that make up ISIS (e.g. Salafist radicals, former military personnel of the Iraqi Baathist regime, local militias and foreign terrorists), and emphasize that these differences result in ruptures between the strategic and tactical levels¹². As a matter of fact, between January 2015 and December 2016 the terrorist organization lost approximately 25% of the territory it held, and witnessed a 16% loss in 2016 alone.¹³

Military experience gained in combating ISIS presence in Iraq has shown that against the expectations, the organization does not portray a ‘resist until the last man’ approach in defensives. In this framework, instead of defending urban areas to the last street, ISIS

adopts a tactical approach that aims to increase the lethality rate as much as possible¹⁴ by using snipers, booby trapped households and improvised explosive devices – especially vehicle-borne IEDs. Lessons-learned, especially in Ramadi, indicate that rural terrain surrounding urban areas is where ISIS puts up the most resistance.¹⁵

Another operational vulnerability that ISIS shows when on defense is its obsession with offensive, and the heavy casualties it suffers by conducting poorly planned offensives when facing heavy firepower.¹⁶ Nonetheless, VBIEDs used in such poorly planned offensives still pose a threat and merit caution.

It is not possible to gather the exact number of ISIS terrorists present in al-Bab through open source information. On the other hand, the slowing pace of the campaigns in Raqqa and Mosul may have given the terrorist organization some freedom of movement to fortify al-Bab. Moreover, estimates on ISIS elements in the area suggest that the number of suicide bombers may be in the hundreds, and the terrorist organization’s web of relations with the local population formed through marriage and ideological oppression pose further challenges to military operations.¹⁷

At the operational level, it is seen that the key to al-Bab lies at the Aqil Mountain that rests to the western outskirts of the town, supported by ISIS’ fortifications at the Hospital district that lies to the west of the mountain. As a matter of fact, throughout the military history, the seizure of high ground at early stages of battle has provided significant advantages to the sides on the offensive¹⁸. In the setting of the al-Bab

14 Michael Knights and Alexandre Mello. “The Cult of Offensive: The Islamic State on Defense”, CTC Sentinel, Vol.8 Issue.4, April 2015.pp.1-26.

15 Ibid.

16 Ibid.

17 Serhat, Erkmen. “El Bab Kapısı Açıldığında” (When the Al Bab Door Opens), Al Jazeera, 29 December 2016, <http://www.aljazeera.com/tr/gorus/el-bab-kapisi-acildiginda>, Date accessed: January 4, 2017.

18 For a study on military history that investigates numerous operations on this matter, see: Donald, P. Wright [ed.], 16 Cases of Mission Command, US Army Combined Arms Center, Fort Leavenworth, Kansas, 2013.

12 Michael, Knights and Alexandre Mello. “The Cult of Offensive: The Islamic State on Defense”, CTC Sentinel, Vol.8 Issue.4, April 2015.pp.1-26.

13 BBC, <http://www.bbc.com/news/world-middle-east-27838034>, Date accessed: January 4, 2017.

campaign, the foremost result of establishing complete control over Aqil Mountain and the Hospital district would be the collapse of the western flank of ISIS' defensive strategy. After this stage, it will become a tactical necessity for ISIS to change its modus operandi and approach to the conflict.

In case local forces operating under the auspices of Operation Euphrates Shield (Free Syrian Army units and Turkmen forces) manage to progress into al-Bab from the west, Aqil Mountain and the Hospital district are positioned to provide Turkish Armed Forces significant tactical expansions, especially as sniper positions. In this regard, military sciences literature indicates that utilization of snipers lowers unintended casualties considerably, especially in urban warfare where civilians and adversaries are intertwined, and that snipers are effective against enemy snipers and other challenges.¹⁹



Lastly, another important issue in ISIS' defensive approach is that the terrorist organization usually pursues a multidimensional understanding. Clearly, while ISIS depends on its fortifications and asymmetric means to wear down the offensives directed to itself, it also takes steps to ensure that in case it loses the territory, the settlements are wrecked beyond repair and remain ungovernable. These steps include disappearing

into the local population to lay the groundwork for subversive actions, using locals as human shields when on defensive, and destroying critical infrastructure before losing the settlement. These steps include disappearing into the local population to lay the groundwork for subversive actions, using locals as human shields when on defensive, and destroying critical infrastructure before losing the settlement.²⁰

19 Jeffrey, E. Dearolph, *Enemy Inside the Gates: Snipers in Support of Military Operations on Urbanized Terrain*, United States Army Command and General Staff College, Fort Leavenworth, Kansas, 2002, pp.25-29.

20 Jessica Lewis Mcfate, *The Isis Defense In Iraq And Syria: Countering An Adaptive Enemy*, ISW, 2015, p.28.

DETERMINING THE OPERATIONAL CENTER OF GRAVITY OF ISIS' DEFENSE

As framed by the Prussian General Carl von Clausewitz, “center of gravity” is the analytical framework that is primarily used in both theoretical studies, as well as in devising doctrines and planning military operations. Briefly, center of gravity (CoG) can be defined as the focal point that physical and psychological forces come together. Striking the enemy’s CoG with sufficient force would cause it to lose its balance. In this regard, the CoG is not the strongest or the weakest side of the adversary, but rather the equilibrium point of its sources, means, and capabilities.²¹

Studies on ISIS reveal that, at the strategic level, the terrorist organization’s center of gravity remains the ability to hold a given territory with military means and utilize its military control in order to impose a political order.²² On the other hand, considering the

Operation Euphrates Shield and the al-Bab campaign, what must be analyzed is ISIS’ CoG at the operational level. Operational center of gravity can be defined as the equilibrium point that defends and supports the center of gravity at the strategic level.²³

In the light of lessons-learned from the ISIS defenses up until now, it is assessed that the operational CoG for al-Bab is formulated around ISIS’ means and capabilities aimed at increasing the burden of the campaign. As explained below, it is evaluated that these means and capabilities revolve around suicide vehicle-borne improvised explosive devices (SVBIED), guided anti-tank missiles (ATGM), and asymmetric threats that hinge on subterranean/tunnel systems. Therefore, for successful completion of the al-Bab phase of Operation Euphrates Shield, this operational CoG should be struck with sufficient force in order to topple the adversary.



21 For a thorough analysis on Clausewitz’s center of gravity theory, see: Antulio J. Echevarria II., Clausewitz’s Center of Gravity: Changing Our Warfighting Doctrine – Again, U.S. Army Strategic Studies Institute, 2002.

22 Jessica, D. Lewis. The Islamic State: A Counter-Strategy for a Counter-State, ISW, 2014. pp.4-5.

23 Dale, C. Eikmeier. “Center of Gravity Analysis”, Military Review, July-August 2004.

COMPONENTS OF THE ISIS TERROR STRATEGY IN AL BAB

The US Marine Corps Command initiated the Operation Urban Warrior program in the 1990s. In this respect, the USMC published the “Military Operations in Urbanized Terrain” (MOUT) intelligence report, which assessed lessons-learned from the Russian, British, and Israeli experiences in such type of conflicts.²⁴ Among the key findings of the report, it is underlined that the operational tempo is higher in these endeavors, thus, rapid reaction is of key importance, fire-power remains a big tactical game-changer, special forces make a significant difference if assigned correctly, infantry-intensive focus of the struggle could bring about more casualties, dismounted infantry support is key for armored units’ advances, irregular adversaries tend to establish their defenses centered on fortified areas and tactically advantageous buildings, and close air-support remains essential.²⁵

Turkish security forces’ struggle against PKK terrorism in the 1990s and ISIS terrorism in the 2000s are categorically different. The 1990s’ counter-terrorism operations took place under low intensity conflicts (LIC) conditions, whereas the counter-terrorism confrontation in the 2000s emerged in the form of hybrid threats. In brief, hybrid warfare could be depicted as the blurring form of conventional and irregular tactics and capabilities in the same battleground, by the same adversaries. The concept of hybrid warfare has come into prominence following the 2006 Lebanon War between the Israeli Defense Forces (IDF) and the Lebanese Hezbollah, when the non-state belligerent of the conflict effectively used rockets, UAVs, and guided missiles.²⁶

The primary components of ISIS’ terror campaign in Iraq and Syria are the violent extremist network’s tactical-level commanders and their freedom of movement under a decentralized order of battle, as well as suicide missions through SVBIEDs.²⁷ Especially, ISIS’ operational approach to the 2015 Ramadi clashes were noteworthy in this respect. The terrorist network systematically modified tankers, armored personnel carriers, and trucks that it captured with massive amount of explosives and additional protection. Some experts even called these armored truck VBIEDs as “ISIS’ air force” in reference to their destructive effects.²⁸ In fact, assessments on ISIS’ annual reports indicate that the terrorist network puts emphasis on the suicide VBIED attacks, and considers this violent tactic differently than other vehicle-borne bombs.²⁹

ISIS’ VBIEDs have increased the casualties of Operation Euphrates Shield. Besides. It is also reported that many of the dismounted ISIS militants have been engaging in the clashes with suicide vests on them, ready to explode.³⁰ The suicide-IED attacks on the Turkish forces tend to increase especially when the visibility decreases due to harsh weather conditions. In sum, the ISIS defensive in al Bab has been the continuation of the tactics-techniques-procedures in other parts of its terror campaign.

Other tactical game-changer weapons at the hands of ISIS, which could pose serious challenges to the Turkish forces on the ground, remain anti-tank guided missiles (ATGM). As the Middle Eastern paramilitary trends shift to hybrid warfare from low intensity conflicts, such capabilities now put more stress on conventional militaries’ traditional superiorities, such as the armor advantage. The challenges posed by man-portable systems against armored land platforms has

24 Marine Corps Intelligence Activity, Intelligence Production Division – Regional Analysis Branch, Urban Warfare Study: City Case Studies Compilation, MCIA 04, Virginia, 1999.

25 Ibid. pp.1-3.

26 For a detailed assessment, see: Frank, G. Hoffman. Conflict in the 21st Century: The Rise of Hybrid Wars, Potomac Institute for Policy Studies, Arlington-Virginia, 2007.

27 Richard, Barrett. The Islamic State, The Soufan Group, 2014, p.35.

28 <http://www.dailymail.co.uk/wires/afp/article-3103194/Truck-bombs-Islamic-States-air-force.html>, Accessed on: December 29, 2016.

29 Alex, Bilger. ISIS Annual Reports Reveal a Metrics-Driven Military Command, ISW Backgrounder, May 22, 2014.

30 Hurriyet, <http://www.hurriyet.com.tr/tskdan-son-dakika-el-bab-aciklamasi-40314526>, Accessed on: December 29, 2016.

been gaining utmost importance in recent years. An in-depth analysis of the Soviet and Canadian forces' experiences in Afghanistan, within 20 years respectively, indicates that their inability to adapt the Red Army's Cold War armor doctrine, which was designed for confronting conventional forces in open European plains, led to heavy Soviet losses in Afghanistan.³¹ In return, Canadian forces performed well in Helmand and Kandahar between 2005 and 2011 due to their successful adaptation, and use of dismounted infantry and engineer units for supporting the armored elements³².

The 2006 Lebanon War is another battlefield that one could observe the impact caused by ATGMs. Statistics suggest that more than 25% the Israeli Defense Forces (IDF) casualties were tank crewmen.³³ Furthermore, of 400 armored land platforms commissioned by the IDF, 48 were hit, 40 were damaged, 20 were penetrated, and 5 Merkava main battle tanks of different variants were destroyed.³⁴

Open-source intelligence suggests that throughout the Syrian civil war, many non-state groups have acquired ATGM capabilities at different levels.³⁵ In fact, it is reported that the Turkish armored units were attacked by ATGMs several times during the Operation Euphrates Shield.³⁶ At the time of writing, Turkish press sources reported that two main battle tanks of the Turkish forces repelled an ambush, and protected the rest of their unit, despite getting hit by intensive anti-tank fire.³⁷

31 Douglas, F. Baker. *The Relevance of Armor in Counterinsurgency Operations*, U.S. Army Command and General Staff College, 2012, pp.66-71.

32 *Ibid.* pp.66-78.

33 Matt, M. Matthews, *We were Caught Unprepared: The 2006 Hezbollah - Israeli War*, U.S. Army Combined Arms Center, Combat Studies Institute Press, Fort Leavenworth, Kansas, 2008, p.64.

34 *Ibid.*

35 https://medium.com/@badly_xeroxed/common-atgms-in-the-syrian-civil-war-6395ea4305ec#.hpseqzvvv, Accessed on: January 4, 2017.

36 Al Jazeera, <http://www.aljazeera.com/news/2016/11/turkey-strikes-isil-targets-syria-al-bab-161125083928616.html>, Accessed on: January 4, 2017.

37 Sabah, <http://www.sabah.com.tr/gundem/2016/12/31/suriyede-turk-birligine-saldiran-deasa-agir-darbe-vuruldu>, Accessed on: January 4, 2017.

Armor protection and survivability within asymmetric warfare against ATGM and IED threats is a growing concern in the literature. This issue covers a broad array of subjects ranging from active protection systems to armor tech, and electronic countermeasures³⁸, which are not touched upon in detail by this report. On the other hand, it is assessed that ISR (intelligence-surveillance-reconnaissance) capabilities come into prominence in this sense.

Finally, press sources also reported that ISIS has been utilizing a set of tunnels for its defensive in al Bab.³⁹

In fact, subterranean warfare is not a new phenomenon. Especially, military history shows many examples of this type of conflict dating back to the Akkadian and Roman empires, and to siege warfare of the medieval period. Furthermore, one of the most important aspects of the Japanese defensive on the Pacific Front during the WWII was tunnel systems, used both for force protection and launching surprise strikes.⁴⁰

Subterranean warfare has a growing importance in the Middle East.⁴¹ Turkish security forces gained subterranean warfare experience during the counter-terrorism operations against PKK's recent terror campaign in urban areas.⁴² Besides, during Operation Euphrates Shield's initial phases in Jarablus, Turkish forces discovered ISIS tunnels in the town.⁴³

38 Andrew Feickert, *Army and Marine Corps Active Protection System (APS) Efforts*, Congressional Research Service, 2016.

39 Hurriyet, <http://www.hurriyet.com.tr/el-babda-son-durum-40317382>, Accessed on: December 29, 2016.

40 Paul J. Springer. "Fighting Under The Earth: The History Of Tunneling In Warfare", Foreign Policy Research Institute.

41 Yiftah S. Shapir ve Gal Perel, "Subterranean Warfare: A New-Old Challenge" *The Lessons of Operation Protective Edge*, Anat Kurz ve Shlomo Brom [ed.], INSS, 2014.

42 Hurriyet, <http://www.hurriyet.com.tr/cizrede-pkknin-tuneli-tespit-edildi-40047055>, Accessed on: December 29, 2016.

43 Haberturk, <http://www.haberturk.com/dunya/haber/1289661-cerab-lusta-daes-tunelleri-bulundu/2>, Accessed on: December 29 2016.



ISIS Tunnel Network Entrance (Jarablus) ⁴⁴

As mentioned earlier, in case the Turkish cross-border operation manages to implement full control over the Aqil Mountain and the Hospital area, it is anticipated that the campaign will enter a new phase. Satellite imagery of al Bab suggests a densely populated urban landscape with narrow streets and congested housing. Thus, EDAM's military assessment predicts more subterranean warfare and IED intensive struggle for the second phase.

FORCE GENERATION ISSUES FOR OPERATION EUPHRATES SHIELD

As stated above, due to regional security factors and the changes in the characteristics of the conflict, Ankara has updated the composition of its military forces deployed for the campaign. Operation Euphrates Shield was planned as a joint operation from its outset with the participation of mechanized infantry, armored and artillery units, unmanned aerial vehicles and air force platforms, as well as engineering and

signal units.⁴⁵ Turkey's successful use⁴⁶ of its combat UAV platforms – Bayraktar TB-2 – in such a critical campaign, is not only significant for the result of the operations, but also for the future of Turkish defense industry. Although manned, fixed-wing platforms (e.g. F-16s) have been heavily relied upon due to operational conditions, lessons-learned through Operation Euphrates Shield will remain essential for Turkey's experience on combat UAVs.

It has been observed that the Jarablus campaign, especially in its initial phase, has fully displayed the joint operations characteristics of Operation Euphrates Shield, with fire-support provided by artillery and multiple launch rocket systems (MLRS) culminating in swift tactical gains by the armored and mechanized units, and with air force platforms making successful use of the target acquisition provided by special forces elements.⁴⁷ After the success in Jarablus, the campaign quickly turned westwards and took over Cobanbey and Dabiq, of which the latter was turned into a myth

⁴⁵ Hurriyet, <http://www.hurriyet.com.tr/iste-firat-kalkani-operasyonu-nakatlan-birlikler-40206595>, Date accessed: 3 January 2017.

⁴⁶ Sabah, <http://www.sabah.com.tr/gundem/2016/09/02/milli-gururumuz-daesi-vuruyor>, Date accessed: 5 January 2017.

⁴⁷ Hurriyet, <http://www.hurriyet.com.tr/dakika-dakika-cerablus-operasyonu-40206555>, Date accessed: 3 January 2017.

⁴⁴ Hurriyet, <http://www.hurriyet.com.tr/galeri-40211526>, Accessed on: January 15, 2016.

by ISIS.⁴⁸ After the second week of November 2016, press sources reported that the Turkish Air Force started to target defensive positions and command & control centers belonging to ISIS.⁴⁹ Air strikes onto these targets, and troop concentrations in surrounding towns, have also signaled the launch of land operations on al-Bab.

Among the news that was reported by the press was the changes in the TAF's force generation once the campaign reached its al-Bab stage.⁵⁰ The deployment of elite commando units to the region shows that the TAF's role would not be limited to fire-support, armored maneuvers, and air strikes; but would also include units that would directly engage ISIS militants. Moreover, it has been reported that some special units of the TAF, which gained experience in military operations in urbanized terrain as a result of the counter-terrorism campaign against PKK, were also deployed to the area.⁵¹

Notably, it was reported that elements from the 1st Commando Brigade (Kayseri) and the Amphibious Commando⁵² Brigade (Foca) are both deployed in the area. Due to their airborne and amphibious capabilities respectively, these units also operated side by side in Turkey's 1974 military intervention to the island Cyprus.

The Turkish press also suggested that due to the winter and weather conditions, which sometimes result in thick cloud layers, the UAVs had challenges in target

48 Al Jazeera, <http://www.aljazeera.com.tr/haber/dabik-isidden- alindi>, Date accessed: 3 January 2017.

49 Hurriyet, <http://www.hurriyet.com.tr/oso-el- baba-2- km-uzakta-40276891>, Date accessed: 5 January 2017.

50 Hurriyet, <http://www.hurriyet.com.tr/500-komando- el-baba-sevkedildi-40317279>, Date accessed: 3 January 2017.

51 <http://www.superhaber.tv/gundem/metehan-demirden- carpiciaciklamalar-el- babin- tutulmasi-turkiyedeki- tum-kapilarin-tutulmasidir/haber-32195>, Date accessed: 4 January 2017.

52 <http://www.superhaber.tv/gundem/metehan-demirden- carpiciaciklamalar-el- babin- tutulmasi-turkiyedeki- tum-kapilarin-tutulmasidir/haber-32195>, Date accessed: 4 January 2017.

acquisition for the F-16s⁵³ – though this issue is also related with the radar systems of these platforms . As a result, extensive use of artillery and MLRS fire-support was reported in some periods of the al Bab campaign.

According to some assessments, the shifts in the force generation strategy of Operation Euphrates Shield at the al-Bab phase is not only stemming from the different characteristics of the operational steps, but also because of issues with the combat capabilities and discipline of the Free Syrian Army (FSA)⁵⁴. While it is not possible to confirm these speculative analyses, it is true that on a broader scale the FSA's military performance in the Syrian civil war has fallen short of numerous other armed rebel groups. Furthermore, the US-led coalition's lack of active combat support to the al-Bab phase of Operation Euphrates Shield may have had negative results especially in intelligence-surveillance-target acquisition-reconnaissance (ISTAR).

In fact, the coalition forces even gave direct combat support to the initial phases of Turkey's cross-border campaign in Syria⁵⁵. On the other hand, it is striking that at a time when Ankara leveled criticism at the West for its stance on the al-Bab operation, aircrafts belonging to the Russian contingent in Syria struck ISIS targets in al-Bab. According to media outlets close to the Syrian Baathist regime, Russian warplanes flew numerous sorties over al-Bab between January 2 and 4, 2017, and destroyed six targets on January 4, 2016 alone.⁵⁶ From a military standpoint, the air-strikes by the Russian Air Force in al-Bab in tandem with the Turkish Air Force can have numerous positive effects such as increasing sortie rates and shorten-

53 Hurriyet, <http://www.hurriyet.com.tr/savas-ucaklarina- hava-muhalefeti- 40319399>, Date accessed: 5 January 2017.

54 For the statements of journalist Metehan Demir on the issue, see: <http://www.superhaber.tv/gundem/metehan-demirden-carpici-aciklamalar-el-babin-tutulmasi-turkiyedeki-tum-kapilarin-tutulmasidir/haber-32195>, Date accessed: 4 January 2017.

55 Hurriyet, <http://www.hurriyet.com.tr/tsk-cerablus- civarinda-hedeflerimha- edildi- 40211438>, Date accessed: 5 January 2017.

56 Al Masdar, <https://www.almasdarnews.com/article/russian-jets-strikeis-east- aleppo- turkish-army- prepares-attack-al- bab/>, Date accessed: 5 January 2017.

ing the operation, establishing ISTAR cooperation, and putting an added pressure on the terrorist defensive in the town. Furthermore, it is evaluated that the Russian Federation's active support in al-Bab operations would serve to prevent the aggressive stance of the Baathist regime to the TAF personnel participating in the Operation Euphrates Shield to some extent.

The latter above is especially important given that L-39Z Albatross type aircraft(s) attacked the TAF personnel participating in the Operation Euphrates Shield on November 24, 2016, which resulted in the loss of four Turkish lives.⁵⁷ Turkish press reported that the TAF then sent Atilgan low-altitude air defense systems close to the area of operations.⁵⁸ Moreover, it is known that the Baathist forces are amassing at Kuweires Air Base which lies approximately 20 kilometers south of al-Bab.⁵⁹

EDAM's analysis of the al-Bab campaign shows that the second (and probably third) phase of the operation, which will entail clearing settlements and holding them, necessitate a different force composition compared to the one that is currently aimed at breaking ISIS' defensive resistance. Furthermore, as part of the initial phase of the campaign, the main determinant of the Turkish force generation strategy is the intelligence regarding the number of ISIS militants and their capabilities. Though, it should be kept in mind that "fog of war" will always be a factor in enemy forces and the battlefield as put forth by Clausewitz.

On the other hand, the task of holding al-Bab will probably be carried on by local forces backed by the TAF, instead of Turkish units. In this case, the amount of personnel necessary (force density) to maintain stability in al-Bab will come into the equation. The



57 Can, Kasapoglu. "The Stage is Set for an Escalation: The Meaning of Syria's Attack on Turkish Forces", <https://warontherocks.com/2016/11/the-stage-is-set-for-an-escalation-the-meaning-of-syrias-attack-on-turkish-forces/>, Date accessed: 5 January 2017.

58 NTV, http://www.ntv.com.tr/galeri/turkiye/suriye-sinirina-stingerfuzeli-atilgan-sevkiyati,SZ18Pd_CZ0yh7qKjoKWqDA/nOfDWv0vqkuHxn-wEZYuQ, Date accessed: 5 January 2017.

59 Can, Kasapoglu. "The Stage is Set for an Escalation: The Meaning of Syria's Attack on Turkish Forces", <https://warontherocks.com/2016/11/the-stage-is-set-for-an-escalation-the-meaning-of-syrias-attack-on-turkish-forces/>, Date accessed: 5 January 2017.

most widely accepted doctrinal approach was provided by mathematician and defense analyst James Quinlivan in 1995. Quinlivan's calculations suggest that at least 20 security personnel should be allocated for a population of 1000.⁶⁰ On the other hand, some other studies in military sciences claim that a strictly statistical point of view may not be so accurate especially when faced with asymmetric adversaries. This approach suggests that numerous factors, such as the cultural traits of the local population and the relations between the terrorist elements and the local populace would come into play.⁶¹ In sum, after al-Bab is cleared of ISIS, a population-centric strategy, which takes into consideration the cultural traits of the local populace and aims to "win hearts and minds", will be essential in holding the city and fostering stability.

POLITICAL – MILITARY FRAMEWORK

The al-Bab campaign has also been influenced by developments related to the political – military framework of Operation Euphrates Shield including publicized differences of opinion between Turkey and the US-led anti-ISIS coalition. It is understood that a diplomatic understanding was reached with Washington and Moscow for the initial phase of the operation. US sources claim that this preliminary agreement would have allowed Turkey to expand up to 20-25 km area from its border. But Ankara decided to move beyond this agreed framework in the direction of al-Bab and initiate military operations to capture the town. Ankara wanted al-Bab and its surrounding region to eventually remain under the control of pro-Turkish forces. Ankara feared that an anti-IS coalition led intervention would have allowed PYD and other non-Turkey friendly entities to strengthen their presence in this geography.⁶²

It can be said that for this reason the campaign was initiated before any possible Raqqa operation by the anti-ISIS coalition. This lack of coordination is also a testimony to the trust deficit between Turkey and the US over the Syrian context, most prominently due to the differing stances on PYD/YPG. It is evaluated that this absence of coordination has also resulted in military disadvantages. The most important disadvantage was the lack of close air-support, as well as ISTAR, from the coalition. Another handicap is that since the campaign was not undertaken simultaneously with the Raqqa operations, ISIS does not need to divide its forces to defend the two provinces at the same time. The initiation of the Raqqa campaign by coalition forces could have mitigated the pressure that the Turkish forces face in al-Bab.

In the medium term, the strengthening of Turkey's diplomatic position will depend as much on its ability to establish a trust relationship with the US as the maintenance of the understanding it reached with Russia. This balancing act would give Turkey more influence over the fate of peace making efforts in Syria. While successful completion of the al-Bab campaign will take time, it is well within Turkey's capabilities. Such an achievement would mark an important success for a joint military operation in urbanized terrain against non-state threats. But ultimately, consolidating military success into a political achievement will require a more astute use of diplomatic capabilities and a more realistic identification of the political objectives of this military campaign.

60 James, T. Quinlivan, "Force Requirements in Stability Operations", *Parameters*, Winter 1995, pp. 59-69.

61 Jeffrey, A. Friedman. "Manpower and Counterinsurgency: Empirical Foundations for Theory and Doctrine", *Security Studies*, Vol.20 No.4, 2011, pp.556-591.

62 Anadolu Agency, <http://aa.com.tr/tr/turkiye/cumhurbaskanligi-sozcusukalin-sincar-in-ikinci-bir-kandil-olmasina-asla-musaade-etmeyiz/720951>, Date accessed: 5 January 2017.

CONCLUSION

Operation Euphrates Shield results from the need to overcome the troubled security environment along Turkey's borders with Syria, as well as the geopolitical necessity of establishing cross-border operational depth until a political solution to the civil war is found. In this regard, it rests on precise and solid political–military grounds. In turn, al-Bab has a critical role in turning operational successes into strategic gains.

It is seen that the TAF's elite forces with counter-terrorism experience are being deployed in the area of operations, and these units have been conducting joint operations with land based fire-support elements and the Air Force. In this regard, the presence of experienced forces in urban warfare, coupled with the Turkish Air Force's air-ground capabilities in counter-terrorism operations, will serve as critical factors for the success of the al-Bab campaign. Besides, as specified, the use of indigenous combat UAVs will be important for the future of Turkish defense industry.

In the first phase of the al-Bab campaign, the TAF units are expected to play a more active role. The increase in the air operations' sortie rates and more intensive military activity around the Aqil Mountain, as well as the envelopment maneuvers in the northeast, will be signs that suggest the first phase of the al-Bab campaign is nearing its end. It is expected that the operations will shift into a new course subsequently. In the second phase, IED threats and subterranean/tunnel warfare will be critical factors to be taken into consideration. Moreover, winning over the local populace quickly will also be critical for holding al-Bab. It will be of utmost importance for the behavior and attitudes of the different local forces operating under the auspices of Operation Euphrates Shield to be under firm control. Without a doubt, as it is the case in every military effort, the clear specification and achievement of political goals of Operation Euphrates Shield, and the use of diplomatic capabilities in tandem with military power remain crucial.



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