



Assessing the Post–July 15 Turkish Military

Operations Euphrates Shield and Olive Branch

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Since the July 15, 2016, military uprising in Turkey, many have speculated on how this event, and the purges and reforms that followed, has reshaped the operational effectiveness of the Turkish Armed Forces (TAF). Yet so far, no analytical piece relying on primary sources and on-the-ground insights has emerged assessing the TAF's effectiveness. This study aims to fill this gap, drawing comparisons and contrasts between the post–July 15 TAF's two critical cross-border operations into northern Syria: Operation Euphrates Shield (OES; August 2016–March 2017), against the Islamic State, which occurred in the Jarabulus–al-Rai–al-Bab triangle; and Operation Olive Branch (OOB; January–April 2018), against the Kurdistan Workers Party (PKK)–affiliated People's Defense Units (YPG) in the Afrin region.



The design, planning, and execution of both operations, as well as their similarities and differences, tell much about how and to what extent the institutional shock caused by the July 15 uprising, subsequent military reforms, and mass purges have affected the TAF's operational efficiency and effectiveness. Further, OES, providing a snapshot of the TAF just after the July 15 uprising, and OOB, providing a similar snapshot eighteen months after the uprising, reveal insights regarding the characteristics of Turkey's potential future cross-border operations. Such operations are likely in 2019 considering Ankara's strong desire to diminish, if not eliminate, YPG control of terrain along the border in northeastern Syria at all costs and by all means.

Background on the Campaigns

The first of the cross-border operations following the July 15 uprising—Operation Euphrates Shield—lasted 216 days, from August 24, 2016, to March 29, 2017. The second—Operation Olive Branch—lasted 58 days, from January 20 to March 18, 2018.¹ The TAF's primary objectives during these respective operations were to seize and hold critical terrain for border security and create buffer zones inside Syria so as to deterritorialize the Islamic State (IS) northwest of the Euphrates River, and to disrupt if not eliminate contiguity for the YPG-linked Democratic Union Party (PYD) and, in doing so, influence the strategic preferences of actors with stakes in the operational theater, notably the U.S. calculus vis-à-vis the YPG.

At first glance, these two campaigns may appear to be conventional ground force sweeps using special forces (SF) to seize and hold terrain, more or less similar to Turkey's earlier cross-border operations such as Hammer I and II in 1997–98 and Sun in 2008, both conducted against PKK targets in northern Iraq. Yet in examining an array of discrete factors, OES and OOB emerge as distinct from those previous operations. These factors include:

- triggers behind the two operations
- execution at the tactical, operational, and strategic-political levels
- command and control (C2)
- decisionmakers—including security-sector actors

such as the National Intelligence Organization (MIT) and TAF; political actors such as the presidency and Ministry of Foreign Affairs; and bureaucratic actors such as the Disaster and Emergency Management Presidency (AFAD), Turkish Red Crescent, and local municipalities

- type and extent of military technologies used and material losses they caused
- influence on foreign policy, including strategic choices by global actors such as the United States and Russia, regional actors such as the Assad regime and Iran, and nonstate actors such as the PYD, Free Syrian Army (FSA), and IS

Given that Turkey's potential future operations will have the same genetic markers as both OES and OOB, both warrant a closer look, as does a comparative study of the Turkish military's performance in the two campaigns. Moreover, OES was initiated just one month after the failed July 15 military uprising, and OOB was begun almost eighteen months after it. These two operations were conducted amid military reforms directly affecting the nature of civil-military relations and mass purges degrading the Turkish military's operational effectiveness.

This study defines operational effectiveness as the military's ability to accomplish its missions. Strategic effectiveness or success, meanwhile, refers to the ability to translate operational accomplishments into political outcomes. That is why this paper assesses the operational and strategic effectiveness of the TAF separately, although the two certainly are connected. For instance, the accuracy and timeliness of precision firepower by either ground or air elements, the combat performance of medium-range air-defense and ballistic-missile-defense systems, or the orchestration of conventional and unconventional efforts would be directly related to operational effectiveness. Entering Syria as a "strong" veto player that could create de facto realities dictating Ankara's preferences in northern Syria would relate to strategic effectiveness. In this sense, this paper suggests that OES did not yield successful outcomes at the political-diplomatic level. This is because it could neither disrupt the territorial control held by YPG forces to the west of the Euphrates nor dissolve either the U.S. or Russian pro-PYD stance in the north, meaning that the operation's strategic effectiveness was low. In the same vein, OES

did not generate desired operational outcomes, such as the swift elimination of the Islamic State's presence in the Jarabulus–al-Rai–al-Bab triangle. This was because OES's campaign design could not keep pace with the changing situation, a pitfall directly related to operational effectiveness. In contrast, this operation did produce some positive effects, such as increasing the Turkish military's familiarity with the Islamic State's way of warfighting, improving its ability to blend unconventional and conventional capabilities in urban settings, and facilitating a swifter, more accurate delivery of indirect fires—outcomes likewise directly related to operational effectiveness.

The TAF was undoubtedly more effective operationally in OOB than in OES. The TAF not only examined lessons learned in OES and updated its standard operational procedures accordingly, it also employed newly gained technological capabilities in the theater. Nonetheless, OOB did not deliver the desired political-diplomatic outcomes. In OOB, for instance, Ankara designated Afrin, the sole YPG-controlled Kurdish canton west of the Euphrates, as the objective instead of the Kobane and Jazira cantons, east of the Euphrates and the center of gravity for the YPG's military buildup. The related discussion helps illustrate the difference between operational and strategic effectiveness. Since 2011, the year fighting began in Syria, the Afrin canton was always of relatively secondary importance to all actors in the conflict. In this sense, even though the TAF achieved relatively higher operational effectiveness in OOB, the campaign yielded disappointing strategic results because Turkey could not influence other actors, particularly the United States and Russia, to cut their ties with the YPG. With OOB, Ankara successfully disrupted an almost six-hundred-mile-long PKK/YPG-controlled belt stretching from the Qandil region in northern Iraq to Syria via the Sinjar region and from the Jazira and Kobane cantons in the east to Afrin canton west of the Euphrates, an outcome related to operational effectiveness. Yet Ankara could not make key stakeholders in northern Syria, particularly Washington and Moscow, understand that Turkey could change the strategic picture if and when it sensed an existential threat to its security, an example of strategic ineffectiveness. Thus, overall, this study suggests that the TAF's operational effectiveness in OOB was higher than in OES yet that neither could ultimately deliver

the desired political outcomes, implying a problem with strategic effectiveness in both operations.

This study commences with an analysis of the various phases and outcomes of OES and OOB, followed by a comparative assessment elucidating similarities and differences between these two operations. A comprehensive discussion follows of the study's findings and lessons learned. The paper concludes with recommendations for future TAF operations.

Operation Euphrates Shield

At the initial phase of OES, Ankara emphasized that the operation would be limited both in time and space to maintain border security and confront the Islamic State as an act of self-defense against terrorism, codified under Article 51 of the United Nations Charter.² The objectives of OES, however, gradually expanded, and Turkish commandos and SF-supported FSA forces ended up capturing al-Bab, the strategic town south of the PYD-controlled Afrin canton and north of Assad-controlled Aleppo. Following is a detailed discussion of the key components and phases of OES.

Origins of the Military Concept

In April 2017, a senior officer then employed at the Operational Planning Department in the J3 Command of the Turkish General Staff (TGS) noted that the first serious discussions about Turkey's possible military intervention in Syria had started almost five years earlier, in June 2012. This was the pre-Islamic State period, just after Syrian air-defense units shot down a Turkish F-4E.³ The officer emphasized that two serious military options were being discussed at the time, both employing corps-size units: the first involved creating a safe zone protecting the Tomb of Suleyman Shah, which was then located inside Syria's Aleppo governorate, only twenty-five kilometers from the Turkish border; the second entailed gaining control of the territory north of Aleppo for use as a safe zone to control refugee flows. Notably, both prospective plans were made and presented by MIT during the National Security Council meetings in late 2012 and early 2013.

Refinement of the Military Concept

Having decided to conduct a military operation long before the Islamic State announced itself by seizing

Mosul, Iraq, in May 2014, Ankara now planned to create a buffer zone in northern Syria. A key turning point leading to this decision, according to a senior officer involved in operational planning, was the May 11, 2013, car bomb attacks in Reyhanli, although the culprits remain unconfirmed even today.⁴ This event further stoked the government's desire to intervene in northern Syria, despite reluctance from then army chief of staff Necdet Ozel. As for the military's initial reluctance, predominant reasons for it despite pressure from political elites and MIT included the following:

- lack of a clearly defined political directive elucidating the political ends, strategic objectives, timeframe, rules of engagement, and limitations of the operation
- need for international legal legitimacy—with the TGS believing Turkey had to lobby for this operation at the UN Security Council in order to be granted a resolution
- inability to gain NATO support⁵

Sociopolitical Context of the Operation

Over the next few years, through 2016, six incidents directly influenced Ankara's strategic calculus regarding a possible operation in northern Syria:

- The first occurred in late 2013, with the emergence of the YPG as the PYD's armed wing; it became the primary security actor on the ground, dominating northern Syria by early 2015.
- The second was Turkey's brigade-size military operation to transfer the actual tomb of Suleyman Shah on February 21–22, 2015. The site was located thirty-seven kilometers from Turkey, near the Euphrates River, and Syria had recognized it as Turkey's sovereign territory. For many pro-intervention military and civilian officials in Ankara, the withdrawal was described as a "missed opportunity" for Ankara. After the operation was completed, Turkey legally renounced its sovereign right to militarily intervene in northern Syria to protect the tomb against the Islamic State threat.
- The third was the reinitiation of clashes between Turkey and the PKK in late July 2015 and their expansion in early 2016.

- Fourth was the replacement in early August 2015 of the noninterventionist army chief of staff Gen. Necdet Ozel with Gen. Hulusi Akar, who was known for his interventionist posture on Syria and his hawkish stance against the PKK.
- Fifth was Russia's late-October 2015 military intervention in Syria and its increasing profile both on the ground and in the air in the country's north, drastically reducing prospects for Turkish cross-border operations in the area. After the downing near the Syrian border of the Russian Sukhoi Su-24 by Turkish F-16s on November 24, 2015—the first shooting of a Russian aircraft by a NATO member state since the Korean War—Russia sought to punish Turkey with sanctions and de facto exclusion from the strategic game in northern Syria. Almost a year passed before Turkey attempted to initiate normalization with Russia. On June 27, 2016, Turkish president Recep Tayyip Erdogan sent a letter to Russian president Vladimir Putin expressing "his deep regret for what happened" and indicating that "a judicial investigation is underway against the Turkish citizen said to be involved in the Russian pilot's death."⁶
- Sixth was an IS-linked suicide attack at a wedding in Gaziantep, Turkey, on August 20, 2016, that killed fifty-seven. According to a retired diplomat, during the National Security Council meeting a week earlier, on August 12, Erdogan himself had stressed that it was time for a cross-border operation into northern Syria and issued his executive decree to prepare for it.⁷ The wedding attack merely provided the "official cause" to initiate OES (see Table 1 for OES objectives, based on author interviews).

Thus, the failed uprising and subsequent military reforms aimed at subjecting the military to strict civilian control—spurred by the state of emergency declared immediately after the attempt—made President Erdogan the sole authority on his country's security-related issues and correspondingly weakened the Turkish General Staff.

The Conduct of OES

The operation was divided into five phases. In the first, lasting three days, the TAF captured Jarabulus. In the second, over two months, the TAF cleared the

TABLE 1. Turkey's objectives and outcomes for Operation Euphrates Shield

	OBJECTIVE	OUTCOME
1	Remove/eliminate IS presence from Jarabulus and al-Rai, the 60-km border with Turkey and the group's only access to the outside world, as an act of self-defense authorized by Article 51 of the UN Charter.	<i>Official objective</i> Fully achieved
2	Control the territory linking the Kurdish Kobane and Jazira cantons east of the Euphrates River with the Afrin canton west of the river, which would have formed a continuous stretch of Kurdish territory.	<i>Implied objective</i> Partially achieved
3	Restore/elevate morale and motivation within the post-July 15 TAF and insulate the military from Ankara politics.	<i>Implied objective</i> Partially achieved
4	Rebuild the nation's confidence in the army with strong public support for the military operation in the post-July 15 setting.	<i>Implied objective</i> Partially achieved

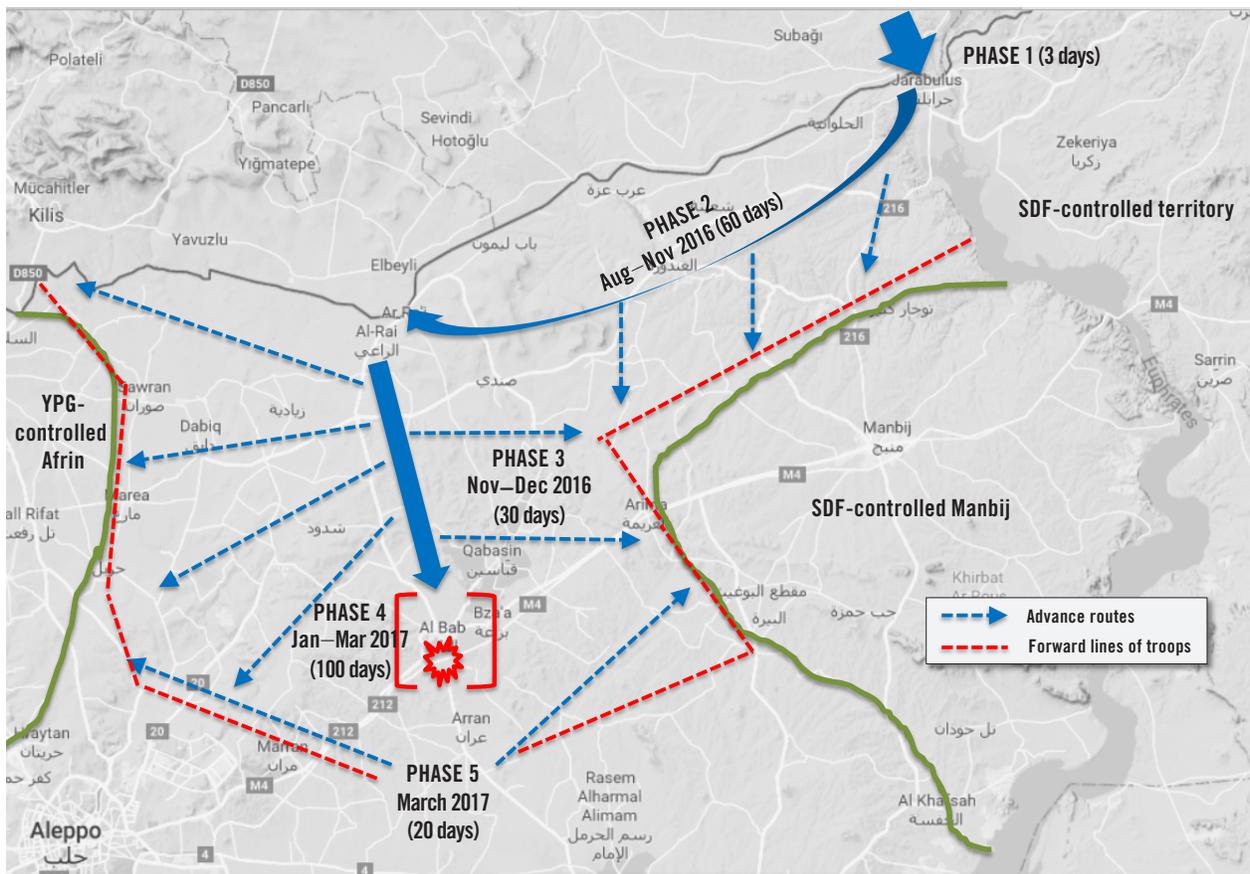
nearly sixty-kilometer border stretching from Jarabulus to al-Rai. These first two phases were conducted only after receiving green lights from both Russia and the United States.⁸ Essentially, these two phases sat at the “converging” interests of all actors with stakes in northern Syria. In the third phase, the TAF encroached southward, while in the fourth it captured al-Bab. In all phases, according to military planning, the Russian air force was tasked with carrying out aerial bombardment of critical targets and providing as-needed close air support (CAS). But these latter two phases, as will be explained further, were situated between the “diverging” interests of Turkey, on the one side, and the United States and Russia, on the other. This divergence led to significant problems for the Turkish military. The fifth phase involved operations around Afrin and Manbij. (See map 1 for the phases of OES.)

OES PHASE 1: Capturing Jarabulus (3 days)

This phase, designed and planned as a special forces operation in which Turkish units would operate as “liaison teams” with FSA groups, was meant to be the main ground operation. Maj. Gen. Zekai Aksakalli, then SF commander, had been named to lead OES. His reputation had swelled following the July 15 uprising because he had been considered among the few generals to actively resist the coup plotters. Jarabulus, meanwhile, had already been cleared of IS militants, so capturing this border town was a cakewalk for FSA groups, backed by Turkish SF units and with Turkish Air Force CAS missions, indirect fire support, and armor protection. According to an

FSA commander, the capture of Jarabulus was to be enacted in early September 2016, but a “preemptive move” was needed the previous month, because YPG groups had been preparing an offensive to capture the town.⁹ But this move did not go off cleanly. Instead, it caused confusion regarding the mission among not only those loosely trained, ill-equipped, and undisciplined FSA groups, but also among Turkish SF teams and MIT elements in northern Syria. According to the same FSA commander, after the capture of Jarabulus in late August, OES command had initially ordered the FSA units at the Kilis-based Hawar Operations Center to continue on to Manbij, to prevent the YPG units from moving west of the Euphrates. “Yet,” as he explained, “we still do not know why, but we were ordered to advance to the west, to al-Rai—not southwest. I think the Americans intervened and forced the Turkish military not to advance to Manbij.” As these remarks suggest, Ankara’s primary objective in OES had not in fact been to fight the Islamic State—the U.S. target—but to degrade, if not defeat, the PYD in northern Syria, particularly west of the Euphrates.

Notably, Turkish Special Forces Command is directly subordinate to the TGS—and accountable to the deputy chief of staff—with no command-and-control responsibilities. Land Forces Command, particularly its 2nd Army Command/Malatya, coordinates counterterrorism operations in eastern and southeastern Turkey. By designating the initial phase of OES as a purely special forces campaign, the TGS stirred friction between SF Command (led by Aksakalli) and 2nd Army Command (led by Gen. Metin Temel), with a personal rivalry also stewing between the generals.



MAP 1. Phases of Operation Euphrates Shield

This was particularly evident in the third and fourth phases, when OES required a new type of counterterrorism force involving conventional capabilities such as armored and mechanized units and indirect fire support, as well as unconventional tactics.

OES PHASE 2: Clearing the Jarabulus–Al-Rai border area (~60 days)

As Turkish forces crossed the Syrian border, the Islamic State put up only weak resistance initially. Meanwhile, Russia’s heavy air bombardments around al-Bab and Manbij, coordinated with Turkey, disrupted IS supply lines, preventing the jihadist group from establishing a robust defensive line at the border. This allowed Turkey-backed FSA forces to advance rapidly to al-Rai, even though they lacked sufficient armored units, close-air support, and indirect fire support. At this phase, OES had cleared 1,100 square kilometers of terrain from Jarabulus to al-Rai. But achievement of these initial goals created the false impression that the advance to al-Bab (phase 3) and capture of al-Bab (phase 4) would be

equally smooth, an assumption based on low situational awareness that, in turn, led to mission creep. Thus, the inability of TAF units to adapt their campaign planning to the changing situation, combined with increased IS resistance, would pose significant challenges with regard to operational effectiveness.

OES PHASE 3: Mission creep toward the south (~30 days)

The third phase presented a stiff challenge to OES forces: the more they advanced to the south, the more they were exposed to improvised explosive devices (IEDs) and antitank guided missiles (ATGMs) from the Islamic State. Satellite maps available from open sources revealed Islamic State militants’ efforts to dig ditches and tunnels and to construct defensive positions, and IS managed to resist fiercely Turkey’s intervention with suicide attacks using armored vehicles, along with the earlier-mentioned IEDs and ATGMs. OES forces should have been provided with more armor protection and CAS; however, this requirement could not have been accurately ascertained at the

operations center in Kilis, run by General Aksakalli. The gradual evolution of OES from an SF operation to a new type of counterterrorism operation requiring a blend of conventional armored units—including indirect heavy fire support with 155-millimeter “storm” howitzers and 122-millimeter multiple rocket launchers and commando battalions—and unconventional capabilities would surely require new personnel at the operations center. Yet this requirement was not fulfilled. After three Turkish soldiers were killed in an IED attack in northern al-Bab in late November 2016, shortly before the offensive, some FSA groups deserted due to internecine rivalries and plain lack of discipline, breaking up the main OES ground force.

After concluding that the al-Bab offensive could not be conducted with FSA groups, the Turkish military deployed one battalion from the 57th Commando Regiment/Sarikamis, another battalion from the 4th Commando Brigade/Tunceli, and two battalions from the 1st Commando Brigade/Kayseri. Additionally, all battalions from the 2nd Armored Brigade/Istanbul, involving Leopard 2A4 tanks, and the 20th Armored Brigade/Sanlıurfa, with M60T tanks, were deployed to the theater of operation. With these deployments just before the al-Bab offensive, the total number of Turkish soldiers operating at a given time reached three thousand—pulled from among two armored brigades, one mechanized infantry brigade, five commando battalions, and around fifteen SF teams. In the course of OES, the increasing conventional capabilities boosted the influence of 2nd Army commander General Temel, which frustrated General Aksakalli, given that the “conventionalization of OES” could crimp his rising status in Ankara.

At the end of this stage, OES, despite the challenges it faced, had secured an area encompassing nearly 2,500 square kilometers in the Jarabulus–al-Rai–al-Bab triangle.

OES PHASE 4: *Siege and capture of al-Bab (~30 days)*

The al-Bab offensive required a new type of counterterrorism planning for the Turkish military, involving conventional armored units, indirect-fire-support components, CAS, and SF units. This was mainly due to the Islamic State’s success in establishing resilient defensive perimeters in urban settlements using vehicle-borne improvised explosive devices (VBIEDs),

tunnel warfare, and antitank missiles. In this phase, IS aptly used suicide VBIED attacks to disrupt OES planning assumptions, task organization, and the morale of participating units. With tunnels, the jihadist group maintained high mobility despite air attacks. With effective antitank missile attacks, the Islamic State curtailed the TAF’s movement of armor and limited its coordination with infantry units. This combat strategy enabled IS to maintain the upper hand in the field despite being on the defensive. Clearly, Turkish military planners at the Kilis operations center did not anticipate the Islamic State’s level of determination in al-Bab, and thus did not bolster their planning expertise accordingly in conventional armored tactics. Specifically, the TAF gave insufficient thought to providing armored and mechanized, close air, and indirect fire support to FSA foot soldiers, assuming the Russian military would provide these functions.

In the first stage of the al-Bab offensive, conducted in late January 2017, the key to breaking Islamic State resistance on the town’s western outskirts was Aqil Hill. Seizing this strategic high ground was therefore marked as a priority. Yet because of operational-level confusion between the SF planners and conventional planners at the operations center, this first attempt turned into a fiasco, with the military planners defining the very nature of the operation as SF despite it actually being conventional. After this experience, two brigadiers general from the 2nd Army Command who had commanded the anti-PKK operation in Nusaybin in March–April 2016—one with an armored-branch background; one with a mechanized infantry background—were granted full responsibility at the Kilis operations center. This enabled Turkish military planners to adapt during the al-Bab offensive. The TAF could then increase the number of armored or mechanized units on the ground, further involve the Turkish commando units at critical locations—in place of Turkish-SF-backed FSA units—extend the effective provision of CAS, and, more important, provide more intricate coordination between the Turkish-SF-backed FSA forces and conventional Turkish military units in and around al-Bab.

OES PHASE 5: *Operations in the direction of Manbij and Afrin (20 days)*

After OES forces won full control of al-Bab on February 17, 2017, President Erdogan stated that Turkey’s

next moves would be in Raqqa and Manbij.¹⁰ He was signaling that Turkey could go even deeper south and east. Although OES had ended, future operations were already surfacing.¹¹ By such measures, the true end of OES might be marked by the hoisting of the U.S. flag in Manbij and the Russian flag in Afrin, both in early March 2017. At the same time, forces under Syrian president Bashar al-Assad were nearing al-Bab from the south, effectively trapping Turkey-backed FSA elements. Even though OES yielded some successful outcomes at the tactical level, the operation did not resolve existing diplomatic problems involving other actors—namely, the United States and Russia. Steadier communication of Turkish goals would have gone some way toward resolving this. Instead, Turkish pro-government media attempted to supplant this narrative with a flood of (mis)information, focusing on the heroic acts of Turkish units on the ground.

FSA Ineffectiveness

As gleaned from interviews with Turkish officers who participated in the operation, along with two Free Syrian Army commanders,¹² FSA forces joining the operation lacked a fixed structure under a single command. Moreover, roles and missions assigned to the FSA were not clearly defined, with confusion prevailing among the various FSA groups as to the mission, as well as their responsibilities and those of others involved in the campaign. Nevertheless, the FSA groups were assigned to be the primary ground force to advance west for phase two, after control of Jarabulus was established. For this, each group was given specific advance routes for capturing and holding a particular bloc of critical terrain. A senior military officer noted that the biggest problem the Kilis operations center faced during the second and third phases involved a failure to synchronize the ground movements of advancing TAF and FSA units, resulting in opaque command-and-control contours between the Turkish military's operations center and FSA's Kilis-based Hawar Operations Center.

A central reason for the larger confusion, according to an FSA commander, was that when the operation began in August 2016, integration had not been fully achieved between the FSA and other Sunni groups falling within the short-lived Conquest of Aleppo Front, which encompassed Sunni fighting

blocs that withdrew from Aleppo in summer of 2016. Friction over ideology and organization still hindered coordination between these two groups, as assessed by the FSA commander. In the weeks to come, this flaw manifested itself on the battlefield in inadequate discipline and cohesion. Moreover, as explained by a Turkish officer, Turkish military units eventually had to recapture most of the critical terrain initially seized by the FSA groups. In the third and fourth phases of the operation, centering on al-Bab, an FSA figure noted, desertion rates from the Syrian bloc were especially high.¹³ The broader take-home message from this experience is that partnering with local proxies in an offensive operation can come at the cost of low operational effectiveness.

Unclear Political and Diplomatic Efforts

On the political end, directives were not articulated to identify the policy aims, strategic objectives, time-frame, rules of engagement, and limitations of the operation. Hence, military efficiency was hamstrung from the planning phase until the capture of al-Bab. The problem of transforming ambiguity about desired end states into clarity, and providing the forces best suited to achieve those end states, led to “open-endedness.” Related were time- and space-linked limitations and rules of engagement for military planners seeking to create executable campaign orders. Particularly during the third phase and the advance southward, this open-endedness emerged as operational cacophony over whether or not capturing al-Bab was an ultimate objective. That is why, for instance, an FSA commander interestingly emphasized that some FSA groups then advancing southward stopped and then left the battlefield, assuming the operation had already succeeded when Turkish military units took control of northern al-Bab.¹⁴ Furthermore, diplomatic efforts to engage other actors with a military presence in the area could not be adapted in real time, coordinated with battlefield developments. This shortcoming resulted in tragic breaches of force protection, such as on February 9, 2017, when an evidently accidental Russian airstrike killed three Turkish soldiers due to lack of coordination with the TAF.¹⁵ Earlier, on November 25, 2016, fire from an Assad-regime L-38 Albatross-type aircraft around al-Bab killed four Turkish soldiers, according to Moscow, due to a “lack of agreement of coordi-

nates during strikes by the Russian airforce.”¹⁶ Yet this was undoubtedly a clear message for Ankara.¹⁷ After the February 2017 incident, Russia and Turkey did boost military coordination.¹⁸

Losses in OES

Sixty-nine Turkish soldiers were killed in OES: nearly 40 percent by VBIED attacks, 30 percent by mortar and rocketfire, and 20 percent by roadside IEDs and 10 percent by accidents. In addition, 220 Turkish soldiers were wounded. Yet notably, not a single Turkish soldier lost his life during armed man-to-man engagements with the Islamic State, given that FSA units were the primary ground force engaging in such combat. Because they did the heavy lifting, FSA groups suffered 380 killed and 800 wounded, the majority from the Ahrar al-Sham, Failaq al-Sham, and Harakat Nour al-Din al-Zinki brigades. The Turkish military announced that about 3,000 IS militants and 500 YPG fighters were “neutralized” during OES.

Material losses were also in play. According to the Turkish military’s list of damaged, hit, or lost armored vehicles leaked to open sources—and not denied by official sources—these included ten Leopard 2A4 tanks that were hastily deployed to the high-ATGM-risk operational theater without proper armored protection and camouflage,¹⁹ one M60-A3 tank, three improved armored personnel carriers (GZPT), and three Cobra armored vehicles, immobilized mainly in combat around Aqil Hill, where intensive clashes took place starting December 20, 2016.²⁰ According to a retired general, these material losses amounted to some \$600 million.²¹ Yet the total cost of the whole operation, including all aircraft flights, indirect fire support, weapons systems, and equipment delivered to the FSA, exceeded \$1 billion.

Measuring the Success of OES

Even though Ankara defined OES as a “successful” operation in its March 29, 2017, National Security Council announcement marking its end, the measures by which Ankara defined “success” are unclear. How indeed was success in OES measured? Through the number of neutralized “terrorists,” the size of cleared or held territory, the extent of effecting political-diplomatic outcomes in northern Syria? Unfortunately, no information on how Ankara defined OES success in strategic terms has so far appeared.

Operation Olive Branch

On January 20, 2018, Ankara launched OOB into the YPG-controlled Afrin region in northwestern Syria.²² Following the launch, the TGS revealed in a press release the operation’s scope, targets, and legal framework, but remained mum on its prospective duration.²³ The purpose of the operation, according to the release, was “to neutralize the terrorists belonging to the PKK-affiliated YPG and the Islamic State in the region of Afrin in northwestern Syria, in order to provide security and stability along Turkey’s borders as well as in the Afrin region.”²⁴ Implied in this statement was that Ankara did not differentiate between IS and the YPG in pursuing border security and regional stability. Furthermore, with OOB, Ankara aimed to reposition international actors vis-à-vis the YPG, casting the group as a serious threat to Turkey’s security. In seeking legitimacy for the operation, Turkey focused on its counterterrorism component, drawing on UN Security Council Resolutions 1624 (2005), 2170 (2014), and 2178 (2014) and, in the UN Charter, Article 51, on the right of self-defense (see Table 2 for Turkey’s objectives in the operation).

Terrain and Weather Conditions During the Operation

The terrain in northwestern Syria is hilly, with an average elevation of 800–1,100 meters along the Turkish border, allowing YPG fighters to optimize their defensive positions. Likewise, in the northern parts of the Afrin region, YPG fighters were sometimes located at altitudes 300–400 meters higher than TAF troops and up to 1,500 meters away from them due to the harsh terrain. For TAF troops, this could correspond to a 30 percent slope, hampering armor mobility. The fronts were largely grown with olive trees and thick evergreen foliage, allowing ample opportunity to hide and complicating the advance of armored columns. Also providing cover for YPG fire were wadis (dry riverbeds), agricultural terraces, and peaks and hillsides. Afrin’s eastern and southern sections are less harsh, consisting of gentler hills. In the east, the line between Menagh Air Base and Tal Rifaat is well suited for human-made obstacles, and this challenged the TAF’s possible advance; but otherwise, this route was the shortest and easiest to Afrin city center. Moreover, both Tal Rifaat and the small surrounding

TABLE 2. Turkey’s objectives and outcomes for Operation Olive Branch

OBJECTIVE	OUTCOME
1 Dislodge, if not eliminate, YPG elements.	<i>Official objective</i> Fully achieved
2 Weaken the U.S.-YPG political/military relationship so as to move Turkey-U.S. relations from conflict to cooperation.	<i>Unstated objective</i> Not achieved
3 Create a safe zone for the local population to reestablish the Afrin region’s social cohesion and rebuild societal and political stability.	<i>Stated objective</i> Ongoing
4 Restore/elevate morale and motivation within the TAF.	<i>Unstated objective</i> Partly achieved
5 Rebuild confidence in and strong public support for the army in the post-July 15 setting.	<i>Unstated objective</i> Fully achieved

settlements carried strategic importance due to their access to Syrian-regime-controlled Nubl and Zahra, in southeastern Afrin. In the east and south, opportunities for cover and concealment are less abundant than in the north and west.

The winter timing of the operation, under harsh conditions, decisively complicated matters even further for the TAF.²⁵ Control and coordination of operational forces suffered, and sometimes the advance was forced to slow down or even stop.

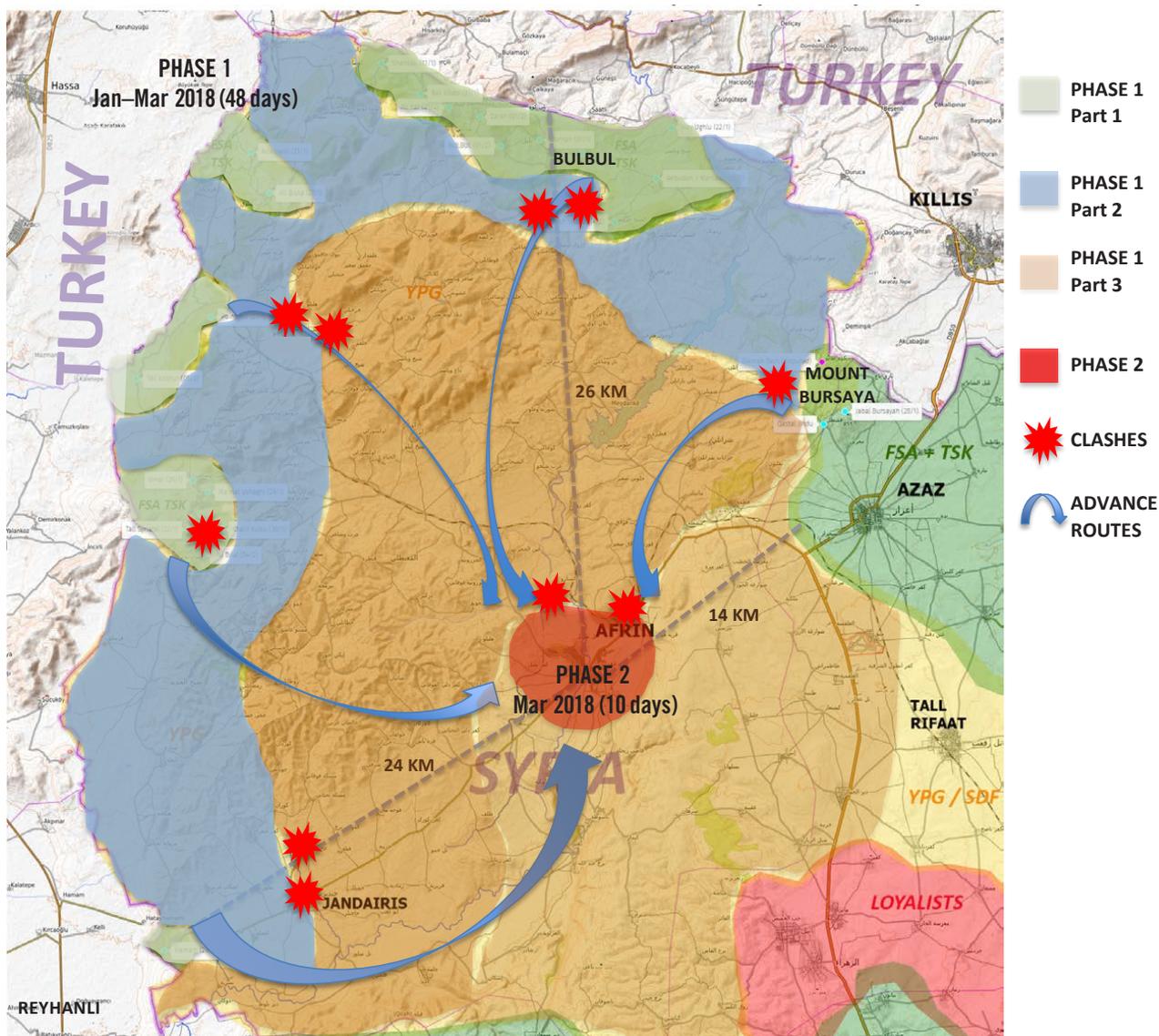
For their part, YPG forces strengthened their defensive perimeters against a potential TAF assault by using a dense network of fortifications, tunnels, underground shelters, ATGM strongholds, heavy gun emplacements, and obstacle systems (e.g., pits, barricades, IEDs, landmines). Furthermore, YPG forces developed defensive perimeters involving fixed and well-fortified strongholds and mobile units patrolling the strongholds. This hybrid defense strategy—integrating defensive perimeters, ATGM nests, tunnels, and IEDs, as well as using the civilian population as “human shields” in and around critical towns like Jindires and Rajo—was the first indicator of the ferocity with which the YPG would defend Afrin.

Phases of OOB

OOB was launched immediately after a series of high-profile military meetings between Turkish and Russian officials. Ultimately, Ankara received the green light both to launch the operation and to use airspace over Afrin for critical airstrikes and close air support tasks.²⁶ Despite threats from Assad’s forces to shoot

down Turkish planes the Russian military contingent controlled the country’s northwestern airspace. Thus, the Kremlin’s approval before OOB was essential for Ankara to be able to sideline Assad’s air-defense units.

According to Ankara, around 8,000–10,000 YPG fighters were situated across Afrin before the operation.²⁷ And sources interviewed in Ankara say these were joined by an unknown number of IS militants who had surrendered to the organization during the Raqqa and Deir al-Zour conflicts and were promised in return that they could fight against Turkey. Without a doubt, the estimated number of YPG fighters concentrated in and around Afrin city center would pose extreme danger even in relatively more flat and populated terrain elsewhere in the region, especially in a complex operational environment favoring defensive operations. For the TAF, the most effective tactic in response was surprise, achieved by traveling less-passable terrain along multiple axes, with the goal of keeping YPG forces dispersed and encouraging desertions. Turkish military planners, in turn, sought to maintain a high operational tempo on the air and ground, aimed at weakening the YPG’s hold on hilly terrain in the north and west. Defense expert Can Kasapoglu and researcher Sinan Ulgen emphasize that Russia’s opening of its airspace over Afrin allowed the TAF to commence OOB with overwhelming air-power, joined by a land incursion into the mountains north and west of Afrin city.²⁸ According to official reports, the operation’s first forty-eight hours saw Turkey dispatch seventy-two combat aircraft, which struck 108 targets in seven sectors. This robust force



MAP 2. Phases of Operation Olive Branch

generation drew on one-quarter of the Turkish Air Force’s principal fighter arsenal, composed of F-16 variants and F-4 2020s, running an impressive three to four sorties per aircraft per day.²⁹ In operational terms, these airstrikes marked a notable achievement, conducted amid debates about fighter pilot shortages and the combat readiness of the Turkish Air Force.³⁰

Aside from the decisive role played by manned aircraft throughout the operation, armed drones emerged as operational game changers. Of the total around 3,400 YPG fighters killed by the TAF and other indigenous components, 449 fell to these tactical armed drones.³¹ Bayraktar TB2s were employed in target acquisition for other platforms,

leading to an additional 680 deaths—with the sum total YPG forces killed using drones amounting to 1,129.³²

Judging from statements by military officials and political decisionmakers, the operation was to be divided into two phases in line with operational objectives:

- first, the clearing of YPG elements from the hilly and mostly rural areas stretching to the north, northwest, and west of Afrin city center
- second, the cleaning out of YPG groups from Afrin city center and capture of the larger Afrin region³³

OOB PHASE 1: *Clearing terrain north of Afrin (~55 days)*

Contrary to the general expectations of Turkish military analysts, OOB was not launched from the relatively flat terrain of Azaz–Tal Rifaat–Afrin, which would have enabled a fast armored advance using the shortest route to Afrin city center. Rather, the operation was launched from the opposite direction, crossing hilly terrain in the north and northwest. The TAF preferred to first control these highlands before laying siege to Afrin city, home to about 300,000 residents, most of them Kurdish. Operationally, the TAF appeared to want to open multiple fronts in different areas so as to disperse the 8,000–10,000 YPG fighters and weaken their defense perimeters.

On January 20, 2018, at 5 p.m., OOB began with airstrikes and CAS missions against predetermined YPG targets throughout Afrin. Starting the next day, January 21, at 10:30 a.m., TAF and FSA groups launched a ground operation from seven different points toward Afrin.³⁴ This time, as opposed to in OES, the advance routes taken by the Turkish commando units were supported by mechanized/armored units as the primary ground force, with FSA elements mostly in place for follow-and-support tasks. At North Bulbul town's Merseva village line and Dikmetas-Bursaya line, the West Seyh Muhammadli–Adamanli–Bilal village line, the Memelan-Atman-Sediya village line (Rajo subdistrict), the Omar Usagi–Mamal Usagi–Halikan village lines, and in the Seyh Hadid and Halikan regions, YPG fighters were forming well-prepared defense lines and strongholds around other critical terrain.³⁵ In order to stop the FSA-backed TAF forces, the YPG evidently dug ditches measuring two to five meters deep and five meters wide, with the hope of causing delays or attrition. With its campaign plan, the TAF preferred to rely on standoff firepower rather than combat maneuver.

By the end of the fifth day, January 24, the TAF ground elements and FSA groups, along with Turkish CAS, attack helicopters, and armed drones, had reached almost eight kilometers into Syria from their initial seven routes, capturing at least eleven villages. But when weather conditions worsened, this multi-axis approach endured setbacks. Heavy rains reduced visibility and muddied the ground, slowing progress and disrupting synchronization of efforts. Equipment breakdowns led to increased attrition.

Despite these problems, the advance of armored columns was well coordinated with CAS and artillery fire, even as these columns struggled to expand their secure positions. This prevented YPG elements from infiltrating secure positions and carrying out hit-and-run attacks. Further, airstrikes and artillery fire forced YPG forces to leave their defensive positions and withdraw to nearby villages. The fighters who stayed behind became targets for airstrikes, armed drone attacks, and indirect fire. And those fighters who withdrew to villages such as Rajo and Jindires were not able to mass sufficient forces to mount effective counterattacks. They could only conduct hit-and-run attacks with small units garbed in civilian clothing. In this context, from January 21 to March 13, 2018, a series of small clashes occurred in rural northern and northwestern areas of Afrin. In their study, Necdet Ozcelik and Can Acun split this first phase into several parts, during which the TAF first lost its operational tempo, then regained momentum through a series of tactical and operational maneuvers.³⁶ This recovery was attributable to extraordinary efforts at the tactical level and capable command and control at the operational level, and can be broken down as follows:

- **MULTI-FRONT LAUNCH OF GROUND OPERATIONS.** The approach wherein FSA-backed TAF units first opened and then sought to expand seven axes of advance from the northern and western sectors surprised YPG forces, thereafter overwhelming them. Moreover, the YPG failed to shape the area of operation for the eventual armed conflicts in and around Afrin city center.
- **CAPTURE OF PRIORITIZED TACTICAL TARGETS.** On January 24, 2018 (the fifth day), the TAF had seized some critical terrain in the Afrin countryside: to the northeast, mountainous Bursaya; to the north, Hay Uglu, Seyh Obasi, Merseva, Seyh Horoz, Mahmoud Usagi, and Shenkal villages; and to the west, Adamanli, Harmanlik, and Halikan—while securing positions for further operations. In putting up resistance, YPG fighters used antitank systems, mortars, rockets, and other heavy weapons.³⁷
- **CAPTURE OF JINDIRES TOWN.** On March 8, 2018, FSA/TAF forces captured the critical town of Jindires, where Ankara claimed YPG forces

had launched rocket attacks on Hatay's Reyhanli and Kirikhan districts.³⁸

- **ENCIRCLING OF AFRIN CITY CENTER.** Afrin was surrounded by operations on its northern, eastern, and southern sides that continued after the capture of the Bafilyon hills and Jindires. OOB troops started to prepare for the next operation in an inhabited area, namely Afrin city center.³⁹ In this context, joint operations with AFAD and the Turkish Red Crescent were begun in the operational area in order to evacuate civilians and provide aid.⁴⁰

For YPG elements, ATGM attacks—specifically, from the 9M133 Kornet, AT-5 Konkurs, and AT-4 Fagot—were the stiffest resistance generated on the ground. Particularly in the first phase, these ATGM attacks and ambushes were the most effective tactics in delaying the advance of the TAF's armored columns. The ATGM attack in Seyh Horoz in early February 2018, which killed five Turkish soldiers, marked the deadliest YPG attack throughout OOB.⁴¹

According to a Turkish security official, the YPG conducted fifty-two ATGM attacks in OOB, mostly targeting pickup trucks mounted with heavy machine guns.⁴² These types of attacks were heavily concentrated in the Rajo area (around fifteen) and Bulbul area (around ten). The security official added that the ATGM attacks increased in number after early March 2018, and that this increase caused great concern in OOB's command center in Kilis, especially as regarded future anticipated urban clashes in Afrin city center (see map 3 for the locations of ATGM attacks).

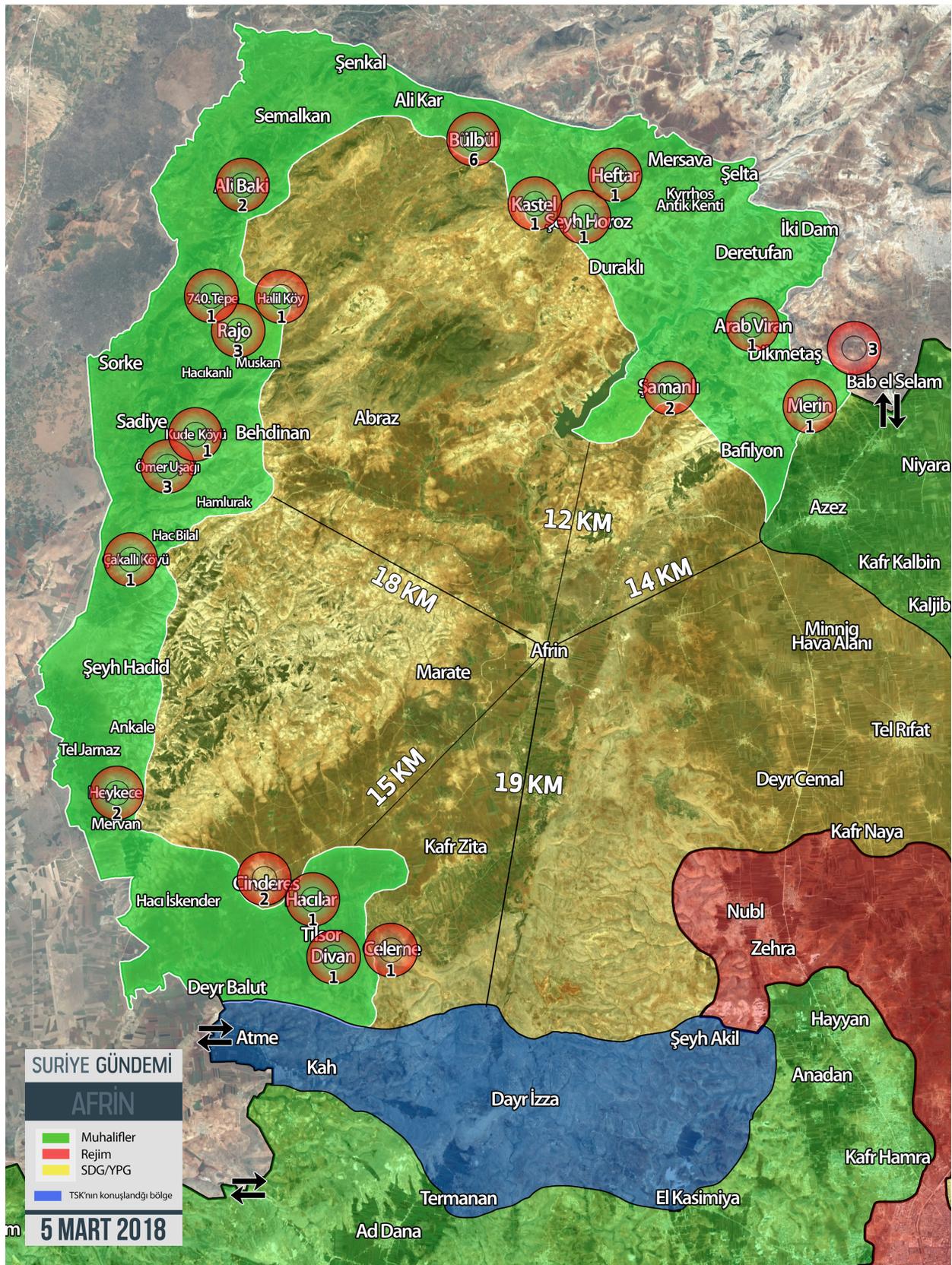
OOB PHASE 2: Clashes around Afrin city center (5 days)

In the second phase of the operation, beginning March 13, 2018, Turkish forces surrounded Afrin city center from the northeast, west, and southwest. In just five days, the YPG had withdrawn, allowing TAF and FSA forces to wrest control of the city center. The mission was achieved by 8:30 a.m. on March 18. Evidence that the YPG had not prepared for this withdrawal lay in the large numbers of cars, weapons, ammunition, and equipment left behind. No clashes actually occurred in the city, but Turkish forces had to work street by street, building by building, to clear areas booby-trapped by YPG fighters with IEDs and landmines.

A specific weakness of the YPG during this phase was its inability to send adequate reinforcements to Afrin, especially ATGMs. This helped tip the scales in OOB. According to a local Kurdish journalist who covered OOB, the YPG command east of the Euphrates instructed the YPG forces to hand over Afrin.⁴³ At first, some YPG units did not heed the call and kept up their resistance, but these holdouts were compelled to give up after three days.⁴⁴ YPG forces in Afrin had two choices: remain until the end despite the risk of total destruction and high civilian casualties, or evacuate the city to allow for diplomatic negotiations to cede control of the city to Syrian president Assad's forces. The YPG knew that launching an urban fight—one it was bound to lose—could erode whatever support it still had from locals in Afrin.

This study suggests that the TAF's operational effectiveness (matching capabilities to missions combined with the ability to plan, integrate, and execute operations) led to the YPG's decision to withdraw from Afrin city. Simply put, the YPG's withdrawal can be defined as a negotiated outcome reached by the YPG command and Russia-backed Assad fighters who were forced out by the on-the-ground operational impact generated by the TAF. Yet whatever the cause, this withdrawal seriously affected the image of YPG military prowess and the political respect it had garnered in the fight against the Islamic State, particularly, according to one U.S. diplomat, "in the eyes of the U.S. decisionmakers."⁴⁵

Another fact worth mentioning is that the YPG withdrew its forces from Afrin via a military air base near Tal Rifaat under Assad's control, an exit route intentionally left by TAF units even though the Turkish forces had the capacity to encircle Afrin and turn the operation into a siege. The coordination during the withdrawal and the TAF's tacit endorsement of it indicate that the Assad regime and Russian forces had advance knowledge of the YPG's decision to withdraw. Yet it is not yet clear what price Russia and the Syrian regime might have imposed for allowing YPG forces to withdraw to Tal Rifaat. A question that warrants serious consideration is whether some YPG members stayed behind to launch guerrilla-type attacks against the Turkish and FSA forces; but with the exception of two or three high-profile attacks in the Afrin city center, such strikes have not occurred.⁴⁶



MAP 3. ATGMs shot by the PKK/YPG throughout the OOB, Suriye Gundemi, March 5, 2018, accessed May 12, 2018, at <http://bit.ly/2GJUHva>.

Losses in OOB

According to official figures released by the TGS, 54 Turkish soldiers and 16 civilians were killed and 233 Turkish soldiers were injured during Operation Olive Branch. On February 10, 2018, a T129 ATAK helicopter was downed in Rajo, marking the first combat loss of a Turkish helicopter during the operation.⁴⁷ The TGS also revealed that around 230 villages in the Afrin region were taken by the Turkish army, with around 3,400 YPG fighters killed in all.⁴⁸ A retired Turkish general estimated that the total cost of OOB was around \$1 billion.⁴⁹

Comparative Analysis of OES and OOB

OES led to successful outcomes at the tactical level, such as familiarity acquired by the Turkish military with the Islamic State's way of fighting. Yet OES was poorly managed at the operational level; the initial operational design and campaign plan could not be adapted to keep pace with changes on the ground. Initially conceived as a special forces operation and planned accordingly, OES led to successful outcomes during the first phase (capture of Jarabulus) and second phase (control of the sixty-kilometer border stretching between Jarabulus and al-Rai). But in the third phase (encroachment to the south) and fourth phase (siege of al-Bab), OES gradually evolved into a new type of cross-border counter-terrorism operation, requiring a blend of conventional and unconventional military capabilities. The TAF did not fully absorb this gradual evolution, and the ensuing mission creep created problems. Furthermore, in the third and, particularly, the fourth phase, Ankara did not think adequately through its diplomatic efforts, and paid the price for this shortcoming. Namely, when advancing southward to al-Rai, Ankara failed to coordinate its operational efforts on the ground with diplomatic ones so as to influence strategic choices by Moscow and Washington. The failure specifically to communicate effectively with Russia cost the operation crucial CAS as fighters worked to achieve their last goal, the capture of al-Bab. This held severe consequences for Turkish soldiers during the hundred-day siege of the city.

Compared to OES, planning for OOB was far better, as evidenced particularly by the following developments:

- preserved unity of command for the whole operation
- use of TAF commando units as the primary ground forces rather than poorly disciplined and trained FSA elements, to boost tactical effectiveness
- close coordination between the air and ground elements, increased command, control, communications, computer, intelligence, surveillance, and reconnaissance (C4ISR) capabilities, precision strike capability, and enabling of CAS missions during the advance
- more-fluid provision of CAS tasks
- effective and efficient use of new military systems and technologies such as TB2 armed tactical drones, T129 ATAK helicopters, Roketsan-produced MAM-L high-precision smart munitions (thermobaric, antiarmor, and airburst variants), and the TOSUN unmanned engineering system
- heavy emphasis on armor defense and other counter-ATGM efforts
- successful integration of newly introduced C4ISR systems, which improved synchronization of commando and armored units on the ground and provided real-time situational awareness for ground forces
- empowerment of the TAF as the sole logistics manager, whereas OES suffered from faulty coordination between military and civilian elements

OOB likely could not have been conducted so flawlessly had Ankara not used robust military technologies such as smart munitions for high-precision strike capability, armed drones, unmanned combat and engineering systems, and systems designed to increase situational awareness, armor survivability, air-land coordination, and so forth. In the absence of both intensive unmanned systems such as TB2 drones and TOSUN unmanned military engineering systems and continuous provision of CAS tasks, the Turkish casualties in OOB would have been much higher.

Furthermore, the massive enlistment of precision airstrikes in OOB, a change from OES, was signifi-

TABLE 3: Critical factors shaping OES and OOB outcomes.

FACTOR	EUPHRATES SHIELD	OLIVE BRANCH	ASSESSMENT
Primary objective	TERRITORIAL Establishing a buffer zone just across the Turkish border	TERRITORIAL AND ENEMY-CENTRIC Deterritorializing YPG units and forcing their expulsion, generating political effects	Whereas in OES the TAF was much more interested in static territorial control just across the Turkey-Syria border, the TAF’s primary objective in OOB was to clean the targeted area through high-tempo maneuvers conducted by armored units and supported by indirect fire and CAS missions. These aimed to deterritorialize the YPG in terms of U.S. support for the PYD/YPG.
Unity of command	Not fully achieved; rivalry between then SOF commander Gen. Z. Aksakalli and 2nd Army commander Gen. M. Temel	Fully achieved	Although the rivalry between then SOF commander Lt. Gen. Z. Aksakalli and 2nd Army Commander Lt. Gen. M. Temel over the nature of the operation spoiled the unity of command in OES, Temel became the commander in charge throughout OOB, which was primarily designed as a conventional military operation.
Geography/ weather	Mostly soft ground with large flat area and moderate weather conditions	Mostly rugged terrain consisting of mountains and hills, except for a few small plains; harsh weather conditions	In OOB, the terrain and weather conditions were more challenging than in OES. During the critical periods January 22–26 and February 1–5, 2018, OOB stopped due to heavy rain and fog. Mud became a factor in limiting and sometimes halting the armored units’ advance.
Surprise	Not achieved	Achieved by simultaneously opening seven different axes of advance in the northern and north-western sectors	In OES, the Islamic State’s quick withdrawal without resistance in Jarabulus and then on the Jarabulus–al-Rai line surprised the TAF, which led to mission creep. Unlike in OES, the TAF achieved surprise in OOB by initiating the operation from unexpected directions.
Military technology	Limited use	Extensive use	In OES, the TAF did not depend on new military technology; in OOB, however, military technologies were game changers. Systems like TB2 tactical armed drones, T129 ATAK helicopters, and TOSUN engineering vehicles were used for the first time in a cross-border CT operation.
Simplicity	More complex	Less complex	OES was a more complex operation in planning and execution due to the involvement of special forces and conventional units employing diverse tactics, techniques, and procedures. Furthermore, synchronization problems among FSA units and between FSA and TAF elements increased OES complexity.
Rates of advance/ OSTEMPO	Slow	Rapid	In terms of rate of advance, the operational tempo in OOB was higher than in OES.
Ground forces composition	Two FSA fighters per Turkish soldier	Three Turkish soldiers per FSA fighter	In OES, the FSA constituted the primary ground element. In OOB, however, TAF commando units and the Gendarmerie Special Operation battalions filled this role.
Close air support (CAS)	Limited and intermittent	Focused and sustained	During OOB, T129 attack helicopters and TB2 armed drones—which were not used in OES—provided support for CAS missions.
Logistics support	Average	Better	In OES, logistics support was not planned and executed under the full control of the TAF. In OOB, the TAF was in charge of logistics management, which ensured success.

FACTOR	EUPHRATES SHIELD	OLIVE BRANCH	ASSESSMENT
Medium-range (5–40 km) air-defense capability	Insufficient	Insufficient	Outmoded MIM-23B HAWKS and I-HAWKS systems were used in both operations to provide medium-range air defense. ASELSAN and Roketsan’s attempts to develop indigenous Hisar-A missile systems are ongoing and aim to fill these capability gaps.
Morale	Moderate	High	Officers and NCOs interviewed by the author on several occasions stated that the morale of the TAF elements was higher in OOB than in OES.
Civil-military cooperation	Moderate	Improved	Cooperation between the TAF and other government agencies such as MIT, AFAD, Turkish Red Crescent, and local authorities, as well as coordination between government institutions and NGOs, was better in OOB than in OES.
Diplomatic-military synchronization	Low	Low	In both operations, the military efforts and achievements on the ground were not fully coordinated at the strategic and diplomatic level.
Public support	High	Higher	According to opinion polls conducted in November 2016, public support for OES was around 70%. Although a reliable public survey on popular support for OOB has not yet been published, media coverage and analysis suggest that support for OOB was higher.

cant in increasing operational effectiveness through the destruction of enemy assets. Can Kasapoglu and Sinan Ulgen emphasize that the operational difference between OES and OOB with regard to airpower can be largely broken down into three reasons: First, having absorbed lessons from OES, Turkish military planners paid utmost attention to eliminating the adversary’s subterranean/tunnel warfare capabilities with high-precision smart munitions at the very beginning of OOB.⁵⁰ (See Table 3 for a comparison of OES and OOB outcomes.) In this respect, on January 20, 2018, the TAF disseminated the visuals of an air-ground standoff missile (probably an AGM-142/Popeye) destroying an underground munitions depot belonging to the YPG. Second, the TAF sought to soften YPG defenses decisively to ensure maximum armor survivability and force protection for ground units. In this area, a more detailed assessment between the two operations may provide useful insights. Third, to dominate the psychological warfare domain, Ankara employed intensive airpower in the first seventy-two hours of OOB, another change from OES. Apart from the kinetic effect, this use of airpower struck fear into the adversary’s formations.

Kasapoglu and Ulgen note:

Especially in counterinsurgency and counterterrorism missions, an advanced air force’s ability to “operate beyond the insurgent’s visual and acoustic range,” and to deliver mass destruction leads to panic and motivational collapse among the enemy ranks. Simply put, non-state armed groups are unable to respond to the effects of kinetic airpower with force on force application especially above the effective altitudes of MANPADS [man-portable air-defense systems]. This clear superiority naturally brings about secondary, non-kinetic advantages to the state actor.⁵¹

Also in contrast to OES, combat engineering efforts in OOB were delivered not by civilian elements but by military ones within the TAF.⁵² Throughout the operation, for example, the TAF employed TOSUN engineering unmanned ground vehicles (UGVs).⁵³ The TOSUN UGV has an operational range of five kilometers, and it is used primarily for clearing roadblocks and trenches. The need for such systems emerged particularly after 2015, during counterterrorism operations against the PKK’s urban warfare campaign from September 2015 to March 2016

inside Turkey, as well as in OES. Facing increasingly urban and hybrid threats, fast integration of the TOSUN UGV into Turkey's military operations has highlighted the strong willingness of the TAF to draw on the advantages of modern unmanned-systems technology.⁵⁴

Similarly, both OES and OOB helped the TAF understand the significance of armor survivability in counterterrorism operations in hybrid settings, focused mainly on defending against intensive ATGM attacks. Currently, Turkish defense firms are involved in several programs to develop active protection systems for ground vehicles. In time for OOB, the PULAT system (later named AKKOR Pulat, based on the Zaslon-L) was announced ready to fit Turkish armored platforms.⁵⁵ The system can simultaneously detect, track, and engage multiple projectiles, and it is designed to eliminate its targets at short distances. The Turkish defense electronics company ASELSAN is also developing the AKKOR active protection system, a more sophisticated product with both hard and soft-kill capabilities, to engage multiple targets at a hundred-meter range. Considering the speed element, active protection systems require a greater level of autonomy than remotely controlled systems. They can detect, classify, track, and engage their targets with a speed that often exceeds human limitations. Therefore, the development and active use of indigenous protection systems such as AKKOR Pulat would be a major milestone for the Turkish defense industry. Highlighting this fact, in March 2018 Turkey's former defense minister Nurettin Canikli identified the PULAT rollout as a major turning point for the Turkish defense sector.⁵⁶ The fact that not a single tank in OOB was destroyed by the YPG despite fierce ATGM attacks shows that the TAF internalized the lessons learned during OES about armor survivability.

Lessons Learned for Ankara

As this analysis shows, the TAF is capable of learning from past mistakes and applying the lessons with relative quickness. Furthermore, the OES and OOB cases show that when fighting abroad, Turkey must first develop a comprehensive counterterrorism plan. To increase overall effectiveness, this plan should aim

to orchestrate military efforts at the operational level with political-diplomatic goals. Moreover, Turkey should look to modernize its traditional cognitive and operational counterterrorism templates by including innovative doctrinal approaches in both rural and urban hybrid settings, blending asymmetric with conventional approaches. All operations should be built upon clear-cut political directives rooted in explicit mission objectives, and forces should be delimited spatially/temporally to allow for sound military planning. This military planning, more finely, should be based on a hybrid approach mixing conventional mechanized maneuvers with counterterrorism operations. As the two operations also show, in fighting a new generation of violent nonstate organizations seeking territorial control, special forces can serve as an enabler to conventional capabilities—but not as the primary force on the ground. Specifically, success against these new adversaries depends on more mobility under armored protection in urban settings and more agility with CAS-supported small-unit actions in rural settings, active armor-protection systems, fast and precise indirect ground fire support with mobile howitzers and multiple launch rocket systems, provision of CAS around the clock, more autonomous drone capabilities, and unmanned and armored engineering systems. Counterterrorism operations for Turkey should be essentially designed as tactical maneuvers with combined arms characteristics—blending conventional military capabilities such as armored warfare, CAS, drone warfare, and tunnel warfare with unconventional capabilities such as small-unit actions containing SF elements and counter-IED efforts, and providing support for proxies.

Both OES and OOB also prove that the TAF should concentrate more on what is known as operational design—conceiving the framework of a campaign or major operation. And this design must account for the inevitable evolution of a given military situation. But a major reason this project faces challenges is de-Gülenification. Many officers purged over the purported role of Fethullah Gülen in the July 2016 uprising were bright individuals educated in Western institutions.⁵⁷ The continuing purges of officers with master's and doctoral degrees indicates that the TAF has been prioritizing de-Gülenification over preserving intellectual capital, a factor negatively affecting the TAF's operational effectiveness.

An already-highlighted weak point during OES was the FSA—specifically, its fighters’ lack of discipline and reluctance to work under a single command-and-control structure, despite efforts to keep them in line. Lower-profile problems, suggested earlier, included disruptions in logistical supply and how weather events such as fog interfered with drone reconnaissance and CAS. Furthermore, during OES, Turkey’s inability to work with the Russian and U.S. militaries, which were then controlling the airspace over northwestern Syria—along with the high-level threat of MANPADs—entirely blocked emergency medical evacuations with helicopters and critical logistics support. This significantly harmed soldier morale and hindered air evacuation and logistics support during critical moments, particularly the al-Bab offensive.

Turkey has a large number of tanks in its arsenal; yet its main battle tanks need significant modernization to fulfill operational demands in battles such as OES and OOB, especially when faced with urban warfare conditions and specifically ATGM challenges. A breakthrough in Turkey’s armored capability is expected with the future delivery, slated for 2020, of 250 Altay main battle tanks.⁵⁸ The absence of such tanks during OES contributed to huge material losses.

The lack of effective coalition support for OES also betrayed operational deficiencies, particularly in CAS and intelligence, surveillance, target acquisition, and reconnaissance (ISTAR). These two military missions are central in guarding against quickly planned suicide attacks with VBIEDs, a challenge new to the Turkish military although not to others from the anti-IS coalition. Proficiency in these missions also helps enhance situational awareness for better armor survivability. Thus, the TAF was forced to mitigate VBIED and antiarmor attacks using its own insufficient means. As Can Kasapoglu and Baris Kirdemir note:

Having digested the lessons learned from Operation Euphrates Shield and Operation Olive Branch, Turkish political-military decision-makers saw the very reality that hybrid battle-spaces bring about extremely dangerous situations for military personnel. Advancing anti-tank guided missiles (ATGMs) and improvised explosive devices (IEDs) pose menacing threats to armor survivability, while man-portable air defense systems (MANPADS) make altitudes below 10,000–15,000 feet risky for aerial platforms, especially for rotary-wing assets and low-flying attack aircraft. Besides, hybrid adversar-

ies, including terrorist organizations, insidiously use information warfare. Thus, protecting soldiers from captivity in high-risk operational environments has become more crucial than ever to sustain the public support to military campaigns.⁵⁹

For the TAF, one vulnerability faced in both OES and OOB was the lack of medium-range air-defense and ballistic-missile-defense systems. Even though Turkish forces did not encounter a direct threat from the air—either warplanes or ballistic/cruise missiles—they had a technology gap in this area, potentially affecting operations. Ankara needs to address this vulnerability as soon as possible.

To be sure, the absence in OES of clear political direction hindered effective military deployment. In OOB, by comparison, a less opaque political directive provided by the civilian decisionmakers to the TAF—cutting through the fog of war in the operational theater—enabled military planners to more simply translate political objectives into operational missions. Also deficient in OES was interorganizational coordination among the military (army, air force, and gendarmerie command), government agencies (e.g., MIT, AFAD), and territorial, local, and tribal proxies, creating confusion on the ground. This shortcoming did not occur to the same extent in OOB.

Both OES and OOB also exemplify the need for basic principles when fighting to take and hold foreign territory: first, for a well-developed, appropriate strategic-communication strategy; and second, for diplomatic language aimed at setting forth clear intentions to other actors operating in the same environment, and at avoiding the impression of being an occupier. Hardline statements by Turkish politicians meant for domestic consumption before and during the two operations showcased the exact opposite of what to say. The January 13, 2018, statement by President Erdogan himself on the forthcoming operation was particularly blunt: “Don’t ever doubt it. One night we may arrive suddenly. If terrorists in Afrin don’t surrender, then we will raze the place on their heads. They will see what we can do before the week is over.”⁶⁰ In the same vein, Erdogan’s remarks during OOB raised concerns about the possibility of demographic change: “The whole issue is this: 55 percent of Afrin is Arab, 35 percent are the Kurds who were later relocated, and about 7 percent are Turkmen. [We aim] to give Afrin back to its righ-

fful owners.”⁶¹ On these and other occasions, such statements effectively weakened Ankara’s hand in talks with the United States and Russia on managing the situation in northern Syria. Furthermore, both OES and OOB clearly show that on-the-ground military efforts should be synchronized with diplomatic efforts. In high-sensitivity counterterrorism operations abroad like the two in question, maintenance of strategic communication with other actors in the operational theater carries the utmost significance. In addition, any rhetoric seen as “ethnicizing” the operation, either implying the need for demographic change or presenting the Turkish military as an occupying force, should be avoided.

Conclusion

Both Operation Euphrates Shield and Operation Olive Branch show that while modern conventional militaries can be operationally effective in hybrid settings abroad where the enemy astutely and asymmetrically blends conventional capabilities with unconventional ones, these operations may still fall short strategically. That is why this study emphasizes the significance of separate analysis of the operational versus strategic effectiveness of modern militaries, even as the two realms are no doubt connected. Operational effectiveness can indeed occur alongside strategic failure (e.g., the U.S. experiences in Afghanistan and Iraq), and the inverse can occur as well (e.g., the Israeli experience vs. Hezbollah in 2006).

Overall, then, what do OES and OOB say about the TAF’s operational effectiveness? In both campaigns, one can suggest that tactical effectiveness was high enough to achieve the desired outcomes. But at the operational level in OES, shortfalls abounded. These included lack of discipline from the FSA elements, which were designated as the operation’s primary ground force; the failure of CAS, particularly in the capture of al-Bab; poor military-civilian coordination; inability to adapt executive directives to match the evolving nature of the armed conflict; ignorance regarding armor survivability; and insufficient C4ISR capabilities. This all makes it difficult to call OES a success story. These operational-level problems, combined with the lack of clear political directives and uncoordinated diplomacy,

not only prevented OES from influencing the strategic preferences of the United States and Russia in northern Syria, they also encouraged YPG forces to consolidate their control in northern Syria.

Operationally, OOB marked a vast improvement over OES. The TAF’s success in drawing lessons learned from the previous engagement and its integration of newly acquired military technologies into planning were important factors behind this improvement. Yet in the end, OOB may not have changed dynamics enough to influence the strategic preferences of other actors with stakes in northern Syria.

According to a retired U.S. colonel whose private company provides logistical services in northeastern Syria, OOB’s success not only assuaged U.S. skepticism about the TAF’s operational effectiveness in Syria—skepticism that had surged during the months-long al-Bab siege—it also convinced U.S. officials of Turkey’s seriousness in seeking to deterritorialize, if not eliminate, the YPG in northern Syria at all costs and by all means.⁶² It is therefore no coincidence that after OOB, with Turkey having gained full control over Afrin city center, Washington grew more willing to cooperate with Ankara to initiate a joint-patrolling deconfliction program in YPG-controlled Manbij. Both the resilience demonstrated by Ankara and the impact of OOB in the Afrin theater are likely now figuring in the strategic preferences of U.S. decisionmakers seeking ways to cooperate with Turkey in the Manbij region. This is not least because Ankara holds the power to foil the U.S. victory over the Islamic State in northern Syria, as well as upset the balance through accidental friendly clashes with U.S. troops. But the question remains as to whether OOB could tip U.S. cooperation away from the YPG east of the Euphrates, and as to Turkey’s and the TAF’s broader strategic effectiveness.

Last but not least, OES, in providing a snapshot of the TAF just after the July 15, 2016, uprising, and OOB, in providing one of the TAF eighteen months after the uprising, reveal insights on Turkey’s potential future cross-border operations into neighboring Syria aimed at deterritorializing the YPG. Such operations are likely in the coming months in light of Ankara’s firm stance against YPG forces controlling territory in northeastern Syria along the border with Turkey.

Notes

1. The author is inclined to consider the events of the night of July 15, 2016, as an “attempted military uprising” rather than a coup. For the full explanation, see footnote 1 in Metin Gurcan, *Tentative Transition: Civil-Military Relations in Turkey since the July 15 Uprising*, Policy Note 48 (Washington DC: Washington Institute, 2018), p. 16, <https://washin.st/2GpaW80>.
2. Tim Arango, “With Operation in Syria, Erdogan Shows His New Power over Turkey’s Military,” *New York Times*, Aug. 25, 2016, <https://nyti.ms/2DCdhsp>.
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7. Retired Turkish diplomat, interview by author, Ankara, late Apr. 2018.
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23. “TSK Basin Aciklamasi” [TAF press release], Turkish Armed Forces, Jan. 20, 2018, accessed Mar. 23, 2018, from http://www.TAF.tr/BasinFaaliyetleri/BA_47 [link no longer live].
24. See the full version of the release: “TSK: Zeytin Dali Harekati Basladi” [TAF: Operation Olive Branch initiated], Jan. 20, 2018, <http://bit.ly/2GsmYh0>; “Basbakanlik Acikladi, İste Zeytin Dali Harekati’nin 12 Nedeni” [Prime Ministry announced: Here are 12 reasons for Operation Olive Branch], CNN Turk, Jan. 22, 2018.
25. In January 2018, the average temperature in Afrin was between –2 and –4 degrees Celsius at night, between 12 and 20 degrees in the daytime, with sunrise at 6 a.m. and sunset at 4:45 p.m. During this month, rains occur irregularly, but heavy rainfalls loosen the soil and sometimes cause flooding in dry riverbeds. In addition, depending on the temperature difference between day and night, weather events such as intense and sustained fog can harm visibility.
26. Can Kasapoglu and Sinan Ulgen, *Operation Olive Branch: A Political-Military Assessment* (Istanbul: EDAM, Centre for Economics and Foreign Policy Studies, 2018), <http://bit.ly/2tkzK8N>.
27. “Turkey Launches ‘Olive Branch Operation’ Against PKK Threat in Syria,” *Hurriyet Daily News*, Jan. 20, 2018, <http://bit.ly/2tnl5d2>.
28. Ibid.
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30. Metin Gurcan, “Turkish Military Purges Decimate Career Officers, Pilot Ranks,” *Al-Monitor*, May 29, 2018, <http://bit.ly/2DCnzJ4>.
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34. “TAF Basın Açıklaması” [TAF press release], http://www.TAF.tr/BasinFaaliyetleri/BA_50 [link no longer live].
35. Of the villages and regions mentioned here, only Dikmetas is in Turkey; the rest are located in Syria. Still, this text generally uses Turkish place-names given the Turkish military context. The Arabic “Sheikh,” for example, is expressed with the Turkish “Seyh.”
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