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Conceptualizing the Rise of Türkiye as a Drone Power

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Introduction

Unmanned aerial vehicles (UAVs/drones) have become an indispensable asset in military operations since the beginning of the century. After the end of the Cold War, the US – with its MQ-1 Predator and Reaper drones[1] – was the dominant state (followed by Israel) in terms of the drone manufacturing and use. Using these drones in its wars in Afghanistan and Iraq, this new technology enabled the US to maintain its superpower status unchallenged. However, in recent years, Türkiye has emerged as a rising drone power. Türkiye has been able to successfully incorporate indigenous drones – especially TB2 – in its military operations against the PKK/YPG and the Syrian regime in several cases. However, the success of the Turkish drones was only brought to widespread attention after it changed the dynamics of several conflicts, i.e., Libya, Azerbaijan.

This policy brief will present an overview on the main rationale of the rise and advancement of Turkish drone industry. Furthermore, the study will highlight several case studies of conflicts where Turkish drones have been used to explain the reasons behind their successful application in warfare.

Understanding the Advancement of Türkiye's Drone Industry

Despite the fact that Türkiye's drone warfare has come to the fore only in recent years, Türkiye's history of drone production is decades long. Initially unable to manufacture its own drones, Türkiye once looked for a solution by procuring drones from abroad. Starting with the British target drone BTT-3 Banshee (produced by Meggit) in 1989, Türkiye has added several UAVs including the Canadair CL89 (jointly produced by Canada, Britain, and West Germany), General Atomics' GNAT 750 and I-GNAT ER, and Israel's Heron to its military inventory.[2] At the same time, in 2008 Türkiye requested to buy US-made drones, including here MQ-1 Predator and MQ-9 Reaper in order to combat the threat posed by the PKK (Kurdistan Workers' Party) – a designated terrorist organization. Unfortunately, this request was not accepted by the Congress. Later, in 2014, Türkiye requested an unarmed version of the drone but no agreement was reached on that either. It is important to highlight the fact that the discussions with the US lasted for approximately 8 years and it directly impacted Türkiye's fight against PKK, which represents a huge threat to Türkiye's security.

Furthermore, the drones that Türkiye had purchased from General Atomics and Israel proved of little use in its war against terrorism. Among others, the GNAT drones specifically provided footage of PKK movements with a 20 minute delay (detrimental to success in combat),[3] while Israel's Heron drones were defective.[4] In these circumstances Türkiye sought to develop its own technology.

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1 Omar Ashour, *How ISIS Fights: Military Tactics in Iraq, Syria, Libya, Egypt* (Edinburgh: Edinburgh University Press, 2021), p. 49.

2 "Türkiye İnsansız Hava Aracı Sistemler Yol Haritası, 2011-2013," *SSM* (2011).

3 Umar Farooq, "The Second Drone Age: How Turkey Defied the U.S. and Became a Killer Drone Power," *The Intercept*, 14/5/2019, accessed on 28/8/2022, at: https://bit.ly/2Vspqa4

4 İsrail'den alınan Heronlar çürük çıktı," Sabah, 13/9/2011, accessed on 28/8/2022, at: https://bit.ly/3cmyqfL

From this perspective the main incentives for the rise and advancement of Türkiye's drone industry were threefold: (i) persistent threat of the PKK, (ii) Western failure to understand Turkish security concerns, (iii) the necessity for Türkiye to follow an autonomous foreign policy. These reasons are all at some point interconnected. Specifically, as the PKK and its Syrian branch the YPG (People's Defence Units) remained a consistent threat for Türkiye's national security, Türkiye an important Western ally - expected that the West, and especially the US, would support its counter-terror activities. Leaving aside the fact that for many years now many of the Western states, including US, have been supporting YPG, the US failed to meet Türkiye's drone requirements. It was clear that if Türkiye had used Predator or Reaper drones in its counter-terrorism operations, its operations against the PKK/YPG would have been more successful.

The lack of its own weapons had left Türkiye highly dependent on US military support. But this lack of support in turn forced Türkiye to search for more independence both militarily and politically. smail Demir, President of Turkish Defence Industries, stated back in 2016 that Türkiye was no longer interested in US drones. He went further stating that "I don't want to be sarcastic but I would like to thank [the US government] for any of the projects that was [sic] not approved by the US because it forced us to develop our own systems."[5]

Within this framework, the Turkish government looked towards a more autonomous foreign policy.[6] The more the West continued to cooperate with and support several anti-Turkish actors that threaten Türkiye's national security, i.e. the Fetullah Terrorist Organization (FETÖ) and the PKK/YPG, the more the perception that the West, specifically the US, was indifferent to Türkiye's security concerns increased both among the Turkish citizens and policy-makers. As a result, Türkiye was compelled towards an autonomous foreign policy with its national interests at the core. This was reflected in several instances as Türkiye started to diversify its economic, political, and military relations.

In line with these changes, Türkiye began to place a great importance on the advancement of its defence industry, especially drone production.[7] The first drone was produced in 1992 known as İHA-X1, to be followed latter by the first domestically produced target aircraft), Pelikan- Baykuş (2003), Martı (2004), Gözcü (2007), Öncü (2006), Şimşek (2012), ANKA (starting in 2004 – first flight 2010 – entered inventory in 2018), and Mini IHA Bayraktar (launched in 2006 entered inventory in 2007).

Out of these examples, the last two —ANKA-S and Mini IHA Bayraktar — are considered turning points in the advancement of Türkiye's drone program and defence industry. These successful developments led to more initiatives, some of which have become the highlights in several regional conflicts, i.e. TB2, ANKA, or Akıncı.

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5 Kasım İleri, "Turkey no longer buying US drones: Turkish official," *Anadolu Agency*, 27/5/2016, accessed on 28/8/2022, at: https://bit.ly/3e1XxoD

6 Muhittin Ataman, "Editor's Note," *Insight Turkey*, vol. 21, no. 4 (2019), pp. 4 - 9.

7 İsmail Demir, "Transformation of the Turkish Defense Industry: The Story and Rationale of the Great Rise," *Insight Turkey*, vol. 22, no. 3 (2020), pp. 17 - 40.

As will be discussed in detail below, TB2 itself is considered a revolutionary development among military strategists since it has worked to be quite decisive in several conflicts. More specifically, Türkiye's TB2 has paved the wave to what some call as the second drone age, where the US is no longer the dominant developer of drones, nor the main user. Furthermore, what made TB2 different from the drones developed by US, China, Israel or the UK, was the fact that TB2 was both effective and less expensive than the others. While the exact price is not official, according to some estimates, the price ranges somewhere from $1-5 million.[8] This is a huge bargain when compared to the estimated $32 million price tag on the US MQ-9 Reaper.[9] A report published by the Wall Street Journal on how the Turkish low-cost drones are changing the battlefield and geopolitics stated that "A set of six Bayraktar TB2 drones, ground units, and other essential operations equipment costs tens of millions of dollars, rather than hundreds of millions for the MQ-9."[10] Here it is important to mention that it is not totally correct to compare TB2 with MQ-9 considering that the latter is more sophisticated.[11] However, the fact that with little payload TB2 is able to hit a target with a precision strike associated with endurance bring to the fore the effectiveness of the Turkish made drones. To support this argument, one can compare TB2 with another similarly-priced drone such as the Chinese-manufactured CH-4B Cai Hong. The CH-4B despite having a range (2750 km) and payload capacity (appx. 300 kg) larger than that of the TB-2, has been associated with several maintenance issues and accidents, raising serious questions regarding their effectiveness.

Similarly, the inclusion of Akıncı drone, which is even more sophisticated than TB2, in the Turkish Armed Forces inventory is considered to be another milestone for Türkiye on its path to becoming a drone power.[12] Other examples that reflect the advancement of the Turkish defence industry are the loitering drones such as — Kargu-2, Alpagu, Togan. They have drawn a lot of attention, especially in the case of Libya, as they can operate fully autonomously in GPS-free environments. Lastly, there are several projects – including the TB3 or Kızılelma, under development that are expected to further transform the Turkish defence industry.

As Türkiye continued to use its indigenous drones successfully in its military operations against the PKK/YPG, international interest grew. Currently, Türkiye is one of the leading global drone exporters. By July 2022, Türkiye had signed agreements with at least 23 states regarding drone sales — i.e. TB2, Akıncı, ANKA-S, and Karayel-SU. Turkish drones have been sold to Ukraine, Azerbaijan, Poland, Qatar, and several African, Balkan and Asian states.

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8 Dan Sabbagh, "UK Wants New Drones in Wake of Azerbaijan Military Success," *The Guardian*, 29/12/2020, accessed on 28/8/2022, at: https://bit.ly/3e1Mb3T

9 Gabriel Honrada, "The Turkish drones winning the Ukraine war," *Asian Times*, 12/5/2022, accessed on 28/8/2022, at: https://bit.ly/3CyRWQD

10 "Report: Turkish Armed Low-Cost Drones Reshape Battlefields and Geopolitics," *Defense Here*, 4/6/2021, accessed on 28/8/2022, at: https://bit.ly/3pOtVxp

11 For example, while TB-2 has a range of up to 300 km and a payload up to 150 kg, MQ-9's range reaches approximatel 1900 km and has a payload of 1700 kg.

12 Arda Mevlutoğlu, "Akıncı and Turkey as a Drone Power," *Politics Today*, 30/9/2021, accessed on 28/8/2022, at: https://bit.ly/3RhqACU

All this demonstrates that Türkiye has emerged as a major player in the drone industry. The next section discusses a few cases on how the usage of Turkish drones has impacted the path of the conflicts including Syria, Libya, Azerbaijan, and most recently in Ukraine.

The Impact of Turkish Drones in Conflicts

Some of the latest regional developments including the Nagorno-Karabakh and Ukraine wars have brought Türkiye's drone industry to the core of many debates, especially in terms of its impact on warfare. While some have argued that drones have not had any revolutionary impact on warfare,[13] many other experts contend that Türkiye's drone warfare has indeed had a great impact in the way that military operations are conducted as various new operational concepts have been introduced. As Kasapoğlu has stated, "Türkiye has been developing a robotic warfare capacity with innovative concepts of operations (CONOPS) and smart weaponry... the Turkish way of drone warfare -namely, the CONOPS behind the achievements from Libya to Syria to Nagorno-Karabakh- remains a key driver of military progress."[14] That said, Turkish drones have definitely had a huge impact on several conflicts and in most of them have changed the dynamics of that conflict, and especially on the way Türkiye conducts warfare.

The most important example in terms of Turkish drone warfare is the inclusion of indigenous drones in Türkiye's counterterrorism and counterinsurgency operations in its fight against the PKK and against the Syrian regime. For several decades, Türkiye has been conducting various operations in these areas (especially against the PKK/YPG) however, with the inclusion of the drones in recent years, especially starting from 2018, the effectiveness and success of these operations has increased considerably.

Within this context, Türkiye has used drones in several operations in Northern Iraq (they have taken place in different periods starting from 2019 and going on in the present with the Operation Claw-Lock)[15] and in other operations such as Operation Olive Branch (2018), Operation Peace Spring (2019) and Operation Spring Shield (2020). The last operation was conducted against the Syrian forces, after their attack on a Turkish military convoy in which approximately 34 Turkish citizens were killed. Among these, Operation Spring Shield is considered to be the operation where the full capacity of Turkish made drones was shown for the first time. For many experts it was an unprecedented conceptual breakthrough in warfare.[16]

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13 Antonio Calcara et al., "Why Drones Have Not Revolutionized War: The Enduring Hinder-Finder Competition in Air Warfare," *International Security*, vol. 46, no. 4 (Spring 2022), pp. 130 - 171.

14 Can Kasapoğlu, "Techno-Geopolitics and the Turkish Way of Drone Warfare," *Atlantic Council* (March 2022), p. 2.

15 See: "Pençe Serisi Operasyonlar," T.C. Milli Savunma Bakanlığı, accessed on 28/8/2022, at: https://bit.ly/3TmwnsE

16 Scott Crino & Andy Dreby, "Turkey's Drone War in Syria: A Red Team View," *Small Wars Journal*, 16/4/2020, accessed on 28/8/2022, at: https://bit.ly/3Cz7gwM; "Turkey's drones provide crucial edge in Syria," *France 24*, 3/32020, accessed on 28/8/2022, at: https://bit.ly/3dZtHAX; "Turkey's unprecedented ascent to drone superpower status," *Drone Wars*, 15/6/2020, accessed on 28/8/2022, at: https://bit.ly/3TpmsCs

First of all, it is important to state that drones were not used alone in the battlefield. What made them even more effective was their coordination with electronic warfare (especially KORAL electronic warfare system) and artillery units. As a result, Türkiye was able to use drones for (i) intelligence, surveillance, target acquisition and reconnaissance (ISTAR), and (ii) target striking. The incorporation of these elements differentiated Türkiye's drone warfare from the way that other states had previously used drones in their operations.[17]

To elaborate, the first TB2 and ANKA-S drones were able to support the land-based weapon systems such as multiple-launch rocket systems (MLRS) with intelligence, increasing their effectiveness in target striking.[18] Furthermore, drone strikes were regularly used to strike land targets. It is relevant to note that Turkish drones were equipped with indigenous precision-guided munitions such as MAM-L and MAM-C which enhanced their precision. These operations were strongly supported by the KORAL EWS which allowed them to jam and deceive Syrian air defences, namely the Russian made Pantsir-S1 air defence missile systems.[19] Several videos were published at that time showing how Turkish drones targeted these defence missile systems while their radars were active.[20]

After a total of five days of its military operation in Syria, Türkiye was able to neutralize 3,136 regime elements, destroyed 151 tanks, 47 howitzers, 2 vehicles, 3 airplanes, 8 helicopters, 3 drones, and 8 air defence systems. Furthermore, 52 multiple rocket launchers, 12 anti-tanks, 24 armoured vehicles, 27 armoured combat vehicles, 34 armoured pick-ups and 4 mortars were also destroyed.[21] Certainly, this success was possible through the effective incorporation of drones in the military operations, although the lack of advanced technology from the Syrian regime facilitated the operation.

Similar operational tactics were used in Libya as well, where Turkish drone warfare proved crucial for the UN-backed Government of National Accord (GNA). As the GNA achieved aerial supremacy they managed to put an end to the Libyan National Army's (LNA) Tripoli offensive. In Libya, Türkiye used drones for the ISTAR mission and could provide accurate information regarding Haftar's troops, air defence systems, and missiles (after January 2020).[22] Alongside artillery, drones were also used to hit designated targets. Lastly, KORAL EWS was used as well in order to jam the aerial defence systems such as Pantir-S1, S-125, and SA-6.

One difference for the case of Libya, was that based on a report from the UN, the GNA has used the Turkish-made Kargu-2 loiter drone.[23] Kargu-2 — produced by the STM defence company — is

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17 For comparision, the US which is the state that has used drones mostly in its military operations has used drones mostly just for striking missions.

18 Kasapoğlu, "Techno-Geopolitics and the Turkish Way of Drone Warfare," p. 3.

19 Ali Bakir, "Turkey's Electronic Warfare Capabilities: The Invisible Power Behind its UACVs," *RUSI*, 27/9/2021, accessed on 28/8/2022, at: https://bit.ly/3KsxV0b

20 Clash Report, *Twitter*, 4/3/2020, accessed on 28/8/2022, at: https://bit.ly/3AwHc2u; Clash Report, *Twitter*, 9/3/2020, accessed on 28/8/2022, at: https://bit.ly/3e2ysto

21 "Turkey neutralizes 3,000+ regime elements in Idlib, Syria," *Anadolu Agency*, 3/3/2020, accessed on 28/8/2022, at: https://bit.ly/3PTthcv

22 Jason Pack & Wolfang Pusztai, "Turning the Tide: How Turkey Won the War for Tripoli," *Policy Paper*, Middle East Institute (November 2020), pp. 2 - 16.

23 "Final report of the Panel of Experts on Libya established pursuant to Security Council resolution 1973 (2011)," *United Nations Security Council* (March 8, 2021).

an important example given its autonomous capacities. While the UN report raised concerns in terms of autonomy and targeted killing on the KARGU loiter drone, both the President of the Defence Industries, İsmail Demir, and the CEO of STM, Özgür Güleryüz, contended that Kargu-2 is not designed to attack targets using artificial intelligence; indeed it is commanded completely by human initiative.[24] Nevertheless, it is clear that the deployment of these loitering drones in warfare would boost further the capacity of military operations.

Turning to the 44-day war in Nagorno-Karabakh — which brough more attention to Türkiye's drone warfare — the tactics used for the Suppression of Enemy Air Defense (SEAD) indicated a new strategy. While KORAL EWS was used in some instances, Azerbaijan also decoys in order to spot the Armenian air defence systems. Once they were spotted, TB2 or Israel's HAROP drones were used to hit the air defence systems.[25] Once the air defence systems were destroyed, drones were used mainly to target ground forces.

Many experts contend that Azerbaijan's win came mainly due to the Turkish technology and military tactics. As a result, Azerbaijan proved to be superior to "Armenia's outdated Russian military hardware and presented a significant challenge to Armenia's dependence on trenches and traditional means of defense."[26] Most data shows that approximately 40 percent of Armenian military equipment was destroyed (amounting to 3.8 billion dollars) with many attacks carried by drones.[27]

The latest case of Turkish made drone use is the Ukrainian war. The first contact with Baykar Makina was signed in 2019 according to which Ukraine was to buy six Bayraktar TB2 drones. Later in 2021, the Ukrainian government announced that it was seeking to buy 24 more drones from Türkiye.[28] Before the war started on 24 February 2022, it is believed that Ukraine received approximately 20 TB2 drones. 16 more drones were ordered on January 27, 2022 and those were delivered in March. It is also important to mention the fact that on 3 February 2022, both states agreed on the joint Ukrainian-Turkish production of the TB2 drones according to which Baykar will construct a plant in Ukraine to produce drones including TB2 and Akıncı.[29] Furthermore, according to a statement by the Ukrainian Defence Minister Oleksii Reznikov on 28 June, Ukraine received 50 armed drones from Baykar after 24 February, plans to order dozens more.[30] Meanwhile, there have been several fundraising campaigns in Ukraine and several western countries, including Lithuania, Poland, and Canada, which aimed to

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24 "Turkish defense company says drone unable to go rogue in Libya," *Nikkei Asia*, 20/6/2021, accessed on 28/8/2022, at: https://s.nikkei.com/3KykQm8; "Turkey to roll out defense products as foreign interest gains pace," *Daily Sabah*, 25/6/2021, accessed on 28/8/2022, at: https://bit.ly/3ReJv1c

25 Kasapoğlu, "Techno-Geopolitics and the Turkish Way of Drone Warfare," pp. -4.

26 Hülya Kınık & Sinem Çelik, "The Role of Turkish Drones in Azerbaijan's Increasing Military Effectiveness: An Assessment of the Second Nagorno-Karabakh War," *Insight Turkey*, vol. 23, no. 4 (2021), pp. 169 - 191.

27 "Military equipment losses of Armenia amount to 3.8 billion dollars – Analysis," *Azertag*, 8/12/2020, accessed on 28/8/2022, at: https://bit.ly/3pOuur1

28 Burak Ege Bekdil, "Ukraine is set to buy 24 Turkish drones. So why hasn't Russia pushed back?," *Defense News*, 29/9/2021, accessed on 28/8/2022, at: https://bit.ly/3cpfpcm

29 On August 8, the Ambassador of Ukraine to Turkey, Vasyl Bodnar, announced that Baykar, had already established a company in Ukraine, purchased land and developed a manufacturing plant project. See: "Bayraktar Drone Factory to Be Built in Ukraine," *Kyev Post*, 9/8/2022, acessed on 28/8/2022, at: https://bit.ly/3Ax4zt7

30 Резніков Олексій, Facebook, 28/6/2022, accessed on 28/8/2022, at: https://bit.ly/3Kpg5Ls

purchase TB2 drones to support the Ukrainian army.[31] In response, Baykar donated free of charge 3 TB2 to the campaign that started in Ukraine and 1 to the one in Lithuania, while the money collected in these campaigns was given to the Ukrainian military.

The effectiveness of the drones in the conflict has been widely discussed. Some experts have considered their usage as quite significant,[32] while others have argued that their effectiveness is highly dependent on the way the Ukrainian military incorporates them in their military operations.[33] However, it can be said that TB2 drones have proved to be a significant asset for the Ukrainian military, especially at the beginning of the invasion, probably as the Russian army was unprepared to respond to the drone attacks or their incorporation in the military operations. As the Ukraine war is ongoing, it is difficult to give a final answer to whether Turkish drones have been a decisive factor in the conflict. However, Turkish drones have proved an important element in Ukraine's resistance to Russian invasion. Specifically, the fact that several Ukrainian officials have praised the role of TB2 accompanied by the continued desire to achieve more drones from Türkiye are direct indications of the effectiveness and importance of the drones to the Ukrainian resilience. Furthermore, a controversial illustration of this is the allegation that Bayraktar TB2 was used by Ukraine to distract the radar warning systems of Russia's Black Sea flagship, Moskva. As such Ukraine was able to hit the ship with two of its Neptune anti-ship missiles launched from a costal battery concealed around Odesa.[34]

Conclusion

This analysis focused on Turkish drone warfare by analysing the background of Türkiye's ascendent defence industry. In this context, the constant PKK threat, the West failing to understand Türkiye's security concerns, and the necessity to follow an autonomous foreign policy have pushed Türkiye to advance its indigenous military technological innovations. Concurrently the paper analysed the main elements that have distinguished Turkish drone warfare and rendered it a conceptual breakthrough. As drones are used both for ISTAR operations and precision strikes, elements of electronic warfare – especially KORAL EWS- were incorporated in the warfare, enabling Türkiye to dominate the air space. As a result, in many cases it has been possible to jam the air defence systems, such as PANTSIR-S1, and conduct effective strikes.

Several discussions have raised questions about the effectiveness of Turkish-made drones on the basis that their success is based on the lack of technology and capacity of the opposing militaries such as in Libya or Armenia. But this does not change the fact that Turkish drones have had a direct impact in the outcome of these conflicts. Secondly, and most importantly — the way Türkiye has incorporated drones with other elements of electronic

31 Muhammet Tarhan, "Fundraising campaigns for purchase of Türkiye's Bayraktar TB2 drone spreading in West," *Anadolu Agency*, 22/7/2022, accessed on 28/8/2022, at: https://bit.ly/3cudYJR

32 Matthew Bryza & Grady Wilson, "Turkey could tip the balance in the Ukraine-Russia standoff," *Atlantic Council,* 16/12/2021, accessed on 28/8/2022, at: https://bit.ly/3AqflBf

33 Can Kasapoğlu, "Can Turkish Drones Help Ukraine? A Military-Strategic Assessment," *EDAM*, 22/2/2022, accessed on 28/8/2022, at: https://bit.ly/3AvRYWQ

34 "Cruiser Moskva is hit by Ukrainian missile," Daily Mail, 13/4/2022, accessed on 28/8/2022, at: https://bit.ly/3ASD1Q1

warfare to use drones for both ISTAR operations and precision strikes has not been seen before in other conflicts. It is exactly this that deserves a special attention when analysing the effectiveness of Turkish drones.

It is worth mentioning that allegations have been made that several Turkish drones have been shot down by air defence systems during the aforementioned military operations. While that may stand true, this does not make Turkish drones unsuccessful. Considering their relatively low cost, this loss is a small price to pay for the damage they inflict on the opponent.

In conclusion, it can be said that Turkish drone warfare and drone exports have given Türkiye important leverage in several regional conflicts. While Türkiye has been following an autonomous policy with its national interest at its core, this leverage has enabled Türkiye to become a decisive actor in the region.

Bibliography

Ashour, Omar. *How ISIS Fights: Military Tactics in Iraq, Syria, Libya, Egypt*. Edinburgh: Edinburgh University Press, 2021.

Ataman, Muhittin. "Editor's Note." *Insight Turkey*. vol. 21. no. 4 (2019).

Calcara, Antonio et al. "Why Drones Have Not Revolutionized War: The Enduring Hinder-Finder Competition in Air Warfare," *International Security*, vol. 46, no. 4 (Spring 2022).

Demir, İsmail. "Transformation of the Turkish Defense Industry: The Story and Rationale of the Great Rise." *Insight Turkey*. vol. 22. no. 3 (2020).

"Final report of the Panel of Experts on Libya established pursuant to Security Council resolution 1973 (2011)." *United Nations Security Council* (March 8, 2021).

Kasapoğlu, Can. "Techno-Geopolitics and the Turkish Way of Drone Warfare." *Atlantic Council* (March 2022).

Kınık, Hülya & Sinem Çelik. "The Role of Turkish Drones in Azerbaijan's Increasing Military Effectiveness: An Assessment of the Second Nagorno-Karabakh War." *Insight Turkey*. vol. 23, no. 4 (2021).

Pack, Jason & Wolfang Pusztai. "Turning the Tide: How Turkey Won the War for Tripoli." *Policy Paper*. Middle East Institute (November 2020).

"Türkiye İnsansız Hava Aracı Sistemler Yol Haritası, 2011 - 2013." *SSM* (2011).