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TRACKING DRONE ACTIVITIES : IRAQ VS. OTHER PARTS OF THE WORLD

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Executive Summary

The ongoing drone operations on Iraqi airspace have been the choke points that confine the Iraqi air defenses. An inside look at the war-drone operations by regional and international actors point to an acute challenge for the Iraqi national security to which Iraqi central government has not been able to effectively address. Iraq is further exposed to territorial incursions from its skies as the icecaps continue to harden between Türkiye-PKK, US-Iran. The recent flood of drone operations as regular practice by these actors further exposes Iraq as the weak country in the pack when compared to the high level of engagement of other central governments in conflict zones, where drone operations take place. In the age of drone warfare, Iraq must reconsider its national security strategy and reclaim its sovereignty as a means of preventing states, terrorist groups, and proxies from using its airspace as a staging ground.

Introduction

Unmanned aerial vehicles (UAVs), more widely referred to as drones, are gaining increasing significance on the world stage. The proliferation of armed drones has significantly increased the force multiplicity of global arms without the need for a proportional increase in manpower. The promise of drone warfare comes with its precise capability to conduct stiff surveillance, reconnaissance, and combat missions. Armed to the teeth, global forces bank on this promise to display military strength, especially in conflict/war zones. Gradually, as battlefields establish their presence in the sky, the growing lethality in the use of drones becomes a challenging global phenomenon. The emergence of drone use varies across geographical locations for distinct purposes. Drone use drastically transforms how armies engage in conflicts given the ever-evolving race of drone war-fighting capabilities. Tracking

drone activities globally coincides with cutting-edge military modernization, in which competing states and armed groups place drones at the center of their military footprint.

In spotlight is the analysis of drone strikes in the Kurdistan Region and Iraq in comparison to other regions around the world. With neighboring countries consistently deploying drones for military purposes, these extraterritorial drone strikes consistently call the sovereignty of Iraq's airspace into question. Through the prism of wider conflicts, drone deployment on Iraqi airspace raises important points for discussion surrounding their use in extrajudicial killings. Unprecedented drone strikes introduce the new face of warfare, especially to a technologically weak and ideologically divided country like Iraq with limited defense capabilities to counter it.

This issue brief seeks to compare drone activities in Iraqi airspace with those in other conflict zones to assess the extent and frequency of these drone strikes. The threat of broader conflicts casts a shadow over the Middle East where different forces vie for power grab through proxies. This is an undeniable pressing issue that has rattled much of Iraq with the uptick in drone strikes in the recent years.

What is a drone?[1]

A drone is any unmanned aerial vehicle (UAV) that operates autonomously through software or in response to remote commands from a pilot. UAVs are often separated into two categories — civilian and military. While civilian UAVs are used for package deliveries and recreation, military drones are used for reconnaissance missions and carrying out offensive strikes on enemy targets.

What to know about Military Drones?

Military drones have proven to be significant game-changers of modern warfare. With rising sophistication and autonomy, military drones offer a wide range of functions in the digital battlefield without risking human lives. These functions range from gathering intelligence, conducting surveillance, carrying out targeted killings, engaging in psychological operations, performing search and rescue operations, and delivering goods. The capabilities of today's armed drones were made possible through innovations in remote control technology, camera systems, and aircraft design which did not exist in the first stages of its development during World War I and II. The three main types of military drones function according to their specific spy or kill roles.[2]

Unmanned Combat Aerial Vehicles (UCAVs): designed for high-risk operations armed with precision guided munitions to carry out lethal strikes on enemy targets.

Unmanned Reconnaissance Aerial Vehicles (UAVs): stealthily designed with high altitude operations for reconnaissance missions to gather information from enemy territories.

Unmanned Ground Vehicles (UGVs): capable of operating in dangerous terrain, UGVs engage in bomb disposal, reconnaissance, combat support, and supply transport.

Global Military Drone Acquisition is primarily motivated by its capacity to access the most remote areas with minimal human intervention, requiring only the bare minimum of time, energy, and effort. In comparison to traditional indiscriminate bombardments, targeted strikes and precision warfare represent the most notable distinctions among the functions of military drones. In a complex and contested environment, especially conflict or war zones, military drones carry out specific tasks, such as:[3]

- Target decoys for combat missions (i.e. precision strikes)

- Target acquisition through Intelligence gathering, surveillance & reconnaissance

- Chemical detection and equipment delivery

- Search and rescue missions

Strikes on Iraq in the Age of Drone Warfare

Research experiments on military drones have persistently progressed since the days of World War I and II. Like the proliferation of nuclear weapons, the procurement, development, and military use of drones are driving competing states to acquire feasible drone technologies in line with their military ambitions. Military drone capabilities have become increasingly important in assessing a state's military strength. Countries with strong drone systems, by adapting to modern military perception and tactics, position themselves as titans of regional and global powers. On the contrary, technologically inferior states fall prey to superior adversaries who exploit these States' perceived weaknesses through political interference and economic dominance, or even the imposition of religious and ideological supremacy. Iraq profiles a classic example of this uneasy relationship that has caved to the technological strength of its neighbors and their sponsored militia groups. Weakened by the US invasion in 2003 and the subsequent fight with ISIS (2014-2017), Iraq has little to no experience of an extended period of safe skies. The ever-presence drone strikes in Iraqi skies is currently one of the country's most pressing security concerns that grants particular attention. The deadly drone operations carried out by Iran, Türkiye, and sponsored militia groups has introduced a new security vulnerability that simultaneously call the sovereignty of Iraq's airspace into question. Should the Iraqi government fail to recognize the gravity of what lays ahead, drone-driven terrors will jeopardize the very survival of Iraqi airspace.

Global Drone Regulations

Military drones are currently at the center of the industrial behemoth of modern warfare that fortifies the security infrastructure of states. This not only guarantees the survival of these states but also injects lethal capabilities should it come to fulfilling their geopolitical ambitions. The international security architecture is significantly undermined by the prominence of armed drone operations worldwide. Legal issues surrounding armed drone usage to justify targeted killings remain unresolved, particularly when employed by states against non-state actor groups. The legality of a drone strike under *ius ad bellum*[4], the law regulating the use of force, provides a threshold for the use of armed drones in non-international armed conflicts. Nevertheless, military drone giants prioritize the neutralization of their targets over adhering to customary international law or *opinio juris*[5] regarding drone-related armed conflicts. As concerns about the legality of drone strikes continue to grow, there has been a corresponding increase in the proliferation of drones. Roughly ten years ago, only sixty countries possessed drone technologies. Today, drones have spread to over one hundred countries according to research from the Center for the Study of the Drone at Bard College.

Given these realities, the current international control measures relating to armed drones do not go far enough in addressing the activities of states that contribute to the irregular spread of armed drones or engage in conflicts. At present, drones are governed by three international instruments: the Arms Trade Treaty (ATT), the Wassenaar Arrangement (WA), and the Missile Technology Control Regime (MTCR)[6], the latter a product of the Cold War[7]. When countries such as China with its liberal export policy does not adhere to customary international law or refuse to join the MTCR, it could potentially disrupt the international security infrastructure. As a result, armed drones, which previously was the preserve of military superpowers,

proliferate much easier to non-state actors, such as terrorist organizations and insurgent groups.

Military Drone Market

Over the analysis period 2022-2030, Military drone market size is projected to grow at 13.1% compound annual growth rate (CAGR) reaching US$53.7 Billion by 2030[8]. The United States remains the top country for purchase of weaponized military drones[9] followed by China, Russia, India, Australia, Egypt, Türkiye, Malaysia, Indonesia, and Israel.

Major developers/Producers:[10]

2000–2004: United States, U.A.E., Israel,

2005–2009: United Kingdom, Italy, Greece, Spain, Sweden, Switzerland, France.

2010–2014: Iran, South Africa, North Korea, China, Pakistan, Russia, Taiwan.

2015–2019: Jordan, South Korea, Türkiye, Germany, Georgia, Japan, India, Ukraine, Australia, Saudi Arabia, Belarus, Indonesia.

Top Suppliers:[11]

The three major exporters of armed drones are Israel, US, and China. The US sells only to NATO members except India.

Israel heavily engages in selling military arms to various countries. Database compiled by the Stockholm International Peace Research Institute (SIPRI) demonstrates sales to US, UK, Canada, France, Australia, Germany, Spain, Brazil, India, China, the Netherlands, Azerbaijan, and Nigeria.

China's open export policies have filled drone arms trade gaps, such as in Ukraine, France, Denmark, Russia, Indonesia, Germany, U.A.E., Pakistan, Iraq, Nigeria, Jordan, Saudi Arabia, and Israel.

Top Buyers:[12]

UK, India, Iraq, Saudi Arabia, UAE, Egypt, Nigeria, Algeria, Ukraine, Qatar, France, Indonesia, Serbia, and Azerbaijan are also among the top importers of armed drones.

Major Global Hotspots for Drone Operations

Zones of geopolitical tension have seen an increase in the number of armed drone activities. Daily battles in the sky between Russia-Ukraine, Israel-Hamas, Houthis and US and other stakeholders in the Red Sea have added a new dimension of fierce airwar strategies. The utilization of these unmanned assets in Ukraine for instance[13], has undoubtedly contributed to the war's sustainability and underlines Russia's technological superiority over Ukraine's inferior defense capabilities. The purpose and frequency of drone strikes in the world's major hotspots vary in time. However, their utilization further complicates the definition of radical warfare[14], escalates the politics of violence and the frequency of conflict. Tracking global conflicts[15] where drone operations predominate include (1) Middle East and North Africa (MENA), (2) Europe and Eurasia, (3) Asia, (4) Sub-Saharan Africa.

An inside look into war-drone operations in conflict zones indicates how militants and state proxies' use of drones have shaped conflicts and spiraled almost out of control. Worldwide, the riskiest flashpoints appear in the Middle East where militiamen enjoy off the shelf air capabilities procured through a vast procurement network[16]. Normalized practice of use of drones has increased collateral damage and civilian casualties, especially when warring parties and militiamen have secure places to turn for political backing, funds, and weapons[17]. Constraints on the use of armed drones- even for extraterritorial killings are crumbling. The aerial battlefield is fiercer than ever, and conflict-stricken zones equally share the burden of lethal war-drone strikes globally.
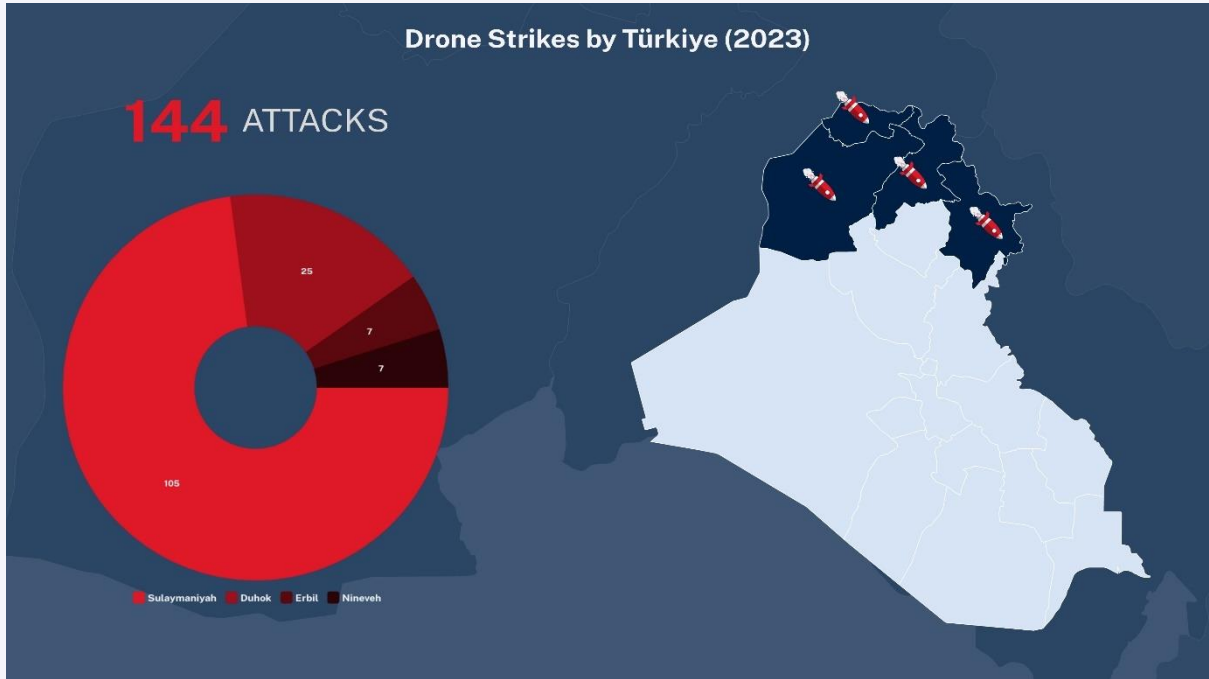
Drone Operations in Iraqi Airspace

Türkiye and Iran's independent air campaigns over Iraqi airspace offer an insightful lense through which to examine the increasing frequency of drone strikes in Iraq. As it stands, the regional conflict furthers the trend of employing proxies, including non-state actors especially in the case of Iran, to wage war on their behalf. Enforcing the rule of law on these non-state actors presents a significantly greater challenge in the context of conflict and fragility. Specifically, armed drones utilized by militants introduce an additional layer of complication that is challenging to contain or counter, even for a well-organized military. As these militants establish a disruptive cycle of air dominance, going after their terror imposes long-term political and security risks for extremely fragile states.

This paradox, clearly martialized on Iraqi air and soil, is a true test of how the Iraqi leadership is on keeping the country from the hands of militia orchestrated terrorism. Drone strikes as the center stage of conflict in Iraq is further illustrated in Table 1-3 below accompanied by an interactive map digitally. This map shows all strike locations tracked by iNNOV8 for the year 2023. It reports minimum estimate for civilian fatalities from Turkish, Iranian drone strikes. iNNOV8 collected open-source available data regarding incidents reported by Iraqi, Turkish, PKK (Kurdistan Worker's Party), US, Iranian and its affiliated media between January 1 to December 31 of 2023, including both incidents that resulted in casualties and those that did not, as shown in the map below. iNNOV8 cross-checked these reports against each other to verify accuracy.

Drone Activities in Iraqi Airspace for 2023 by Türkiye

Drone Strikes by Türkiye (2023)

144 ATTACKS

25
7
7
105

■ Sulaymaniyah ■ Duhok ■ Erbil ■ Nineveh

Location	Date	Target	Casualty
▪ Aqara district/Duhok Province ▪ Matin mountain ▪ Shiladze subdistrict ▪ Shiladze and Deraluk ▪ Bamarne Subdistrict ▪ Amedi district ▪ Skiry village ▪ Gara mountain ▪ Nahila area ▪ Skiry village ▪ Chamanke resort	▪ 3, 9, 11, 28/01/2023 ▪ 4, 5, 6, 10, 19/05/2023 ▪ 3, 14, 20/06/2023 ▪ 26/10/2023 twice ▪ 5/12/2023 (9 times) ▪ 20/4/2023 ▪ 7/08/2023	▪ PKK stronghold ▪ PKK site ▪ Village ▪ (Allegedly) PKK fighters ▪ Vehicle	▪ Unknown ▪ No casualties ▪ 10 PKK members killed ▪ One PKK fighter killed & three injured ▪ Two farmers injured ▪ One Peshmerga killed ▪ Several Killed ▪ Killed one civilian & seriously injured another

• Soran district/Erbil Province • Choman subdistrict • Barbzin Mountain, Bradost • Merg Mir village, Bradost • Sidakan • Kani kandi village, Koya district	• 18/01/2023 • 2/5/2023 • 25/06/2023 • 13, 24/08/2023 • 17, 26/10/2023	• PKK site • Village/house or tent • Unidentified Territories • Village	• Unknown • Several injured • Either 7 PKK fighters or civilians killed • 7 PKK members killed • 10 PKK fighters killed • One killed & two seriously injured (unidentified)
• Sinjar district/Nineveh Province • Sinjar (and other unspecified locations) • Chomo village • YBS units (Sinjar Resistance Units, Yezidi components) • Sinjar • Mount Sinjar • Makhmur district	• 28/01/2023 • 1/03/2023 • 23/05/2023 • 1/06/2023 • 4/08/2023 • 17/09/2023 • 13/10/2023	• Vicinity of Sinjar • PKK site • PKK fighters (Yabasheh forces) • PKK fighter (logistics) • Vehicle • Turkmen refugee camp	• Unknown • Two PKK members killed (notably PKK commander Shirzad Qyrani), two others seriously injured • 3 PKK killed • One PKK fighter killed • YBS members killed
• Sulaymaniyah International Airport/ Sulaymaniyah Province • Kani Miran, Saliawa, Wryawa villages, Penjwen district • Penjwen road, near Nalparez subdistrict • Penjwen • Kani Mirani village • Penjwen • Mawat district • Basawe and Galali villages • Khalakan, Dukan • Galala area • Arbat Airport • Sarkapkan subdistrict, Rania district & Qandil Mountain • Endze village, Qandil	• 7, 15, /04/2023 • 6, 11, 13/08/2023 • 3, 9, 18, 27/09/2023 • 28/12/2023 • 2/5/2023 • 4/06/2023 • 3/10/2023 (four times) • 9/08/2023 (two separate attacks) • 1/10/2023 (20 times) • 4/10/2023 (three times) • 27/12/2023 (twice) • 28/12/2023 • 2/10/2023 • 6/11/2023	• Unknown • (Allegedly) PKK fighters • Vehicle • PKK site • Village • PKK fighters	• Unknown • 2 killed & 2 injured (civilian or fighter) • 3 civilian Arabs killed • One killed (civilian or fighter) • Several injured • One killed and one injured • 2 PKK fighters killed • One civilian killed and two injured • 3 members of PUK Counterterrorism killed & 6 others (PKK fighters allegedly) • One killed & one injured • One civilian killed & one injured

▪ Aghjalar, Chamchamal district ▪ 70 other sites were hit in Iraq and Syria ▪ Bokriska village, Pishdar district ▪ Over 10 locations (Qandil mountains, Bradost, Choman) ▪ Ranya Boskeni village			▪ 2 PKK fighters killed & 2 injured

Source: Kurdistan Watch, Airwars, Baghdad Al-Yom, Turkish Ministry of Foreign Affairs & Defense, MDEast, Rudaw English, Reuters, NewYork Times, Iraqi Ministry of Foreign Affairs.

Key Background

Türkiye's military drills against PKK began as a countermeasure to the PKK agenda against the Turkish state, as part of the party's congress in 1982 in which PKK decided to take their insurgency inside Türkiye, primarily aiming at establishing a Kurdish state[18]. The first bullet in 1984 started the insurgency and introduced another phase of the Kurdish-Turkish conflict in Türkiye. Led by Mahsum Korkmaz, known as Agit, the 1984 attacks targeted a Turkish gendarmerie station in Eruh and Siirt villages killing one gendarmerie soldier and injuring six soldiers and three civilians[19]. Ever since, rising tensions between the Turkish forces and the PKK, both equally capable of terrifying each other, have led to sporadic long-range attacks to the present day. Listed as a terrorist organization by Türkiye, the EU and US[20], PKK's threat pushed the Turkish forces to fully materialize on the conflict through heavy armament. February 21, 2008, marks the first confirmed ground incursion of Iraq by Turkish forces preceded by the Turkish Air Force bombardments of PKK sites in Northern Iraqi Kurdistan, where PKK strongholds reside[21]. With Türkiye's development of armed drones during 2015-2019 period, its use against PKK continues to pose serious threats to the group's war-fighting capabilities. The use of drones from 2019 onward has fueled an increasing proportion of violence through targeted killings from Iraqi airspace, fast pacing towards regionalizing the

conflict in addition to complicating regional and international relationships, especially with

Turkey's NATO allies[22].

Conflict Assessment

Focusing specifically on current operations, the ongoing drone strikes by Türkiye featured on

the interactive map hints at the battlefield advantages of drones against PKK

sites/strongholds and personnel in the Kurdistan Region of Iraq. Increasing drone presence

as a means to crackdown on PKK fighting capabilities has also meant indiscriminate

targeting collateral damage of civilians deep into villages and urban centers throughout Iraqi

Kurdistan. The data from the table displays the lowest level of violence throughout the first

six months of 2023 since 2015, corresponding with the period of the unilateral ceasefire from

the PKK side, which ended in June of 2023. What distinguishes this phase of Turkish-PKK

conflict since 2015 can be attributed mainly to the success of the drone industry back at

home. This is why from 2019 onward Türkiye has increasingly relied on its airpower,

especially armed drones, to push back against the PKK and its affiliates in Iraq and Syria. As

Turkish drones advance in notoriety on the battlefield, so does Türkiye's air superiority. Data

collected from the 2023 drone strikes indicate a major shift of policy of drawdown in ground

forces to address PKK threats as drone-dominated airstrikes intensified during the last six

months of 2023. Benefiting from the porous border between Iraq-Türkiye and protection from

the Qandil mountains, PKK have held up against Turkish ground attacks, even if that meant

fierce soldier to fighter clashes. Türkiye's shift of policy to deploy drone strikes, however,

presents air superiority advantage over PKK and high vulnerability of PKK personnels

roaming the villages and urban centers of Iraqi Kurdistan as they fall victim to targeted

killings. Categorized over 4 provinces, the number of incidents is broken down as follows with

the combatant casualties meant for PKK only.Other non-PKK combatants are categorized in brackets.

Duhok

- COMBATANTS KILLED:15 (one KRI Peshmerga killed)
- COMBATANTS INJURED:3
- NON-COMBATANTS KILLED:1
- NON-COMBATANTS INJURED:3

Erbil

- COMBATANTS KILLED:18 or 25
- COMBATANTS INJURED:several injured
- NON-COMBATANTS KILLED:7
- NON-COMBATANTS INJURED:several injured

Nineveh

- COMBATANTS KILLED:6 (several YBS fighters also killed)
- COMBATANTS WOUNDED: 2
- NON-COMBATANTS KILLED:no civilian casualties recorded
- NON-COMBATANTS WOUNDED:no civilian casualties recorded

Sulaymaniyah

- COMBATANTS KILLED:14
- COMBATANTS WOUNDED:7
- NON-COMBATANTS KILLED:10
- NON-COMBATANTS WOUNDED:11

Analysis

Incidents reported along the borders, villages and urban centers plotted on the interactive map indicate 144 attacks; 105 in Sulaymaniyah, 25 in Duhok, 7 in each of Erbil and Nineveh provinces. The total number of combatant casualties reach 60 killed and 15 injured while 18 civilians killed and 20 injured. iNNOV8 is also aware of one Peshmerga military fatality in Erbil and several members of the Yezidi militia group YBS in Sinjar. The aspect of drone strikes establishes a solid case of Türkiye's drone activities as regular practice on Iraqi airspace. This is an important point of analysis given the high number of incidents recorded compared to other conflict zones. For instance, the Nagorno-Karabakh conflict only recorded a total of 46 drone strikes by both Armenia and Azerbaijan between April 2016 and September 2020[23]. In comparison, Türkiye carried out 144 drone attacks in 2023 alone across the borders and urban centers, with Sulaymaniyah at the center stage of these attacks. In the wake of increased drone strikes by Türkiye, the number of civilian casualties is on the rise. This is without considering individuals of unknown affiliation.
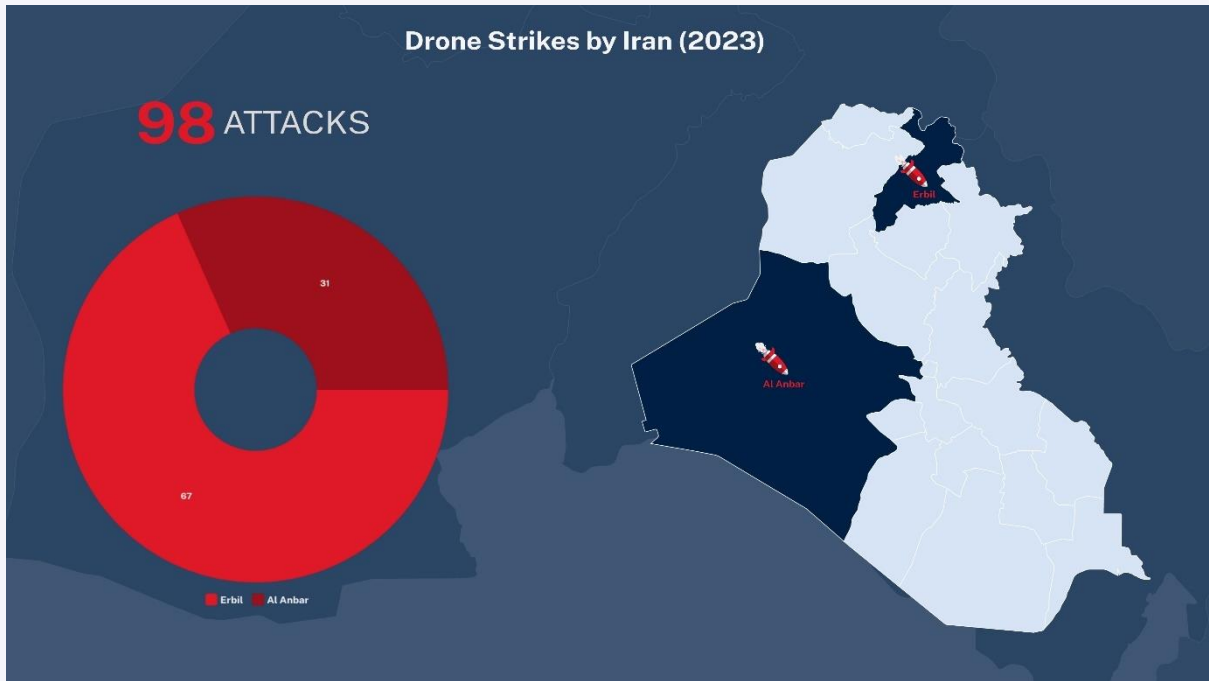
From the political aspect, Türkiye articulately intends to put an end to the conflict with the PKK, but suspects blockade by political actors involved, allegedly the Patriotic Union of Kurdistan (PUK), a social democratic party ruling the green zone of Iraqi Kurdistan, namely Sulaymaniyah, Halabja, the Administrations of Garmian and Raparin. With the majority of drone attacks involving Sulaymaniyah, a fresh layer of conflict adds yet another political iceberg between Turkish authorities and decision-makers in Sulaymaniyah. Condemning PKK, renouncing their acts seems to be the only possible path forward in stopping the campaign of portraying Sulaymaniyah as being under the control of PKK, especially as Türkiye's extended flight ban to and from Sulaymaniyah International Airport continues to the date of this publication. The intensification of PKK 's activities in Sulaymaniyah,

infiltration by its members into the airport are the reasons for continued flight bans as cited by the spokesperson of the Turkish Ministry of Foreign Affairs, Ambassador Tanju Bilgiç in April 2023[24]. Verifying Turkey's assertions against the 105 drone strikes in Sulaymaniyah is of utmost significance. For instance, Duhok is where the majority of PKK militants are killed, whereas the majority of civilians killed are in Sulaymaniyah. This demonstrates one of two things: either Turkish intelligence failure or irresponsibility and negligence in conducting indiscriminate attacks. In either case, both are fatal in that they increase the likelihood of civilian casualties at the hands of Turkish drone strikes in response to PKK presence in densely populated locations in Iraqi Kurdistan.

In response to Turkish drone attacks, PKK has been propelled to try and develop means of retaliation, by acquiring their own drones[25]. The PKK is responsible for two drone attacks that targeted Turkish outposts in Bradost/Erbil three times on September 9, 2023, and twenty-two suspected drone strikes across multiple locations on October 4, 2023. With the fast proliferation of drones in the market, the PKK could adapt its war strategy to involve the use of drones as a countermeasure to the spike of Turkish drone operations. More significantly, Türkiye's self-imposed control zones along the borders between Iraq and Syria may unintentionally encourage the PKK to retreat to rural Türkiye, their original base. To put it another way, applying more pressure to the PKK and forcing them off of their bases could resurrect violence inside Türkiye and raise the possibility of a regionalized conflict. By mediating a ceasefire brokered by regional and international actors, the protracted conflict may be prevented from becoming further regionalized.

Iran-backed Militia Groups (Oct 18-Dec 31, 2023)

Drone Strikes by Iran (2023)

98 ATTACKS

Location	Date	Target	Casualty
▪ Kurdistan Region (multiple locations)	▪ 7/08/2023	▪ Iranian Opposition groups	▪ 18 killed and 50 injured
▪ Erbil international Airport/ Erbil Province ▪ Harir (Bashur base)) Airport ▪ Peshmerga headquarter, Pirmam ▪ Erbil vicinity Province	▪ 7/11/2023 (three drones) ▪ 19/11/2023 (5 attacks) ▪ 9/12/2023 (5 attacks) ▪ 26/12/2023 (twice) ▪ 25, 27,28/12/2023 ▪ 31/12/2023 (twice) ▪ 21, 27/10/2023 ▪ 6, 7/11/2023 ▪ 9/12/2023 (5 attacks) ▪ 25/12/2023 ▪ 9/11/2023 (three drones) ▪ 19/11/2023 (9 attacks) ▪ 18/10/2023 (two attacks) ▪ 22, 26/10/2023 ▪ 3, 6, 17, 22 /11/2023 ▪ 6/12/2023	▪ International Coalition military base ▪ US Forces ▪ Vicinity of Sebiran area ▪ Unknown ▪ Residential area	▪ 3 US soldiers injured (one critically) ▪ A few Injuries ▪ 3 US service members wounded ▪ Unknown

	• 31/12/2023 (two attacks) • 8/12/2023 (3 times)		
• Ain Al-Assad Airbase/ Al-Anbar Province	• 18, 21, 22, 24, 27, 30, 31/10/2023 • 6/11/2023 (3 times) • 12, 13, 15, 17, 20, 22, 23/11/2023 • 3/12/2023 • 6/12/2023 • 11, 21/12/2023	US forces	No casualties

Source: Iran Primer, US CENTCOM, New York Times, MDEast, Baghdad Al-Yom, Airwars, Kurdistan Watch, Rudaw English, Reuters, US News.

US Drone strikes

Location	Date	Target	Casualty
• Kirkuk Province	• 3/12/2023	• 5 militants (implicated in launching a one-way attack drone)	• 5 militants killed (PMF)
• Multiple locations housing pro-Iran militia groups	• 26/12/2023	• IRGC affiliated militia (Islamic Resistance group)	• Unknown

Source: Iran Primer, US CENTCOM, New York Times, MDEast, Baghdad Al-Yom, Airwars, Kurdistan Watch, Rudaw English, Reuters, US News.

Key Background

An escalation of proxy warfare sponsored by Iran has added to the widening of conflagration in the Middle East. Training proxy forces throughout the region is within the mandate of Iran's Quds Force —the Islamic Revolutionary Guard Corp's (IRGC) international arm fueling further sectarian divisions in the Middle East. The IRGC as part of Iranian hardliner policy, has engaged in arming and funding its militia groups, such as providing armed drones to Hezbollah in Lebanon, funding more than one hundred thousand Shiite fighters in Syria,

arming ballistic missiles and drones to Yemen's Houthis, and helping Shiite militias in Iraq with building missile capabilities[26]. Recognized as the state sponsor of terrorism by the US government[27], Iran spends billions of dollars on funding and arming militia groups and feeding partner forces in Iraq, Afghanistan, Gaza, Lebanon, Pakistan, Syria, and Yemen. Recent Iranian excavations in the Middle East has fueled a renewed front of regional tension in Gaza, Yemen, Iraq, Syria, Lebanon, and Pakistan. Exchange of fire in the Red Sea, rising missile and drone attacks in the Gulf function as stopgaps to any meaningful negotiations going on to easing proxy wars. Despite having a lengthy history, the competition for influence in the Middle East has accelerated into a US-Iranian theater of conflict. The thawing of regional ties appears mirage as Iran distances itself further from negotiations in response to the unilateral withdrawal of the US from the nuclear deal and Trump's new containment strategy and its regional allies.

Iraq has emerged as a de facto staging area for the US- Iran conflict, with both parties conducting airstrikes, particularly following Hamas's October 7 attack on Israel. Regular drone and missile engagements ensue between Iran-backed militia groups and US forces stationed in Iraq, wreaking havoc on the nation. The lack of a resolute position adopted by the Iraqi government has created opportunities for encroachments on Iraq's sovereignty rights. The government is currently facing challenges due to the increasing number of civilian casualties and the absence of due process to hold the perpetrators accountable or prevent the event from occurring. At present, the persistent use of lethal airstrikes, particularly drone operations in urban areas via Iraqi airspace, presents security challenges for both Baghdad and Erbil alike- as both are striving to devise effective countermeasures that do not marginalize Iran or the US, both of which are considered vital partners and essential for the security and stability of Iraq.

Conflict Assessment

In the aftermath of October 7, US forces stationed in Iraq and Syria have been under a string of 98 suicide drone strikes, only in Iraq. Most of the attacks, totaling 67 targeted Erbil Province, specifically on US Bashur or Harir base and the international coalition base within Erbil International Airport while 31 attacks targeted Ain Al-Assad base in Al-Anbar province separately. Iran-backed militia groups also targeted several other locations in the KRI with no reports specifically addressing the locations or aftermath of these attacks. Continued military provocations by Iran on Iraqi airspace is owed to the wide-range presence of its umbrella groups, namely the Islamic Resistance, Asaib Ahl al-Haq, Harakat al-Nujaba, and Kataib Hizbullah- which is part of the Popular Mobilization Forces. In response, Iran-backed militia command and control nodes have also been targeted by US forces: one in Kirkuk where 5 militants from the Popular Mobilization Forces were killed and the other targeted multiple locations housing Iran-backed militia groups within Iraq with no reported casualty.

Analysis

The nature of Iran and the US drone assaults in Iraqi airspace is a major point of contention. The indiscriminate targeting by Iran-backed militia groups has resulted in devastating civilian[28] and combatant casualties[29]. The tension between US-Iran is intensifying in the Middle East as Iran vies with the US on drone and other military capabilities power. In Iraq, Iranian drone attacks can hardly be called a spectacle of aerial precision, blurring the line between combatant and civilian. The utilization of Iraqi airspace by Iran as a forward operating base[30] has resulted in increased Iranian drone attacks, which have posed challenges for the US in effectively countering the threats it faces. Notably, Iran's drone program and its efforts to establish informal military alliances with strategic partners could

also mean more US enemies with lesser defined geographic areas that possess drone capabilities[31].

One notable attribute of US drone strikes is their ability to identify an attack's point of origin[32] prior to executing them, at least in the case of Iraq. U.S. drones have not caused any harm to civilians, nor have they been the focal point of U.S. military operations in Iraqi airspace targeting adversaries. Nonetheless, past US missions in Iraq, under the cover of counterterrorism, have set the stage for other regional actors to vie for influence through military means and establish air superiority over Iraqi skies. Irrespective of the perpetrator, there ought to be no leeway regarding drone operations within Iraqi airspace. To put it plainly, using Iraq as a battleground for US-Iran confrontations should amount to terrorism from the sky, which the Iraqi government has not been able to successfully handle without repercussions and fear of those who pass for allies.

This is a crucial topic of conversation because it concerns the degree of involvement and approach taken by the Iraqi central government in dealing with foreign or domestic actors who present security risks domestically. The degree of incompetence displayed by the Iraqi leadership in the face of US-Iran and Turkish-PKK confrontations should be evident from a comparison with the reactions of other central governments in conflict zones where drone operations occur globally.

Other Parts of the World

Conflicts in MENA

With varying actors in the powerplay, the Middle East undergoes a decades-long ideological war of division and extremism manifesting themselves on the battlefield. Most pressingly, weapons that cause high impact and deaths at the hands of extremist groups, or sometimes state actors, raise serious questions about where the region's complicated security environment is headed to. Drone as weapon of choice at some key areas of conflict, such as Gaza, Syria and Iraq, and as of late the Red Sea explain much about the regional powers' preference for an all drag-out-fight.

Iran-sponsored Conflicts: In drone proliferation and operations, Iran stands among most of active regional powers. Iran's buildup through its armed militia-groups, namely axis of resistance Hamas, Hezbollah, and Houthis, have established a dangerous tit-for-tat aerial strikes setting the region's clock on alert. War-drone statistics indicate a sustained process of wearing down the region's defenses that eventually could trigger re-engineering the geopolitical track, all in favor of Iran. This is all because of Iran's distinct strategic use of drones. Drones can be employed as surveillance and reconnaissance assets, as two-way strike, or one-way suicide strikes, with Iran employing them in all three modes[33]. suicide drones, which are often built out of commercial components but with a large explosive payload and pseudo precision guidance[34] are used by both Iran and its militia groups spanning over Iraq and Syria, Yemen, UAE, and Saudi Arabia. Various statistical reports[35] show the terror strikes and targeted killings dealing a blow to the Middle East's airspace. The latest drone and missile attacks on commercial vessels in the Red Sea by the Houthi rebels have led many of the world's biggest shipping companies to reroute their vessels and avoid the area[36].

Conflict in Syria: with Türkiye and armed Kurdish groups in spotlight, throw their weight on the defective security infrastructure of the region. Türkiye's new drone war strategy has rattled much of Syria-Iraq borders, all under the excuse of PKK insurgency-labelled terrorism. Establishing a norm of aggression and invasion, Türkiye's air campaigns have gone unnoticed compared to Iran driven war-drone. Turkish drone attacks consistently target fighters of Syria's Kurdish-held northeast[37], an ally to the US in the fight against ISIS in addition to the tall list of human causalities in Iraq and Syria[38], usually overlooked for its destabilizing effects on the region.

Instability in Lebanon: due to political gridlock and spillover from the Syrian Civil War, Lebanon has remained in a state of political instability. Previous involvement of Hezbollah's armed component in the Syrian Civil War, which allegedly supports Bashar-al Assad's regime, effectively exacerbates the country's political situation. As both Hezbollah and Israel trade fire over the disputed Lebanon-Israel border, edging closer to war spreads fear of wider conflagration across the region. Drone strikes deep into Lebanon's airspace by Israel is exchanged with further airstrikes and retaliation by Hezbollah. Lebanese airspace has served as center to launch rocket and drone strikes[39] since the outbreak of the Israel-Palestinian conflict abound the brittle governance system coupled with a crippling economy and destabilizing security infrastructure.

Israel-Hamas War: the fighting source of Hamas was underestimated until October 7 that left hundred Israelis slaughtered in a surprise attack. Hamas militant control of the Gaza Strip has turned the region into a hub of violence sponsored by Iran's well-established patronage network. The October conflict's turn into a full-blown war comes in light of shuttle diplomacy efforts by international and regional actors towards a peace, or much less normalization accord between Saudi Arabia and Israel. Jeopardizing the deal, though introduces level of

complications for it to go forward, dims (weighs less) considering the humanitarian crisis taking place with the death toll nearing 24 thousand from inside the strip. Increasing drone operations for dull, dirty, dangerous airstrikes although many of them secretly operated by Israel's elite drone operators[40] is a sign of changing the war strategy on the Gaza battlefield.

Yemen War: Houthi rebel's launch of a barrage of drone attacks on commercial vessels transitioning the Red Sea puts the country at a frontline position of wider conflicts. Iran-backed Houthi rebels' airstrikes surge in direct response to Israel's war on Hamas, however, such airstrikes are an established practice of the rebels not only on the internationally recognized Yemeni government but also on Saudi Arabia[41] and UAE[42] equally over the previous years. Recent developments in ending the conflict mediated by China between Saudi Arabia and Iran lapse as hostilities between the warring parties escalate and risks of a renewed front against Al-Qaeda in the Arabian Peninsula (AQAP)[43]. With that in mind, speculations over the sudden and sustained use of drones signal external support[44], indicating a strategic shift in the key contention regions.

Civil conflict in Libya: internal fragmentation and division keeps the country split between the UN recognized interim government in Tripoli in the west, and another in the east backed by General Khalifa Haftar who leads the Libyan National Army (LNA)[45]. Haftar's political ambitions was met with a ceasefire that put an end to his abortive 2019-2020 assault on the capital[46] Regional actors including, Saudi Arabia, UAE, and Egypt on the one hand and international actors, such as France and Italy feed the internal fighting and risk the country of becoming another Syria-like conflict. Recent drone attacks on the Al-Kharruba airbase aim to stoking a new war and involving Libya into the regional conflict. The battle for control over Libya is a risky business given the capacity of terrorist organizations to launch attacks and draw back the country into regional disputes. However, the UN-backed government seem

tough on terrorist operations as ruling from a Libyan court[47] in May 2023 sentenced 23 people to death and another 14 to life in prison for their role in a deadly Islamic State militant campaign that included beheading a group of Egyptian Christians and seizing the city of Sirte in 2015.

Civil war in Sudan: Sudan's September 11 drone attack on an open market south of the capital Khartoum left at least 43 dead and more than 55 wounded[48]. Rocked by violence, Sudanese conflict purports to continued tensions between the country's military, led by Gen. Abdel Fattah Burhan, and the paramilitary Rapid Support Forces, commanded by Gen. Mohamed Hamdan Dagalo. Exchange of indiscriminate airstrikes are a trend of Sudan's war featuring the Greater Khartoum area a battleground further diminishing the promise of a long-awaited democratic transition.

Conflict in the Sahel: rising jihadis violence predominantly linked to either Al-Qaeda or the Islamic State have urged the Sahel governments to utilize counterinsurgency strategies other than mobilizing ground troops. Military takeovers by rebel groups resonating with jihadis extremism take on a new phase as drones gain notoriety to set the scales. First used in the Sahel[49], drones helped the Ethiopian government to push back the Tigray army rebels who took over several cities. The region's endless fight against terrorism can only hope to defeat it through drone operations, even if that means costing civilian lives. Not only have drones in the Sahel been rarely effective for defeating rebel groups and ending conflict, but the space for drone use may also bolster the jihadis groups to follow suit. The case of drone operations on the rise could potentially be game changers if they end up in the hands of jihadi groups, inflicting yet another wave of destabilization on the Sahel government and potentially risking civilian lives further. The presence of the largest US drone base in the region[50] could serve as a platform for strikes against these groups. However, the rise in the

number of targeted killings with civilian blood on the line could only buildup tension and resistance from the public, who might end up recruited by jihadis groups in search of retaliation.

Conflicts in Sub-Saharan Africa

Conflict in Ethiopia: ethnic infighting has plagued the Ethiopian central government ever since the 1990s when Eretria's war of secession left the country landlocked in 1990s. coinciding with the escalation of the Tigray War since spring 2021, militia groups from the Amhara and Oromia regions who largely allied with the central government, and the Oromo sided with the Tigrayans during the Tigray War, have added another layer of internal conflict for Ethiopia. Fighting former allies and enemies alike, a crackdown of the central government's security forces restricts consolidation of the central military control to respond to ethnic violence in the two regions effectively. Tipping the balance in Ethiopia's civil war[51] cannot be divorced from lethal armed drone operations. Use of drone led to miraculous turnaround during the Tigray Defense Forces (TDF) mounting advance on Ethiopian federal military in several cities, which depended on ground troops for the duration of the conflict. Deployed Iranian, Chinese, and Turkish drones to target TDF troops and supply lines, the central government recaptured the cities and forced the TDF to retreat in a matter of weeks in late 2021[52]. The successful outcome of Ethiopia's lethal drone operations serves as a model for other West African leaders attempting to resolve their own military dilemmas.

Terrorism in Somalia: sharing a border with Ethiopia and Kenya, Somalia's struggle with containing armed militants poses security issues to the region's conflict-stricken condition. Large swaths of ungoverned territory allowed the Al-Shabab terrorist group to seize control of the capital city of Mogadishu in 2011 but were eventually pushed back by Kenyan troops as

part of the African Union Mission in Somalia (AMISOM). Somalia, perhaps, is one of the major hotspots for drone strikes by all actors involved in the conflict. Airstrikes claimed the life of Al-Shabab leader Ahmed Abdi Godane in 2014 by the US followed by targeted killings of al-Shabab's co-founders in an October 2022 strike and around thirty militants as they attacked a Somali base in a January 2023 strike[53]. The terror of drone operations haunts civilian lives as they spike over the recent years reaching a 460 percent increase during Trump's single term in the White House[54]. Owing to flawed intelligence in the target development process by US forces, the height of war-drone operations has proven fatal in Somalia's fight against terrorism thus far in 2023, with a total of thirteen attacks.

Conflicts in Asia

Civil war in Myanmar: record high number of drone attacks have given a new phase to the Myanmar conflict, the only country with the longest civil war. Challenges to the junta military rule are ongoing since the 2021 coup by armed ethnic groups representing themselves in the banner of the People's Defense Force (PDF). Anti-Junta forces carried out the majority of drone attacks during the first nine months of 2023, totaling 44 attacks[55] on police and military outposts. This new trend of heavy drone assaults in the Myanmar conflict indicates the insurgent's weapon of choice, which they believe to be effective, safe, with little human resources to operate.

Conflicts in Europe and Eurasia:

Ukraine war: All-out drone war have become the fist of the Ukraine war with a record of nearly one thousand drone strikes in six months only[56]. The sustained campaign of drone strikes has seen the Ukrainian infrastructure to ruin, specifically targeting the country's energy grid and nuclear power plants. In the last months of 2023, Russia hit Kyiv with seventy-five drone

strikes, the biggest drone attack since the war began[57]. Although Ukraine denies responsibility for drone attacks on Russia, Russian territory has seen an uptick of drone strikes mainly targeting military and energy infrastructure. Bringing the horror of war to Russia seem to have resistance from the Western countries and the US as they have all clearly articulated that they do not support attacks inside Russia[58]. Raising the cost of war for Russia, could prove a successful counteroffensive, however, in the long-run, drone proliferation could further the escalations, especially if it falls into enemy hands[59].

Nagorno-Karabakh: with inexpensive combat-ready drones proliferating on battlefields, Turkish Bayraktar TB2 drones in the Nagorno-Karabakh conflict[60] has helped Azerbaijan tilt the balance towards rolling up more territory in the disputed regions with Armenia. The Nagorno-Karabakh conflict zone includes the Soviet-era NKAO and the former Armenian-controlled adjacent territories. Azerbaijan's offensive reignites tensions in the South Caucasus region which could potentially disrupt oil and gas exports from Azerbaijan to Central Asia and Europe. The political risk of intermittent clashes since August 2016 has seen a surge in drone attacks approximating 46 strikes[61] by both Armenian and Azerbaijani troops in the cross-border. Along the front lines mass displacements take place while the disarmament of Armenian separatists is mediated by Russia in attempts to reintegrate Nagorno-Karabakh into Azerbaijan. The use of attack drones, shelling, and special operations activities[62] shapes the conflict zone without security guarantees for those who are yet to give up their weapons as negotiations go forward.

Conflict Zone Drone Operations	Central Government's Level of Involvement
Iraq: (Turkey vs. PKK) & (Iran-militia groups vs. US)	Weak (Condemnation)
Syria: (Turkey vs. Kurdish armed groups) & (Iran-militia groups vs. US)	No territorial authority
Lebanon: Israel vs. Hezbollah (cross-border)	Military Involvement (Countermeasure)
Palestine: Israel vs. Hamas (war)	Heavy military Involvement
Yemen & Red Sea: US (other international actors) vs. Houthi Rebels (Iran-backed)	International and regional military involvement
Libya: UN-backed government of National Unity in Tripoli vs. Government of National Stability in Sirte (civil conflict)	Heavy military Involvement
Sudan: Federal Military vs. paramilitary Rapid Support Forces (civil war)	Heavy military Involvement
The Sahel: central governments vs. Jihadis groups (Al-Qaeda & ISIS)	Military involvement
Ethiopia: (central government vs. Ethnic armed groups in the northern Tigray region) & escalation between Ethiopia military vs. Eretria over access to Red Sea	Military involvement
Somalia: central government vs. Al-Shabaab terrorist group	Military involvement
Myanmar: central government vs. the People's Defense Force (PDF)	Military involvement
Ukraine: Ukraine vs. Russia (war)	Heavy military involvement
Nagorno-Karabakh: Azerbaijan vs. Armenia (cross-border)	Military involvement

Table 4: a comparison of drone operations in conflict zones according to the central government's involvement. While this does not inherently restrict itself to drone operations in these conflict ZONES in 2023, it does provide an illustration of how sovereign countries respond when their territorial integrity is violated.

Sovereignty as Tomorrow's Necessity

The forecast for the future of the Middle East will carry the twin hallmark of drone and missile attacks, thanks to the stealth, and not to forget the lethal military technologies in the hands of state and non-state actors engaged in the oil-rich region. The narrative of drone dominance is no longer a far-fetched ambition or mission. Hegemony in the airspace is the next battle against every state's sovereignty in the region to which central governments respond with varying degrees. Throughout the world's drone operation zones, central governments share a common attitude in dealing with drone strikes- which is to militarily engage as a countermeasure. With the exception of Iraq, Syria, and Libya, other central governments from the region have responded with military measures to drone operations, even if with varying effectiveness.

Iraq ranks the weakest in its class since Syrian central government does not have territorial control over Northeast Syria where drone operations take place, or in Libya where a civil war is ongoing between UN-backed government of National Unity in Tripoli vs. Government of National Stability in Sirte. Iraq's stance is hostage to sectarian conflict, has been very weak in response to drone operations in its skies, regardless of the actor. No matter who leads it, condemnation has been the only natural response and by far the highest level of engagement from the Iraqi government. From a threat to Iraq's security to a regular practice, drone operations function as the lethal fist of extrajudicial executions between warring parties. This has posed serious questions regarding the concept of territoriality as a central component that defines a state's security. Exceptionalism of extraterritoriality in the form of terrorist organizations[63] has been cited several times by actors involved in drone strikes in Iraqi airspace. However, extrajudicial pre-emptive drone strikes are not an act of self-defense as

established by the International Court of Justice in the Nicaragua v. US case[64], which specifically applies to Turkish self-defense claims.

Extrajudicial executions of another state's nationals, even counter-terror in character, if conducted outside of a battlefield, have no legal basis to address US counterterrorism claims for its drone operations on Iraqi airspace[65]. Thus, as the international law does not provide legal grounds for drone operations, either as part of armed conflict or for targeted killing, ongoing violations of Iraqi territorial integrity incite further violence with a continued record of Human Rights abuses and civilian deaths that cannot be shielded from the pattern of failure in carrying out imprecise lethal strikes.

To turn back the tide against this wave of drone invasion from the skies, countries are facing existential decisions to protect their skies' sovereignty. Sovereignty as tomorrow's necessity can contain the battle for the future against a drone army that could proliferate, given Iran and China's ever rising drone capabilities in the market.

Conclusion

In the era of drone warfare, states with limited technological resources may find it difficult to assert control of its skies to defend its their airspace and ensure the safety and security of their citizens, both of which are essential to a state's sovereign existence. When compared to other conflict zones, the analysis of drone operations on Iraqi airspace, carried out by the US, Turkey, PKK, and Iran-backed militia groups showcases a picture of air dominance by these outside players that the Iraqi central government is unable to contain. Given the steady rise in the number of drone strikes by these foreign powers, Iraq faces valid challenges to its unity

as a state. Iraq can either revise its existing security agreement with its neighbors, and with the US, to limit their drone activities through its skies, or push back against such drone-assisted violations of its sovereignty through invoking international rules and regulations. Only then Iraq, as a state, can ensure the territorial integrity of the country, and the safety and security of its citizens.

Acknowledgement:

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TRACKING DRONE ACTIVITIES : IRAQ VS . OTHER PARTS OF THE WORLD

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