A New Chapter in the Drone Race in the Middle East

Jean-Loup Samaan
Senior Research Fellow
Middle East Institute of the National University of Singapore

In the past months, drones seem to have been spotted on every battleground: in May 2021, amid the war in Gaza, Hamas used (though unsuccessfully) kamikaze drones against Israel. In November, Algeria accused Morocco of a drone strike killing three Algerian workers in a region controlled by the Polisario Front. Then, two months later, Abu Dhabi, the capital city of the UAE, came under a series of attacks by the Houthi insurgency in Yemen, which combined drones as well as cruise and ballistic missiles.[1] Finally, in the spring of this year, Turkey's Bayraktar TB2 drones proved to be a vital weapon for Ukrainian forces to disrupt the Russian ground invasion.

All these war vignettes are evidence that drones are becoming a central component of military strategies across the Middle East. But if the proliferation of unmanned aerial vehicles (UAVs) is now a fact of life, its exact ramifications for regional stability are yet to be fully comprehended.

The race to develop or import such systems has grown in earnest in the last ten years. Before that, only the US and Israel had significantly invested in the production of unmanned systems. The Israel Defense Forces (IDF) first used UAVs during the Yom Kippur war in 1973, and today operate a wide range of them, with air force squadrons employing armed drones such as the Heron TP and the Hermes 450. Those have been seen in action in targeted killings of terrorist leaders from Lebanon to Gaza. Israel has also been one of the biggest exporters worldwide, with companies like Elbit Systems and Israel Aerospace Industries selling systems to at least 26 countries from Latin America to Southeast Asia.

At first, Israel was also the main drone supplier to the Turkish armed forces. But following the political dispute between both countries, which culminated with the 2011 crisis over the Mavi Marmara Flotilla, arms sales were cut and Turkish defence industries ordered by Ankara to develop their own alternative. Since then, Turkey has become a kind of "drone power" and it is estimated that Turkish armed forces now operate about 130 indigenous drones.[2]

One of the new systems that came out of this reform of Ankara's procurement policy was the Bayraktar TB2, arguably the most iconic system developed today by Turkey's defence industry with orders made to at least 19 countries around the world. Turkish forces have used drones extensively on the battlefield in Syria and northern Iraq, but also domestically against militants of the Kurdistan Workers' Party (PKK) in eastern Anatolia. In 2020, Turkey's use of drones to counter an offensive of the Syrian Army against Ankara-backed rebels underlined how central the system had become for the country's military strategy.

Noticeably, the TB2 is not considered a masterpiece of military engineering but for many potential buyers, it represents an affordable way to compensate for

[1] Samaan, Jean-Loup "Beyond the Houthi Attack on Abu Dhabi: How to Address the Drone & Missile Threat to Civilian Areas?" Trends Institute, 25 January 2022. https://trendsresearch.org/insight/beyond-the-houthi-attack-on-abu-dhabi-how-to-address-the-drone-missile-threat-to-civilian-areas/

[2] Rossiter, Ash and Cannon, Brendon J. "Turkey's rise as a drone power: trial by fire." *Defense & Security Analysis*, 2022, 38:2, 210-229, DOI: 10.1080/14751798.2022.2068562

limited air forces. As sarcastically described by Aaron Stein, the TB2 is "the Toyota Corolla" of UAVs.[3]
During that same period, other Middle Eastern countries also invested in drones. Iran's Revolutionary Guards have been developing their own indigenous capabilities with armed systems like the Shahed-129, the Mohajer 6 or the Ababil-3. Unlike Turkey, Iran is not a latecomer to the drone race. Tehran started its drone programme in the 1980s, around the same time it launched its ballistic missile programme. In both cases, it was a response to the trauma caused by the eight-year war with Iraq, which saw Iranian cities come under fire from Iraq's Scud missiles.[4]
On the other side of the Persian Gulf, Saudi Arabia and the UAE bought in past years Chinese drones, like the Wing Loong systems (models I and II), as well as the CH-4. Noticeably, the Gulf states' decision to turn to China for armed drones was a consequence of the US government's refusal to provide them with access to the Predator UAV. Eventually, decision-makers in Riyadh and Abu Dhabi found Chinese drones to be a critical instrument in their war efforts in Yemen. In fact, drones may be the best field for China's arms sales in the Middle East today: alongside Saudi Arabia and the UAE, Jordan, Egypt, Algeria and Iraq have also turned to Beijing to equip themselves with UAVs.[5]
The motivations driving Middle Eastern states in this drone race vary depending on the status of their national armed forces. For Israel, whose military is the most advanced in the region, drones provide air support to ground operations, and they can replace fighter jets or special forces in counterterrorism missions, although IDF commanders do not look at it as a game changer. In fact, the IDF force structure was not substantially affected by the deployment of UAVs. For other armed forces in the region though, UAVs can compensate for shortcomings, either in resources or in personnel. In a way similar to ballistic missiles, UAVs can be seen as a low-cost alternative to the build-up of an air force. For Iran's Revolutionary Guards, drones are a perfect instrument to add to their arsenal, alongside ballistic and cruise missiles. They then serve a similar operational function in coercing the US and its Gulf partners. This is coherent with Iran's "forward defence" military doctrine.[6]

The TB2 is not considered a masterpiece of military engineering but for many potential buyers, it represents an affordable way to compensate for limited air forces

There is also a logistical advantage to UAVs: unlike a traditional air fleet, drones do not demand the same level of maintenance or the same amount of pilot training. It does not mean anyone can operate a military drone, but the cost of entry is significantly lower than for an air force built around advanced fighter jets.
This is also the reason why the small monarchies of the Arabian Peninsula are seduced by the potentialities of drones. Because of their small national population (about 313,000 for Qataris and 900,000 for Emiratis) and their unease about relying on foreigners in the military domain, Gulf rulers see unmanned systems as a perfect solution. This is also influencing Gulf thinking in homeland security: a few years ago, Dubai bragged about the introduction of its first "Robocop" patrolling the streets of the city.[7]
Drones also represent an opportunity in the defence industry sector. Apart from Israel, Iran and Turkey, other Middle Eastern countries rely on external suppliers, but there is a clear desire from the UAE, and to a lesser extent Saudi Arabia, to give priority to unmanned systems in their current push to strengthen

[3] Weaver, Matthew "What Weapons have Other Countries Supplied to Ukraine?" *The Guardian*, 17 March 2022, www.theguardian.com/world/2022/mar/17/what-weapons-have-other-countries-supplied-to-ukraine
[4] Tabatabai, Ariane "Decades in the making: The Iranian drone program." *Bulletin of the Atomic Scientists*, 12 October 2017. https://thebulletin.org/2017/10/decades-in-the-making-the-iranian-drone-program/
[5] Bowman, Bradley; Thompson, Jared and Brobst, Ryan "China's surprising drone sales in the Middle East." *Defense News*, 23 April 2021. www.defensenews.com/opinion/2021/04/23/chinas-surprising-drone-sales-in-the-middle-east/
[6] Yossef, Amr "Upgrading Iran's Military Doctrine: An Offensive "Forward Defense." Middle East Institute, 10 December 2019. www.mei.edu/publications/upgrading-irans-military-doctrine-offensive-forward-defense
[7] Reuters, "Robocop joins Dubai police to fight real life crime." 1 June 2017. www.reuters.com/article/us-emirates-robocop-idUSKBN18S4K8

their defence industrial base. Abu Dhabi is evidently keen on emulating Turkey's success story of the past decade. Turkey's experience conveys the promise for other countries in the region that investing on "niche capabilities" like UAVs is feasible in a short amount of time and that it can serve a political purpose – i.e., to rally the population behind a military system that feeds nationalistic sentiments.

As this Middle East drone race continues unabated, it slowly redefines military power across the region and portends new risks of instability. First, the growing affordability and accessibility of UAVs mean that their proliferation cannot realistically be curbed. There is no pre-existing legal or diplomatic framework able to contain this phenomenon.[8] As of today, the Missile Transfer Control Regime provides guidelines, such as the prohibition on transferring UAVs "capable of delivering a payload of at least 500 kg to a range of at least at least 300km," but no country in the Middle East is a member of this non-proliferation initiative, leaving the framework inapplicable.[9]

The absence of regulating mechanisms enables local states to deploy drones in an atmosphere of impunity that only exacerbates the race. This is even more concerning as Middle Eastern countries have not shied away from providing drones to non-state actors at the service of their proxy wars. In Libya, the militia of Marshall Khalifa Haftar, a former officer in Muammar Gaddafi's army, launched an offensive on Tripoli in 2019, using Chinese-made Wing Loong UAVs, which were likely provided by the UAE, a key supporter of Haftar. Remarkably, Turkey then responded by supporting the forces of the Government of National Accord in Tripoli with the delivery of TB2 drones. Likewise, Iran has been supporting its close non-state allies such as Hezbollah in Lebanon, Hamas in Gaza, and the Houthis in Yemen. In each case, these militant organizations claimed to operate so-called "indigenous" drones, but their design revealed obvious Iranian support.[10]

The race is also unlikely to stop because of the perceived cost in not obtaining them. This relates to the fact that defence against drones remains difficult. The most advanced systems operated by countries in the region such as Iron Dome, Patriot or THAAD batteries, were not initially designed to intercept a UAV, whose trajectory greatly differs from a ballistic missile – be it in terms of altitude or manoeuvrability. In recent years, non-state actors have demonstrated an ability to quickly change tactics thanks to the introduction of drones in their arsenals. The Houthis used kamikaze drones as a first salvo targeting Saudi Arabia's air defence systems before firing a barrage of missiles at civilian areas.[11] A "swarm" of drones, just like rockets, can harass and exhaust the defence of a country by their sheer quantity.

This does not mean that it is only counteroffensive means that work against UAVs. Israel has been investing in anti-drone defence systems for several years. Rafael developed several systems designed to add to the territorial protection provided by Iron Dome and missile defence systems like Arrow. Among them is the Drone Dome, a system that aims to intercept micro and mini-UAVs by using a high-powered laser beam. Other Israeli companies such as Skylock Systems, have also developed their own system. Unsurprisingly, the new Arab partners of Israel such as the UAE and Morocco, have shown an interest in benefitting from Israel's know-how in the domain. Rabat publicly acknowledged in 2021 that it was procuring Israeli drones as well as counter-drone capacities.

All in all, the affordability and accessibility of armed drones clearly trump the technical uncertainties and the high cost of defensive systems. In the absence of any diplomatic initiative to regulate the current trends, the drone race is likely to continue in the Middle East.

[8] Arduino, Alessandro "Increasing reliance on drones raises critical questions about war-time ethics." *The Arab Weekly*, 31 August 2019. https://thearabweekly.com/increasing-reliance-drones-raises-critical-questions-about-war-time-ethics

[9] Kerr, Paul "U.S.-Proposed Missile Technology Control Regime Changes." Congressional Research Service, 10 May 2022. https://sgp.fas.org/crs/nuke/IF11069.pdf

[10] Gaulkin, Thomas "Drones add little to rocket-filled Israel-Palestine skies, but represent growing global threat." *Bulletin of the Atomic Scientists*, 20 May 2021. https://thebulletin.org/2021/05/drones-add-little-to-rocket-filled-israel-palestine-skies-but-represent-growing-global-threat/

[11] Conflict Armament Research, *Evolution of UAVs Employed by Houthi Forces in Yemen*, February 2020. www.conflictarm.com/dispatches/evolution-of-uavs-employed-by-houthi-forces-in-yemen/