



Unmanned Aerial Systems Current Challenges and Future Opportunities for Governments Around the World Focus: Middle East and North Africa

Snapshot: State of the Defence Market for UAS

UAS have become a key part of the armed forces across the world, as they are being extensively deployed in war zones, counter-terrorism operations, and for functions such as border patrol, maritime surveillance, and search & rescue as force multipliers. Furthermore, UAS can lead the way into high threat environments by reducing risks for manned aircraft while challenging next-generation air defence systems.

This paper offers an indication, by region, of some of the uses of UAS identified over the past few years. Across all three regions there are some common challenges, with changeable dynamics over time and location:

- **Globalization** requiring national governments and regional intergovernmental agencies to efficiently track movements, secure identity and automate decision-making.
- **Porous long borders** that require advanced technology such as surveillance drones, infra-red cameras, ground and subterranean sensors, border patrol vehicles, digital fencing and more.
- **Economic growth challenges** often leading to an increase in localized or regional crime, such as the smuggling of illicit goods, drugs, and people.
- **Terrorism and espionage** which requires the careful and timely coordination between government agencies, with external sources of information to develop a common operating picture of movements within and beyond borders.



Focus: Middle East and North Africa

Several countries in the region pioneered acquiring UAS to enhance their civil and military capabilities with armed units progressively being viewed as conferring new military capabilities on the country, enabling it to deal with targets in high-threat operating environments without the same risks and political ramifications. Importantly, the growing unrest and geopolitical complexity in the region have highlighted the need for enhanced military capabilities including UAS.

ISR capabilities proved to be a decisive factor in a region characterized by porous borders and vast unmanned spaces, allowing many governments to collect valuable intelligence and regain the upper hand against both domestic rebel threats and transnational terrorist groups.

In early 2021, 13 regional states were either operating armed UAS or in the process of acquiring such capability, with four of them, namely UAE, Israel, Turkey, and Iran also exporting Unmanned Combat Aircraft Systems (UCAV) to other countries. The primary use of UAVs in the region remains focused on military purposes, specifically ISR and target acquisition. For example, Algeria and Egypt have repeatedly flown UAVs in their counter-terrorism campaigns against local brands of the self-proclaimed Islamic State in the south-east Algerian territories and the Sinai Peninsula.

Indeed, even more than ISR platforms, weaponized drones (or unmanned aerial combat vehicles – UCAVs) are capturing the imagination of many governments in the Middle East and making headlines due to their front-row role in all the region's conflicts.

United Arab Emirates

In 2019, ADASI, a UAE home grown unmanned systems developer, won the contract to supply UAS to UAE armed forces for ISR, target acquisition, naval support, and border patrol. ADASI is an end-to-end solution provider of integrated, autonomous systems and automated technologies, with a stronghold in the MENA region.

In late 2020, the United Arab Emirates (UAE) procured 18 MQ 9 Reapers valued at \$2.9 billion from the US. The armed UAVs will also be equipped with maritime radar and could be delivered in 2024. This follows the announcement that the US intended to sell 50 F-35 fighter jets to the UAE.

In early 2020, ADCOM Systems' United 40 MALE UAV was envisioned as an intelligence-gathering, reconnaissance, and communications relay platform, capable of supporting various operations for special forces. Those included for special forces, regular army, and humanitarian aid responses. The United 40 is also known by the designation of Yabhon Smart Eye 2. In 2015, ADCOM Systems announced an anti-submarine warfare variant (the Block 6) had been developed in cooperation with Finmeccanica subsidiary Whitehead Alenia Sistemi Subacquei (WASS).

In March 2021, a Memorandum of Understanding was announced between the UAE's EDGE and Israel's IAI, to develop an advanced counter-UAS (C-UAS) solution tailored to the UAE, with wider ranging benefits for the MENA region and beyond. The project will leverage their technical capabilities to jointly develop the system in response to specific customer needs. Further support will be available via IAI's partnership with Belgium Advanced Technology Systems, Belgium, which has a local technical and marketing presence in the region.

The UAE has been using unarmed Predator XP for sensitive ISR and target cueing for the superior sensor picture and its integration into the US-supplied C2 and targeting architecture which the UAE Air Force runs for its operations, allowing work beyond line of sight (BLOS).

However, as with other users in the Middle East with strong military links to the US, concerns about information security preclude American permission for integrating Chinese UAVs into Western command, control, communications, and computers architectures, which limits their usefulness beyond self-contained ISR strike missions.

The UAE is particularly wary of the reputational costs involved in using armed drones and do not want to be viewed as misusing them or causing civilian casualties.

Saudi Arabia

The national development programme, Vision 2030, is considered a driver to create a domestic defence industry, as part of a broader economic reform.¹ The Kingdom already operates the largest and most modern air force in the Arab world, with hundreds of F-15S/SA Eagles and Eurofighter Typhoons.

In April 2020, the Kingdom of Saudi Arabia granted a license to local company, Infra Defense Technologies, to build 6 drones in 2021, and 40 within a span of five years. Intra President Salman bin Nasser Al-Shathri said 60 percent of the project's operations will be handled by Saudi enterprises. Local media reported that 60 percent of its output will be destined for export, potentially to Brazil and Kuwait.

Working in partnership with US based robotics company, UAVOS, King Abdulaziz City for Science and Technology (KACST) is developing the MALE variant of the Saker, the Saker-1C, which is intended for communications relay, search and rescue, and long-endurance surveillance operations.

As noted in *Drone Wars: The Next Generation*, the Kingdom had announced "ambitious plans to manufacture its own armed drones, obtaining a licence from China's Chengdu Aircraft Industry Group (CAIG) to develop up to 300 Wing Loong, and potentially CASC's new heavyweight CH-5 armed UAVs.²

Egypt

In April 2019, Egypt took delivery of Chinese-built Chengdu Wing Loong unmanned air vehicles for military service, particularly to allow the detection of improvised explosive devices (IEDs) and roadside mines, and to detect and track moving vehicles.

Wing Loongs have been used by Egypt to search for smuggling tunnels used by IS between Gaza and Sinai. In March 2017, the Egyptian Air Force used them to launch several airstrikes against militants in north Sinai, in the cities of El Arish, Rafah, and Sheikh Zuweid.

Iran

In May 2021, the Iranian Islamic Revolution Guard Corps (IRGC) unveiled a wide-body UAV named 'Gaza'. It can be employed for combat, surveillance, and reconnaissance, as well as search and rescue operations after natural disasters and accidents. An unclassified 2019 report of the US Intelligence Defence Agency that defines UAVs as "Iran's most rapidly advancing air capability".

1. <https://drones.rusi.org/countries/saudi-arabia/>

2. Joanna Frew, 'Drone Wars: The Next Generation', *Drone Wars UK*, May 2018, pp. 19–20; Stockholm International Peace Research Institute (SIPRI), 'SIPRI Arms Transfers Database'.

Iraq

In August 2021, Iraq's Defence Minister, Juma Anad Saadoun said on Iraqi television that the country had 'reached a consensus' with Turkey for the purchase of Bayraktar TB2 UAVs.

Israel

In June 2021, IAI announced the signing of a \$200 million contract to provide UAV services to a country in Asia, making this the fourth major transaction IAI announced this year. Israel does not sell its advanced UAV to any states in the Middle East and North Africa, and refrains from disclosing the identity of UAV customers from other regions as well.

Morocco

In May 2021, it was reported that Morocco's Royal Armed Forces (Far-Maroc) is acquiring electro-optical systems from Canada for use on 13 Turkish Bayraker TB2 combat UAVs it plans to buy.

Pakistan

In August 2021, it was announced that Turkish Aerospace Industries (TAI) had signed a contract with Pakistan's National Engineering and Science Commission (NESCOM) to produce components for TAI's medium-altitude, long-endurance (MALE) combat drone, Anka.

TAI opened its first office in Pakistan in December 2019 at the country's National Science & Technology Park. TAI and NESCOM will be jointly responsible for employment, resource, and technology transfer within the scope of the agreement that was inked to expand the markets for the Turkish drones.

Challenges Defence Ministries are Facing regarding UAS

There is no doubt that the political aspirations of several nations in the region have been expressed clearly, through the different war zones. For those with the ability to arm themselves, the development and use of military UAVs has stood out as a successful strategy.

From partnerships with foreign powers with regional agendas, to local ambition, the region is now considered a healthy market for defence companies such as Turkey's Baykar Makina, China's Chengdu Aircraft Industry Group, or the Emirati Adcom Systems.

Deploying UAS assets with advanced capabilities such as BLOS remains the preserve of a limited number of countries with SatComms, thought to be Egypt, Israel, Iran, Morocco, Qatar, and the UAE.

Funding

Challenging economic situations in many countries come into stark contrast with well-funded nations. Defence budgets have in recent years been skewed towards modernizing and equipping militaries particularly to combat all forms of terrorism or foreign attacks. Many nations in the region have dedicated huge financial resources to develop and or procure UAS. One of the misconceptions, however, is that satellite communications, an integral aspect of the effective use of UAS, are expensive with little return to the nation or economy as a whole. With the advancement in satellite technology and service offerings, satcom have become much more portable, affordable and efficient and constitute an essential part of any successful military operation.

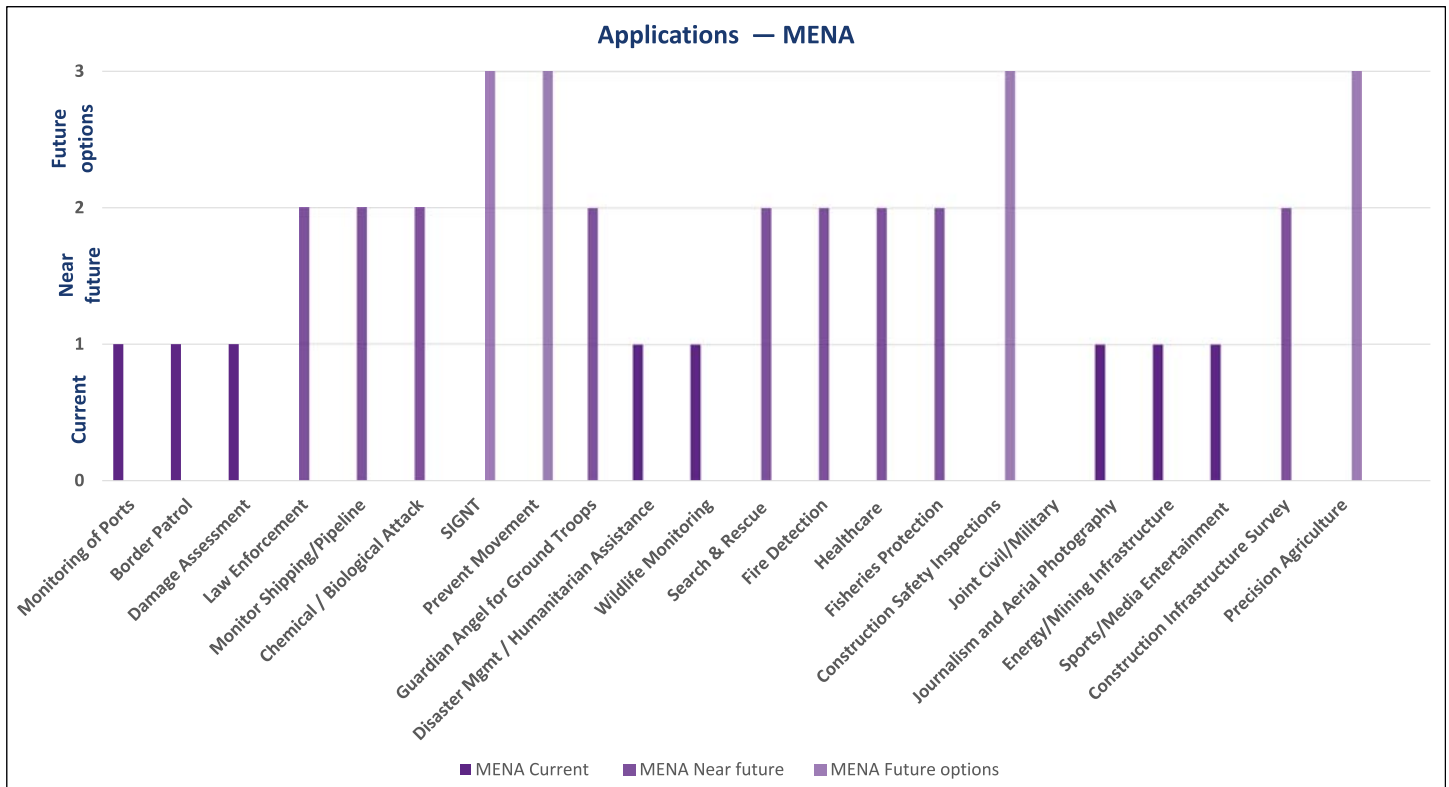


Fig 1: Applications – Middle East and North Africa



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