

# Drones:

**An essential technology component  
in Africa's security**





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Since a 2015 news report that the Nigerian Air Force was deploying five China Aerospace Science and Technology Corporation (CASC) CH-3 Rainbow Unmanned Combat Aerial Vehicles in combat operations against the violent Islamic insurgents namely Boko Haram, there has been a noticeable increase in the use of drones all over Africa.

African militaries are now acquiring armed drones also called unmanned aerial vehicles (UAVs) in large numbers, especially from countries like China, Israel and Iran. These exporting countries are rapidly becoming the country of choice for affordable drones bereft of US technologies.

The United States is known for its strict UAV export control regime which intends to make it difficult for questionable individuals or nations from getting such sensitive technology. Until recently, the US does not usually sell its drones to African countries due to perceived negative human rights records.

To address this issue, African countries are now purchasing drones from other providers or to manufacture by themselves.

Over the years, China which understands the underlying geopolitical dynamics in selling sophisticated sensitive defence articles in the global market has promptly

seized the opportunity of U.S. lapses and has supplied armed UAVs to several African countries.

Moreover, China is not burdened by the rules associated with being a signatory of the Missile Technology Control Regime (MTCR) which aim is to prevent proliferation of missiles which can carry mass destruction weapons.

While very effective, Chinese drone technologies are actually cheaper than its U.S. counterparts and also without consideration of human rights violations.

Thus, China has successfully exported its range of affordable drones to almost all regions in Africa.

Militaries in Africa are increasingly relying on combat drones to carry out precision strikes, surveillance, reconnaissance and intelligence against a wide range of threats.

Most importantly, terrorism is the major source of security concern for the continent, which is highlighting the importance of effective counter-terror operations.

With the urgent need to monitor lengthy boundaries and areas with natural resources in a less intensive, and cost-effective way, African nations are now big customers for drones.

The Nigerian Military which is known for its general apathetic attitude towards adopting new and emerging technologies, in a surprising move purchased five CASC CH-3 Rainbow UCAV, which it proceeded to use with a devastating effect against Boko Haram terrorists.

The Chinese CASC CH-3 uniquely lacks a centrally located vertical tail, but has large winglets and canards similar to the



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Jetcruzer 450 and the RutanVariEze. The main landing wheels of the tricycle landing gear has fairing to reduce drag. The subsequent crash of one of the CH-3 in Borno, in North-eastern Nigeria highlighted technical difficulties in operating unmanned systems.

Paired with the formidable YC-200 and FT-5 guided bombs and AR-1 air-to-ground missile, the AR-1 missile can be used against a wide range of threats provides precision strike at a very affordable cost.

The continuous use of the CASC CH-3 in Nigeria draws attention to the importance



of unmanned systems in counterterrorism and counter insurgency operations.

The country has further upped the notch by placing orders for the UAE-made Yahbon Flash-20, Wing Long II and CH-4 unmanned systems and several others to further strengthen its UAV operations especially in the area of persistent surveillance and threat elimination.

With Nigeria going ahead to acquire several other drone types, the country could be considered as the largest user of a diverse

range of drones in the world; with a massive fleet which includes both indigenous and foreign supplied types like the Tsaigumi drone, Amebo drone, Gulma drone, CH-3A UCAV, Star Tiltrotor, ADS Aerostar UAV, VTOL fixed wing UAV, Mugin commercial UAV, RQ-11 Raven Unmanned Aerial Vehicle, Yahbon Flash-20 UAV, Textron Aerosonde AAI VTOL UAV, Ukrainian PD-1 UAV, CH-4 UCAV, Wing Loong II, and Tekever AR3 UAV.

In addition, the Nigerian Army also launched a UAV command for exploiting the essential capabilities offered by unmanned aircrafts. Looking elsewhere, Egypt, having one of the largest aircraft fleet in Africa is steadily increasing its unmanned aircraft capability. Accordingly, on October 2018, the country showcased its armed Chinese state-owned Chengdu Aircraft Industry Group (CAIG) Wing Loong medium altitude and long endurance (MALE) UCAV.

Moreover, the country recently announced its intentions to order more of the same type.

In April 2019, the Egyptian Ministry of Defence confirmed that it has taken the Chinese-built Chengdu Wing Loong unmanned air vehicle (UAV) into air force service. Egypt purchased 32 new Wing Loong 1D UAVs In November 2018, Yahbon United 40 MALE UAV from the UAE, CASC Rainbow CH-4B, CASC Wing Loong MALE UAV I / II, RQ-20 Puma hand launched UAV system, 324 Scarab from the United States, and ASN-209 surveillance drone built locally under license.

Egypt's Wing Loong drones have already been used in combat against 'Wilayet Sinai', the local arm of so-called Islamic State

(IS) in the in north Sinai, in the cities of El Arish, Rafah, and Sheikh Zuweid. Also, in March 2017, Wing Loongs were used by the Egyptian Air Force to search for smuggling tunnels used by IS between Gaza and Sinai.

Even Middle Eastern countries are not left out on the export spree, in recent times, Israel, Iran and Turkey have also become major exporters of UAVs to Africa. Most recently, on September 13, 2018 the Zambian Air Force was seen operating an Israeli-made Hermes 450 unarmed UAV during the country's independence day parade.

The Hermes 450 UAV had a satellite communications antenna that enables it to be controlled beyond the line of sight. Historically, Zambia which has a limited military aviation capability has since turned towards China to bolster its aerial capacity notwithstanding its limited financial resources and technical dexterity. It is believed that the Zambian Defence Force bought CASC CH-4 Rainbow for reconnaissance and air-strike mission. Although, there have not been any concrete evidence.

According to reports by ADIT, Israel's UAV exports accounted for more than 60% of international UAV exports over the thirty years with 165 UAVs delivered to foreign customers.

In the wake of the Libyan Civil War which obliterated the Libyan Air Force, Libya obtained some Iranian made Ghods Mohajer drone which its forces primarily use for intelligence gathering and surveillance of

ISIS troops formation. The Ghods Mohajer UAV is used as a tool to compensate for the country's weakness in the area of conventional airpower, acting as a force multiplier in many areas. The United Arab Emirate also supplied several Wing Loong II UAVs to the Libyan National Army, while Turkey operated dozens of its now popular Bayraktar TB2 UAVs which shot to prominence after turning the direction of conflicts in Libya, Syria and Azerbaijan.

There are currently about a total of thirty-one African countries with UAV, however only four countries are manufacturing the technology. Nevertheless, the number is expected to increase both in indigenous design and foreign made drones as a result of the increase in organized crimes and terrorism coupled with the underlying UAV arms race between regional powers expected to overtake the continent in the near future.

Analysis on recent drone procurement trend in Africa clearly indicates that this type of equipment is here to stay. Africans are finding unique missions for drones even in the maritime domain known to be tricky for operating unmanned systems.

The scope of drone missions is expanding rapidly; several missions which are traditionally handled by manned platforms are now being handed over to drones; from surveillance of cities to monitoring national boundaries. Drones are now taking over these types of missions and African militaries are keen to pushing the envelope of their capabilities.

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