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# EXPERIMENTS ON THE USE OF UNMANNED AERIAL VEHICLES IN ARMED CONFLICTS

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**Abstract.** The article discusses the growing role of unmanned aerial vehicles on the battlefield of military conflicts in Syria. In future wars, the multi-stage and multi-stage application of reconnaissance, strike drones, and barrage munitions is projected, which will significantly complicate the fulfillment of air defense tasks. This, in turn, creates a risk of uncontrolled export of unmanned aerial vehicle technologies.

**Keywords:** drones, armed conflict, Syria, barrage munitions, armed conflict, drones, commercial drones.

**Annotatsiya**. Maqola Suriyadagi harbiy mojarolar jang maydonida uchuvchisiz uchish apparatlarining ahamiyati tobora ortib borayotgani haqida so‘z yuritiladi. Kelajakdagi urushlarda razvedka, zarba beruvchi UUA va Barrajli o‘q-dorilarining ko‘p bosqichli va ko‘p bosqichli qo‘llanilishi prognoz qilinmoqda, bu esa havoga qarshi mudofaa vazifalarini bajarishni ancha qiyinlashtiradi. Bu, o‘z navbatida, uchuvchisiz samolyot texnologiyalarini nazoratsiz eksport qilish xavfini tug‘diradi.

**Kalit so‘zlar:** uchuvchisiz uchish apparatlari, qurolli to‘qnashuv, Suriya, barrajli o‘q-dorilari, qurollito‘qnasuv, uchuvchisiz uchish apparatlari, tijorat dronlari.

**Аннотация.** В статье говорится о возрастающей роли беспилотных летательных аппаратов на поле боя военных конфликтов в Сирии. В будущих войнах прогнозируется многоступенчатое и многоступенчатое применение разведывательных, ударных БПЛА и барражных боеприпасов, что значительно усложнит выполнение задач ПВО. Это, в свою очередь, создает риск бесконтрольного экспорта технологий беспилотных летательных аппаратов.

**Ключевые слова:** беспилотники, вооруженный конфликт, Сирия, барражные

боеприпасы, вооруженный конфликт, беспилотные летательные аппараты, коммерческие дроны.

**Introduction.** The technologically advanced and wealthy states of the Middle East are gradually transitioning from strategic establishment to long and arduous combat operations. The longer conflicts last, the more they deplete limited resources and, therefore, the more likely the parties to the conflict are to make risky decisions. This situation forces the military leadership of Middle Eastern countries to reconsider their approaches to the use of the theater of operations (TMO) and the planning of ground, sea, and air operations.

For the last seventy years, the Middle East has remained one of the hottest spots in the world. Of course, there are regions where wars are almost continuous and where hundreds of thousands of people die – this is Central Africa. What are the problems in the Middle East related to? Indeed, recently, representatives of different peoples and different religions lived here for centuries. Few people know that at the beginning of the twentieth century, almost half of the population of Syria and at least a third of the population of Iraq professed Christianity. In a century, the political, ethnic, and religious map of the Middle East has changed beyond recognition. The turning point in the recent history of the Middle East region was the First World War.

Until then, the Middle East had been part of the Ottoman Empire for several centuries. With all the ambiguities of this state, the Ottoman sultans managed to maintain a relatively stable existence of the region. Numerous Christian and Jewish communities lived in the territory of present-day Syria, Iraq, Lebanon, and Egypt. Of course, there were interreligious conflicts, but they were not as serious as in the 20th and 21st centuries.

The civil war in Syria resulted from the imperfect political and administrative division of the Middle East. In the form in which Syria existed in the second half of the 20th century, it can no longer be. At the very least, the Syrian Kurds, who have already tasted freedom and live in a semi-independent Rajava (an independent, self-proclaimed confederative autonomy of the Kurds in northern and northeastern Syria), will never agree to the establishment of Damascus's

authority over them. As a last resort, an Iraqi scenario can be implemented in Syria, where Kurdistan is formally part of a single state but is actually independent and has its own armed formations, pursuing a foreign policy in its own interests **[1].**

Referring to the first experience of the enemy's combat use of UAVs, the Western military recalls the year in 2004 when Israeli soldiers made an unfortunate discovery: Hezbollah militants began using mini-drones for reconnaissance. Over the next 24 months, this competence evolved, and in 2006, Hezbollah attacked Israelis with drones that were already equipped with explosives. At that time, it was revealed that the idea was not developed by Hezbollah, and since 2004, the Mirsad-1 UAV, manufactured in Iran, was used. Subsequent rapid technical development soon led to the public introduction of unmanned systems, and commercial mini-drones began to use the "Islamic State" on a large scale.

Initially, the drones searched for possible targets for vehicle-borne improvised explosive devices (Suicide Vehicle Borne Improvised Explosive Device, SVBIED). More "innovative" ideas developed rapidly. Thus, "Islamic State militants" (IS) have been very successful in dropping small UAVs purchased on the market, or in dropping such explosive-filled devices on targets such as "kamikazes." From October 2016 to July 2017, Iraqi security forces periodically faced dozens of daily drone attacks.

Not every one of the explosive devices hit its target, but Western military officials claim that even accidental strikes have left the Iraqis and allied coalition forces in serious trouble. ID has manufactured drop-in drones in accordance with its own quality standard and has utilized numerous mini-drones (primarily from the Chinese company Ji) in quadcopter (Rotary) or glider (Fixed wing) configurations. Video cameras installed on UAVs also performed various functions. They served for reconnaissance, target setting, as well as for conducting propaganda activities. The emerging capabilities spread rapidly and ultimately revolutionized the field by combining all of its technology from the Middle East with real-time video broadcasts.

Drones were used to locate Syrian air defense assets in Lebanon and identify terrorist groups using surface-to-air mobile missiles against Israel. The explosive use of combat

technology using drones in the 1990s and 2000s also affects the current situation in the Middle East, as well as in other theaters of operations (TORs). Iranian drones have been built since the 1980s and were used in the Iran-Iraq War, but at that time the technology was very primitive. However, during the "global war on terrorism," Iran managed to seize downed American drones and "reconstruct" and modernize them. **[3].**

Although the Islamic Republic of Iran does not possess production capacity comparable to that of the United States, it uses factories built by American specialists during the Shah's reign. Israel is a pioneer in the development of air/missile defense systems to prevent unmanned attacks, including lasers that are much more efficient and cost-effective than the expensive Patriot surface-to-air missile system (ZRT) missiles and the Iron Dome tactical system "Iron Dome." **[2].**

Israel has also provided the US with unmanned surface ships and boats to patrol the Persian Gulf and the Gulf of Oman. At the same time, China, which is openly competing with the US and the West for global hegemony, is using its massive production capacities to create thousands of "fake" drones. Throughout the military conflict, Israeli troops took a hostile stance toward the Syrian government (and, accordingly, the Syrian Armed Forces), especially toward pro-Iranian Shia armed formations (primarily the Hezbollah organization). Israel's goal was to prevent any parties from violating its territory and airspace borders and, possibly, to prevent an increase in the influence of Islamic armed groups in Syria. It is known for certain that Israel used a small "Skylark" reconnaissance drone over Syria.

There is also speculation that Israel used various strike drones and barrage munitions to destroy targets in Syria: in particular, devices such as "Harpy," "Hermes 900," and "Eitan." Syria supported the current central government led by President Bashar al-Assad. It also helped train and arm Shiite paramilitary formations operating on the side of Tehran's forces. According to media reports, Iranian "Oghab-1," "Yasir," "Mohajer-1," "Mohajer-2," "Mohajer-4," "Mohajer-6," "Ababil-CEL," "Ababil-3," "Shahed-123," and "Shahed-129" are operating in Syria.

These UAVs could have been delivered both by units of the Iranian Islamic Revolutionary Guard Corps (IRGC) operating in Syria and to the Syrian Armed Forces and pro-Iranian Shia armed groups. Drones were widely used against the Iranian ID. The US accused Tehran of being behind the drone attacks against US troops. In 2021, it became known that the Russian Armed Forces in Syria are actively using Orion drones (developed by the Kronstadt company) to strike both intelligence and terrorist targets. Thanks to this, Russia became one of the countries possessing long-range heavy strike UAVs. In Syria, Russia first utilized "Kub-bla" and "Lancet" barrage munitions developed by the Kalashnikov concern **[3].**

He formed and led an international coalition of states to fight against ISIS and other extremist organizations. The U.S. entered the Syrian conflict in 2014 and began striking militants using strike drones in 2015, using the Incirlik airbase in Turkey. Subsequently, due to the cooling of relations between Ankara and Washington, the US Armed Forces were forced to move their UAVs from Turkey to Jordan, Iraq, Qatar, and Kuwait. During the conflict, Washington's ally was the paramilitary formations of the Syrian Kurds (so-called people's self-defense detachments), but there is no concrete evidence of any UAV transfers by the US.

During the hostilities, the U.S. deployed various UAV models, including the MQ-1 Predator, MQ-1C Grey Eagle, and MQ-9 Reaper heavy-armed drones. Like the British, the American armed forces carried out point strikes using drones to eliminate individual terrorists. To eliminate the Islamist leaders, unconventional means of destruction were used, such as AGM-114 Hellfire anti-tank guided missiles (in the R9X variant), which were equipped with long knives rather than explosives to avoid civilian casualties. "Switchblade-300" and "Switchblade-600" barrage munitions (often referred to in the media as "kamikaze drones") were widely used, which are effective in delivering point-blank strikes. Turkey initially joined the U.S.-led international coalition, but preferred to act autonomously after growing disagreements with the U.S., and in 2016, the fight against ISIS became a pretext.**[4].**

However, the real enemy of Ankara was the Kurdish armed formations. Ankara's ally was the Syrian National Army (SNA), which consists of Sunni Arabs and Turks. Turkey

possessed at least two types of heavy strike UAVs, both of which could be used in Syria in this capacity: the Bayraktar TB-2 and the Ankara-S. The Bayraktar TB-2 was used both to strike military facilities and manpower concentrations and to eliminate leaders of Kurdish paramilitary organizations. Ankara also used "Kargu" barrage guns. The conflict in Syria has also shown that non-state armed formations are capable of challenging state armed forces and gaining some advantages through the creative use of low-cost drone technologies.

A major breakthrough in the Syrian conflict was the use of commercial unmanned aerial vehicles equipped with weapons. IG became the first non-governmental organization to use commercial UAVs as weapons. This practice later began to be used by other armed Islamic structures. ISIS also became the first non-state armed formation to establish the production of unmanned aerial vehicles and their means of destruction. Islamist armed formations have gained new capabilities in the field of reconnaissance, surveillance, and targeting, while equipping UAVs with small bombs and explosives has become a dangerous surprise for the state's armies.

For example, the New Year's Eve raid on the Russian Khmeimim airbase in Latakia from December 31, 2017, to January 1, 2018, showed that non-state armed formations, using cheap and simple methods, can attempt to damage the aviation of militarily advanced forces and intercept their air defenses. The use of commercial drones has been actively used in radical Islamic propaganda.

Displaying video materials of UAV use on the Internet and social media was intended to demoralize the Syrian Armed Forces and other opponents of the Islamists. The conflict also became a battlefield for several states facing conflict with each other, exacerbating regional security concerns. Israel and Iran used drones against each other or the non-state paramilitary formations they supported, which exacerbated the existing tension. In contrast to the U.S. presence in eastern Syria, Iran provided Syrian armed forces and government-backed armed forces used against U.S. military bases.

This was also exacerbated by US airstrikes on the deployment and launch sites of

unmanned aerial vehicles of Syrian troops and pro-government forces. Russia, the United States, and possibly Turkey, have also extensively used barrage munitions in Syria. Given their effective use by ground forces and the low cost of production, a wider use of this type of weaponry in modern conflicts should be expected. During the hostilities in Syria, the participating parties were able to familiarize themselves with the various UAVs of their opponents and their technologies, as it was common for drones to crash or be shot down. There is also a high probability that friendly parties in the Syrian conflict will share samples of the discovered devices with each other **[4,5].**

**In conclusion,** one can note certain common points regarding the use of drones in Middle Eastern conflicts. Air defense systems are gradually becoming targets of attack for enemy UAVs from modern UAV defense systems. Experts note that the detection range of the "Zenit" missile and artillery system by UAVs is comparable to, and sometimes exceeds, the detection range of the "Zenit" missile and artillery system (ZRTM) by UAVs. The impact of noise from the electronic warfare equipment (EWS) installed on the UAV leads to a decrease in the detection range of the UAV from the ZRTM radar station and the possibility of accurately targeting Zenit guided missiles.

Furthermore, the task of equipping Armed Forces personnel with mobile and inexpensive radio-electronic means (e.g., "anti-drone weapons") has increased the effectiveness of using UAVs to suppress air defense, gain air superiority, and eliminate major ground forces by intercepting small, often commercial, modified UAV weapons. In future wars, the use of light reconnaissance and reconnaissance-strike UAV groups, as well as barrage munitions, is projected to be multi-stage and multi- echelon. The further development of group drone application tactics significantly complicates the operating conditions of air defense systems. Militarily advanced nations are striving to develop and manufacture barrage ammunition. They are increasingly being used in military operations. Non-state armed groups create "kamikaze drones" by processing commercial UAVs.

## REFERENCES:

1. Почему ближний восток стал горячей точкой. И.А. Полонский // Военное обозрение, 2020. - №17. С.131-137.

2. Василий, И.И. Страны Ближнего Востока осваивают беспилотные системы. Kirish rejimi: htpp://nvo.ru. Murojaat sanasi – 16.01.2025.

3. Целицкий С.М. Применение беспилотных летательных аппаратов в вооруженных конфликтах в Сирии и Нагорном Карабахе // Пути к миру и безопасности. 2023. – № 2 (65). – С. 183-192.

4. Степанов, С.В., Гумелёв В.В. Накрывающий ближний восток / С.В. Степанов, В.В. Гумелёв // Армейский сборник, 2022. – №7. – С. 47-52.

5. Ждановский, В.И. Бесконечна война ближнего востока. Соотношение сил и средств воюющих сторон / В.И. Ждановский // Армейский вестник, 2019. - №3. С. 114-121.