

The History and Evolution of Iran's National Drone Program

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Russia's invasion of Ukraine launched in early 2022 has fundamentally changed the international security architecture that had existed for many years, but it has also caused global political and economic cataclysms. Although Russian forces made significant gains thanks to heavy artillery fire, including missile strikes on cities all over Ukraine in the first weeks of combat, Ukrainian defenders quickly rebuffed attempts by consolidating its military power, exercising diplomatic connections, and launching counterattacks at Russian positions.

The failures of continuous artillery and missile strikes in the following months prompted Russia to make some changes in its military tactics. As a result, Russia was forced to seek help from its traditional allies China and Iran through unofficial channels.^[1] Although China has refrained from overtly providing military support to Russia in order not to further complicate relations with Western countries, particularly with the United States, Iran began supplying locally produced long-range attack (suicide) drones to Russia. The effective use of Iranian-made Shahed and Mohajer drones by the Russian army to conduct attacks against Ukraine's critical civilian infrastructure in the first days has revived interest in the Iranian drone industry internationally and has brought to light the real threat of Iran's long-standing national drone program to security across the Middle East region.^[2]

The primary aim of this article is to define the role of the drone program in Iran's national security interests, and briefly discuss Iran's attempts to create new hotbeds of conflict in various regions through its drone program. The first part of the article will look at the importance of the

national drone program in Iran's National Security Concept and how international and regional threats to Iran's national security shortly after the Islamic Revolution accelerated the technical evolution of the drone program. The second part of the article will focus on the security threats to the Middle East region caused by the rapid proliferation and widespread use of strike drones produced by Iran since the early 2000s.

The place of the national drone program in Iran's National Security Concept

With the end of the 1979 Islamic Revolution in Iran and the establishment of theocratic rule, the new government was subjected to severe economic sanctions imposed by major Western countries and institutions, led by the United States. Consequently, while sanctions against Iran have failed to oust the government and prevent its exercise of regional power, those sanctions have led to a stagnation in the country's military and technical sphere. As a result of these sanctions over the years, most military hardware maintained by Iran, in particular by its air force, has become partially or completely outdated.^[3]

In 1984—the early years of the Islamic Revolution—the new government laid the groundwork for its national drone program to revive the local military industry and maintain a balance of military power in the region. Logically, it was impossible to predict whether Iran, which was building very small and simple drones under embargo in those years, would be able to rapidly develop this industry over the years.^[4]

The first mass production of domestic drones in Iran goes back to the bloody Iran-Iraq War (1980-1988). In response to constant missile attacks by Iraqi troops, which received military support from leading powers such as Germany, France, the Soviet Union and China at the height of the war, Iran managed to gain an advantage over the enemy army due to large scale manufacturing of the *Ababil-1*, a low-cost attack

munition.^[5] However, although during the protracted war Iran reestablished former boundaries with the help of its drone program, the armed conflict between Iranian forces and the United States Navy in the Persian Gulf in 1988 resulted in dire consequences for the Iranian government.^[6] This defeat both further increased the importance of the national drone program for Iran and suggested a strategy for assuring military superiority over hostile countries (the United States, Israel, and the Gulf monarchies).

However, Iran's Unmanned Aerial Vehicles (UAV) program, based primarily on domestic defense production capabilities in those years, cannot be called completely flawless. Numerous sanctions imposed on the country immediately after the Islamic Revolution made it impossible to import the equipment needed to produce combat drones. As a result, the Iranian government began to prioritize the production of short-range reconnaissance drones, largely through mobilizing potential internal resources. To this end, the new Islamic government founded the Jerusalem Aircraft Industrial Company in 1985. Although in the early years this industrial company was engaged in the production of reconnaissance drones, since the mid-2000s it has also been producing strike drones called Ghods Saeghe^[7] Also, the Iranian aircraft manufacturing company, whose foundations were laid during the Pahlavi period and was built by the United States near the city of Isfahan, began to consistently produce other types of strike drones from the early years of the Iran-Iraq War to the present day.^[8]

Despite the achievements listed above, Iranian-made drones were not considered a real threat to the national security of the countries in the region between the 1980s and 2000s, although they had potential. The main reason why Iranian drones performed poorly in the initial stage was that the development of the national drone program was under the direct control of the Islamic Revolutionary Guard Corps (IRGC) and

local power structures under its command, which were considered the main stronghold of the new Iranian theocratic state.

Over time, realizing that the drone program could not be developed in the desired form under the control of the IRGC, the Iranian government was forced to change the traditional approach to the development of the drone program in the following years. As a result, in order to involve prominent local experts and scientists in the process, the government decided to make the drone program available for academic research. To that end, Iran sought continuing academic support from various industrial schools, such as Sharif University of Technology, for the relatively quick progress of the drone program. As a consequence, since 2003, domestically produced strike drones have been widely used not only by the Iranian army, but also by Iranian proxy groups involved in the fierce civil wars and the campaign against ISIS in Syria, Iraq, Lebanon and Yemen.^[9]

Iran has also made domestic drone technology available to some of its proxy forces to further extend its influence in the Middle East region and to fight other countries, which it views as part of the “*satanic alliance*” led by the U.S. and Israel. For example, according to previous reports by Israeli security agencies, in 2004-2005, the radical Shi’a organization *Hezbollah*, based in Lebanon, intruded into Israeli airspace several times with the help of the *Mirsad-1*, an Iranian reconnaissance drone.^[10] Actively arming Iranian-linked proxies and equipping them with strike drones in subsequent years have been just one key component of Tehran’s national security strategy.

Although the rapid building of the Iranian drone industry in the early years was not at first seen by regional states as a serious threat, later, during a crucial period of the Yemeni Civil War (2014-), the Houthi rebels used Qasif-1 drones

supplied by Iran against the Saudi-led Arab coalition in Yemen in 2016. The scale of the threat further became clearer with precise strikes against Saudi Arabian energy targets.^[11] The first frank public comments about allied vulnerability to Tehran's multidirectional UAV threat were made by former U.S. Central Command chief Gen. Kenneth McKenzie. In April 2021 testimony before the Senate Armed Services Committee, he noted that the small and medium-sized armed drones deployed by Iran and its proxies "present a new and complex threat to our forces and those of our partners and allies. We are operating without complete air superiority in the Gulf region."^[12]

With the increased risk of threat, unconventional methods of fighting Tehran's burgeoning drone program by states in the region, especially Iran's arch-rival Israel, have become increasingly systematic. Thus, since 2020, the number of assassinations of prominent scientists and high-ranking security officials, such as Ayoob Entezari, Mohsen Fakhrizadeh, Colonel Hassan Sayyad Khodaei and Colonel Ali Esmailzadeh working on Iran's drone and nuclear programs, has increased significantly compared to previous years.^[13] Although this series of assassinations between 2020 and 2022 has partially slowed the rapid development of Iran's nuclear and drone programs, they have not completely disrupted them.

Amid growing Western and Israeli concerns about the national drone program, the Iranian government stepped up efforts to develop the program and began supplying domestic drones to Russia in early 2022 to measure their capabilities in real-world combat conditions.^[14] As a result, in July 2022, the Western media reported that Iran was secretly exporting the Shahed-136 kamikaze drones (also known as Geran-2) to Russia.^[15] Although both Russia and Iran denied this information in the first days, a public demonstration of Iranian-made drones shot down by Ukrainian forces soon after confirmed the fact.^[16]

Several reasons explain the fact that Iran, against the background of Russia's invasion of Ukraine, provides official military assistance to Moscow and embarks on mass exports of strike drones. One of the main reasons is that Tehran uses the export of drones as an instrument of additional pressure on the anti-Iranian coalition from Western countries and is thus looking to achieve certain concessions in the nuclear talks process. But despite this destructive approach, Western countries, without taking a step back on this issue, have further increased international pressure on Iran and Russia, as well as accelerated the process of providing Ukraine with more advanced weapons to use against drone attacks.^[17]

Threats to international security by Iranian-made drones

While Iranian drones deployed by Russia in Ukraine initially posed serious threats to civilian infrastructure and military facilities, the scale of the threat has begun to shrink. However, a detailed examination of Iranian drones shot down in the skies of Ukraine showed that Iran has managed to improve the technical skills of domestic drones slightly over the past decade. For example, the British independent research organization Conflict Armament Research (CAR) found that Iran's new generation drones, compared with the *Shahed-129* and *Ababil-2* UAVs previously used in Yemen and Syria, have the ability to destroy a given target with high precision even in foggy weather.^[18] Plus, the ineffectiveness of Soviet-made air defense systems used by the Ukrainian army against *Shahed-136* drones allows them to easily destroy ground targets.^[19]

Overall, for Iran, the extensive deployment of its drones by Russia on the Ukrainian front is crucial, as real combat conditions provide Iranian manufacturers the opportunity to directly investigate the weaknesses and strengths of drones and address shortcomings. In addition, Iranian drones, which have a simple control system and are many times cheaper than their competitors in cost, are an important tool for the

Iranian government to gain additional influence by exporting this military product to potential beneficiaries such as Tajikistan, Ethiopia, Venezuela and Serbia.

Cooperation with Russia on the drone program is also important because with the new deal signed in late 2022, Iran was able to assemble its drones at Russian military factories. Thus, Iran was able (at least for now) to avoid international sanctions and embargo conditions by partially moving drone production lines directly onto foreign soil.^[20]

The ongoing war in Ukraine has not only caused security cataclysms at a global level, but also created new opportunities for political maneuvering for Iran, which pursues a pragmatic but destructive regional policy. Thus, the Iranian government, using its domestic drone production, began to threaten the Western coalition with fomenting conflicts that had been frozen for many years. For example, after exporting drones to Russia, Ethiopia and Venezuela, Iran is now in talks with the Serbian government about potential drone exports.^[21] The attack drones Iran has sold to Serbia since 2022 amid rising tensions between official Belgrade and Kosovo could again undermine the stability in the Balkan region and provoke a new armed conflict.^[22]

Conclusion

Although the foundation of Iran's national drone program was first laid to gain superiority over its rivals, in subsequent years mass production of drones became an effective means of creating an additional mechanism for the Islamic government to influence neighboring states and protect their national interests in the region.

Although countries in the anti-Iranian coalition since 2002 have been closely monitoring Tehran's drone program, there are still differing views on the exact number of Iran-sourced strike and reconnaissance drones. And the IRGC, which is

undoubtedly the mainstay of the Islamic government, has a major stake in maintaining confidentiality about to whom it distributes drones. This policy of confidentiality is intended both to set panic into Iran's enemies abroad and to have a more favorable effect on domestic audiences.

Iran's policy of *intimidation* and *coercion* proves that even if the long-term confrontation with Western countries ends in the near future, there is little chance that the Islamic government will compromise on its national drone program. Therefore, the U.S. and allied countries must tighten international sanctions and completely limit Iran's ability to illegally import drone parts.

Notes and references:

[1] Li, Jason (2023). Ukraine at One Year: Has China Supported Russia?

<https://www.stimson.org/2023/ukraine-at-one-year-has-china-supported-russia/>

[2] Army Recognition (2022). Ukrainian MoD confirms the use of Iranian-made Mohajer-6 drones in Ukraine by Russian army. armyrecognition.com/ukraine_-_russia_conflict_war_2022/ukrainian_mod_confirms_the_use_of_iranian-made_mohajer-6_drones_in_ukraine_by_russian_army.html

[3] Axe, D (2021). Iran Has One of the World's Most Outdated Air Forces. URL:

<https://nationalinterest.org/blog/reboot/iran-has-one-worlds-most-outdated-air-forces-195428>

[4] The New Arab (2022). How Iran launched and expanded its drone program. URL:

<https://www.newarab.com/news/explainer-how-iran-launched-and-expanded-its-drone-program>

[5] Timmerman, Kenneth R (1991). The Death Lobby: How the West

Armed Iraq, pp: 30-32

[6] The New York Times (1988). U.S Strikes 2 Iranian Oil Rigs and Hits 6 Warships in Battles over Minin Sea Lanes in Gulf. URL:

<https://www.nytimes.com/1988/04/19/world/us-strikes-2-iranian-oil-rigs-hits-6-warships-battles-over-mining-sea-lanes-gulf.html>

[7] Streetly, M (2013). IHS Jane's all the world's aircraft : unmanned : 2013-2014

[8] Ibid (2013)

[9] Eisenstadt, M (2020). If the Arms Ban Ends: Implications for Iran's Military Capabilities. Washington Institute for Near East Policy. URL: <https://www.washingtoninstitute.org/policy-analysis/if-arms-ban-ends-implications-irans-military-capabilities>

[10] Center for Arms Control (2004). Terrorists Develop Unmanned Aerial Vehicles. URL: <http://www.armscontrol.ru/UAV/mirsad1.htm>

[11] Knights, M (2021). Yemen's "Southern Hezbollah": Implications of Houthi Missile and Drone Improvements. URL: [washingtoninstitute.org/policy-analysis/yemens-southern-hezbollah-implications-houthi-missile-and-drone-improvements](https://www.washingtoninstitute.org/policy-analysis/yemens-southern-hezbollah-implications-houthi-missile-and-drone-improvements)

[12] Nadimi, F (2022). Iran's Game of Drones. URL: <https://www.washingtoninstitute.org/policy-analysis/irans-game-drones>

[13] Shahbazov, F (2022). How "Spy Games" Between Iran and Israel Could Enflame Regional Tensions. URL: <https://gulffif.org/how-spy-games-between-iran-and-israel-could-enflame-regional-tensions/>

[14] The Guardian (2022). Drone analysis in Ukraine suggests Iran has supplied Russia since war began. URL:

<https://www.theguardian.com/world/2022/nov/10/iranian-made-drones-supplied-to-russia-after-february-invasion-says-ukraine>

[15] CNN (2022). White House says Iran is preparing to supply Russia with weapons-capable drones. URL: <https://edition.cnn.com/2022/07/11/politics/iran-russia-weapons-capable-drones/index.html>

[16] Times of Israel (2022). Iranian drones in Russian hands show there's already one victor in Ukraine war: Iran. URL: timesofisrael.com/iranian-drones-in-russian-hands-show-theres-already-one-victor-in-ukraine-war-iran/

[17] Mcleary, P (2023). The little-known weapon knocking down Iranian drones over Kyiv. URL: <https://www.politico.com/news/2023/01/04/weapon-iranian-drones-ukraine-00076442>

[18] CAR (2022). Dissecting Iranian drones employed by Russia in Ukraine. URL: <https://storymaps.arcgis.com/stories/7a394153c87947d8a602c3927609f572>

[19] Ibid (2022).

[20] Jerusalem Post (2022). Iran, Russia sign deal to begin Iranian drone production on Russian soil. URL: <https://www.jpost.com/international/article-722841>

[21] Arab Weekly (2021). Ethiopia suspected of using Iranian drones against Tigray rebels. URL: <https://thearabweekly.com/ethiopia-suspected-using-iranian-drones-against-tigray-rebels>

[22] Shahbazov, F (2023). Iranian Drones Could Tear the Balkans Apart. URL: <https://gulfif.org/iranian-drones-could-tear-the-balkans-apart/>