

Rebuilding the Syrian Military: The Threat to Israel

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Over the past year, the Syrian military, which was severely weakened due to the civil war, has undergone accelerated reconstruction processes. This coincides with the civilian reconstruction in Syria, and necessarily proceeds at its expense. Although the Syrian military faces many challenges and is far from posing an immediate threat to Israel, these reconstruction efforts demand attention; some have already created potential strategic threats to Israel: on the conventional side – missiles, UAVs, and air defense systems; and on the nonconventional side – chemical weapons offensive capabilities and, potentially, the drive to develop nuclear capabilities. This article proposes recommendations for Israel in light of these threats, led by the need to define red lines regarding Syria’s military reconstruction; incorporate campaign between war measures in response to the breach of any red line; and leverage connections with regional partners to contain the potential threat, based on shared, relevant interests.

Before the outbreak of the Syrian civil war, the Syrian military, which for many years revolved around the defeat of the Israel Defense Forces on the battlefield as one of its key goals, posed a significant threat to Israel’s security. It was strong and well-organized, with 300,000 troops and an arsenal of conventional weapons, led by surface-to-surface missiles (SSMs), surface-to-air missiles (SAMs), anti-tank guided missiles (ATGMs), unmanned aerial vehicles (UAVs), advanced anti-ship missiles (ASMs), and air defense systems. In addition, Syria’s arsenal included a nonconventional element: chemical weapons. Syria even tried its hand at developing nuclear capability, with a nuclear reactor constructed in Deir ez-Zor that was destroyed in 2007. Over the years, the Syrian military has become stronger by purchasing weapons and ammunition from various countries and by domestic production. According to estimates, before the civil war, the Scientific Studies and Research Center (SSRC), better known by its French acronym CERS (Centre D’Etudes et de Recherches Scientifiques) – which is under the auspices of the Syrian Ministry of Defense and is responsible for manufacture and development of weapons for the military – was one of the most advanced research

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and development centers in the Middle East. Military collaboration with Iran, Russia, and North Korea intensified significantly during the first decade of the 21st century, turning Syria into one of the key knowledge bases for the production of weapons and precision missiles. In 2006, Iran and Syria signed a [military cooperation agreement](#) to strengthen long-term military cooperation against “common threats” (the United States and Israel). In the framework of this agreement, in 2007 Iran paid approximately \$1 billion for the development of surface-to-surface missiles on Syrian soil.

During the course of the civil war, the Syrian regime amended its goals and priorities, and both the Defense Ministry and the military focused on domestic fighting. Thus, instead of acquisition of advanced weapons and training exercises focusing on a future campaign against Israel, the military needed light firearms – that is, simple rifles and mortar shells – and focused primarily on combating Syrian rebel groups and the Islamic State. At the same time, the military weakened due to a shortage of manpower, following the high desertion rate and many fatalities, as well as a decline in the availability of resources and the damage to advanced weapon systems.

As the civil war began to ebb, and particularly in 2015-2018, the Syrian military [underwent many structural changes](#), with the cooperation of Russia and Iran. Since 2018, the Syrian military renewed its fortification and the annual training to prepare for war against Israel, while at the same time trying to increase its independence. The regime in Damascus invested major sums in [rebuilding the Syrian military](#), and there are force buildup and reorganization measures, including with new personnel appointments. This comes against the background of recent years of positive developments to the Bashar al-Assad regime. President Assad has consolidated his authority over the country and currently controls around 65 percent of its territory. He has also experienced something of a diplomatic renaissance, in the form of [renewed diplomatic relations](#) with many Arab countries that severed ties during the civil war. The trend peaked with Syria's readmission to the Arab League, with several of its members aiming to help rebuild the country. The pan-Arab aid for Syria will, it seems, be translated in the foreseeable future into efforts to rebuild Syrian military power – and all this while Western nations, headed by the United States, continue to boycott and sanction the Assad regime.

Over the past decade the prevalent opinion in Israel has contended that Syria is a member of the Iran-led radical axis, and the main focus of Israeli attention has been Iranian entrenchment on Syrian soil, the Shiite militias that operate freely in Syria, and Damascus' role in arming Hezbollah. Against this backdrop, there is a

tendency to overlook the threat posed by a stronger Syrian military. The [firing of an anti-aircraft missile](#) from Syria into Israel in early July 2023, in response to an alleged Israeli airstrike on Syria, was a reminder of the current and potential threat.

The Syrian Military's Fortification Efforts

Missile Technology, UAVs, and Air Defense

After the First Lebanon War in 1982 (Peace for the Galilee), and the destruction of Syria's surface-to-air missile system by the Israeli Air Force in [Operation Mole Cricket 19](#), Syria decided to establish a significant array of highly accurate ballistic missiles, capable of striking a target to within a 10-meter radius. At first, this array was based on Russian Scud-C missiles and North Korean NoDong missiles, with activity focused in Project 99 at the Scientific Studies and Research Center, CERS. Under the auspices of CERS, [Sector 4 was responsible for the Syrian missile project](#). Within Sector 4, there were several branches, including: Project 99, the program responsible for the production and development of the Scud family of missiles, in cooperation with North Korea – a project that, [according to reports](#), is managed from underground facilities; Project 702, which, it is speculated, is responsible for manufacturing the solid rocket boosters for Syria's missiles, including the M600; Branch 340 and Institute 1000, which specialize in electronics, research and development, and design of navigation and guidance systems for all of the munitions produced by CERS; and Institute 4000 and Branch 650, which are responsible for developing drone technologies. Already in 2014, at the height of the Syrian civil war, there were [reports](#) that under CERS, Damascus resumed the manufacture of long and medium range missiles and rockets at the same rate as before the war. In 2016, the head of Israeli Military Intelligence [reported](#) that Syria had resumed manufacture of the M600 missiles, which has a range of 300 kilometers, making them a version of the Iran Fateh-110 missile that was upgraded by CERS. In order to damage these missile capabilities, as well as the cooperation between CERS and Iran, Dr. Aziz Asbar, the head of Sector 4, [was killed](#) in August 2018 in an operation ascribed to Israel. This is in addition to Israel's repeated airstrikes against CERS assets over the years.

CERS also provides arms and ammunition to Hezbollah. In late 2022, it [was reported](#) that in an effort to arm its proxies, Iran has had direct commercial ties with officials within CERS. Over the past decade, CERS is estimated to have made a quantum leap in its capabilities, especially in the fields of precision munitions and the manufacture of UAVs and cruise missiles, capable of reaching ranges of

up to 2,000 kilometers. Iran helps CERS with arms and ammunition transports, funding, and consulting. In addition, in response to the frequent airstrikes in Syria, CERS constructed subterranean infrastructures to safeguard its production capabilities.

The quantities of arms and ammunition in Syria's possession is unknown, but it is safe to assume that it has several hundred items, with an emphasis on rockets. The most significant of these are the Scud missiles, the Russian-made Yakhont anti-ship cruise missiles, and two types of Syrian-made rockets – the M302 and the M600, also known as the Tishreen missile. Testimony to the Syrian military's capabilities was evident already in 2013, when [Damascus considered](#) using M600 missiles in response to airstrikes on the country, and in July 2018, two SS21 missiles were even fired at Israel, which landed in Syrian territory.

In addition to the ability to manufacture their own UAVs, in recent years it has been reported that Syria has procured advanced Iranian and Russian drones. During the course of the civil war, the Syrian military [improved its capabilities](#) to use UAVs in combat, with the emphasis on surveillance drones for precision strikes. In fact, it was [reported](#) that Syria used no fewer than six different models of advanced Iranian UAVs for reconnaissance purposes, including the Ababil-3. These UAVs can easily be used as offensive weapons. In addition, during the course of the war, Russia helped Syria [convert their planes into UAVs](#) capable of carrying chemical weapons. In recent years, there was a marked uptick in Syria's willingness to use these weapons against Israel. In addition to a number of incidents in which [Syrian UAVs entered Israeli airspace](#) during the civil war – incidents that it is impossible to determine whether they were intentional or not – an [Iranian-made Syrian drone was launched into Israeli territory](#) in April 2023, apparently in response to alleged Israeli air strikes in Syria. Although there were suspicions that Iran was behind the launch, there is increasing suspicion that the Syrian regime allowed it to take place as an act of retribution – which could indicate that Damascus would be willing to allow, or even initiate, similar revenge attacks in the future.

Since 2018, the potential transfer of Russian S-300 anti-aircraft missiles to the Syrian military has been seen as the central threat to Israel's freedom of operation in Syrian airspace. Currently, Syria's air defense systems include primarily antiquated Russia equipment that does not impinge on Israeli operations at all. The [removal of one such system](#) from Syria that had been in Russian hands for the benefit of the war in Ukraine in 2022 does not obviate the possibility that Syria

will one day have an identical or similar system. It does, however, postpone that day. Given Russia's decision to remove the S-300 system from Syria, Damascus' cooperation with Iran over the procurement of air defense systems has intensified greatly over the past year. Iran has an [array of advanced anti-tank missiles](#) that could greatly enhance Syria's military force buildup. In May 2023, [Iran announced](#) that it would supply Syria with the advanced Khordad 15 surface-to-air missile system, and that it intends to send other advanced systems to Damascus.

Offensive Capabilities using Chemical Weapons

In the 1980s, Syria began to [develop chemical weapons](#) in response to the inability of its military to deal symmetrically with Israeli artillery and airpower. With the help of North Korea and Iran, Syria developed chemical weapons as a strategic weapon for deterrence purposes, particularly vis-à-vis the Israeli threat. When the civil war broke out, the regime used this weapon against rebel groups. Notwithstanding the threat by then-US President Barack Obama to attack Syria if the regime used chemical weapons again, in August 2013 [nerve gas was used against a civilian population](#) in the Ghouta district of Damascus. Some 1,400 people, including many children, are estimated to have been killed in that attack.

In light of the threats of attack by the United States, Russia and the US [signed an agreement](#) in September 2013, whereby Syria would dismantle its entire arsenal of chemical weapons and close its production plants. The Assad regime was given seven days to declare all the facilities used to store or manufacture chemical weapons and related equipment. The [CERS 3000 Institute](#), the biological and chemical research body headed by Dr. Zuhair Fadhlun, was responsible for the production of Syria's chemical weapons throughout the civil war, and thus was the focus of most of the disarmament efforts. The weapons produced by the Institute were designed to be assembled at a later stage on platforms such as surface-to-surface missiles, artillery, rockets, and aerial munitions, some of which were also manufactured by CERS, especially in Sector 4. In addition, CERS was also responsible [for Branch 450](#), under the command of Ghassan Abbas – a secret unit responsible for the storage, transportation, and assembly of chemical weapons on various launch platforms. Syria joined the Organization for the Prohibition of Chemical Weapons (OPCW), and, by mid-2014, the superpowers announced the completion of the disarmament process, in which [1,300 tons of chemical weapons](#) were destroyed. However, before the disarmament process, [Branch 450 reportedly dispersed](#) Syria's chemical weapons stockpiles among 20-50 different locations across the country. In addition, the OPCW declared several times that Damascus had not divulged the location of all the chemical weapon stockpiles in its possession and that it still had unknown quantities stored in secret locations.

In the following years, during the internal fighting, the Assad regime used chemical weapons a number of times. Primarily it used chlorine gas – which was not one of the weapons that Syria needed to destroy according to the agreement, although the chemical weapons convention that Syria joined as part of the agreement does ban its use as a weapon. Even so, there were testimonies regarding the use of sarin gas as well. In April 2017, [the regime used sarin](#) against civilians in an attack on Khan Sheikhoun, leading to dozens of fatalities and hundreds of injuries. In response, the United States, under President Donald Trump, launched an attack on Syria – the first time since the civil war erupted. A year later, another attack by the regime led to a response by the US-British-French coalition. As part of this response, the CERS Barzah facility – where, according to [prior reports](#), Syria's chemical weapons are assembled on artillery and surface-to-surface missiles – was damaged. After the attack, the US Defense Department announced that Syria's chemical weapons program had been severely damaged and “set back for years,” but also stressed that the infrastructure for producing chemical weapons remained.

Indeed, in 2018 and 2020 there were [reports](#) that CERS made efforts to import banned materials, which could be used to manufacture sarin, from companies in Germany, Belgium, and possibly elsewhere – and that it had been doing so since 2014, the same year that the dismantlement of its chemical arsenal was completed. In 2020 and 2021, [according to foreign reports](#), Israel attacked facilities it identified as used to develop and manufacture chemical weapons, and that other suspicious sites had been identified. The 3000 Institute within CERS, which changed its name to the 6000 Institute in an attempt to conceal its purpose, is still operational. It is widely believed that Branch 450 also still exists in a new format. Moreover, CERS owns many straw companies, which it uses to import banned substances or dual-use substances to manufacture sarin and other toxic chemical agents.

Thus not only does Syria still possess chemical weapons, but its chemical weapons program is still extant, perhaps in order to deter Israel and other external enemies. Likewise in recent months, the United Nations and the OPCW have [reiterated](#) several times their assessment that Syria has yet to divulge the location of all its chemical weapons sites and called on the regime to cooperate with the organization's investigators. During the civil war, the European Union, the United States, and other countries imposed sanctions on companies, organizations, and individuals with ties to the Syrian chemical weapons program (including [many CERS employees](#) and members of the Assad regime), which remain in force to this day. Similarly, in May 2023, US President Joe Biden [called on other countries](#) to condemn Syria's use of sarin and chlorine gas. While it is unclear whether the

regime currently has the capacity to produce chemical weapons on an industrial scale, it seems that it does have a stockpile of chemical weapons that were not destroyed, as well as the expertise, intention, and potential to resume production. It also has the requisite launch platforms, such as Scud missiles, SS21 missiles, various types of rockets, and even fighter jets, primarily the MiG-21.

Nuclear Weapons in the Syrian Military

Since the late 1970s, Syria has been involved in intensive and covert activity, under the auspices of the Atomic Energy Commission of Syria (AECS) and with the cooperation of North Korean scientists. Since 1994, AECS has been headed by Dr. Ibrahim Othman, who is personally involved in many of the organization's research projects. The goal of the nuclear program was to establish a plutonium reactor, to be used to produce fissile material, which would potentially enable Syria to manufacture a plutonium-based nuclear weapon. This activity, which was exposed by chance and validated through the combined efforts of Israeli Military Intelligence, the Mossad, and investigators from the Prime Minister's Office in Israel, led to the project's elimination in a 2007 airstrike on the reactor in Deir ez-Zor. Already in 2007, AECS researchers were found to be looking into the use of [laser technology](#) for the enrichment of natural uranium for the production of fissile material (namely, enriched uranium), but it is not known whether there were any subsequent attempts by Syria to develop nuclear capabilities by conducting enrichment experiments – either using lasers or centrifuges – or the production of plutonium.

[Reports](#) published in 2013 indicated that Syria stockpiled up to 50 tons of natural uranium, which it intended to use as the raw material for the production of fuel rods for a nuclear reactor and for the production of plutonium. This is [a large enough quantity of uranium](#) to produce between three and five bombs. Plutonium, which is a fissile material, is a byproduct of the irradiated uranium rods and is used as the core of a nuclear weapon. In addition, it is possible in complex processes to convert the natural uranium into enriched uranium, which is also a fissile material and can be used to produce a nuclear warhead. This activity is the foundation for the construction of a highly significant nuclear arsenal, based on enriched uranium, or the foundation for plutonium-based nuclear weapons. The location of this material is not known for certain.

In addition, AECS scientists have been involved in plasma research, with one eye on the possibility of producing neutrons. (The neutron is one of the components of the atomic nucleus, along with protons. A large output of neutrons is needed to initiate and accelerate nuclear processes.) Plasma science is one of the key tools

in nuclear energy research and is often a sign that a country seeks to achieve controlled nuclear fission. Researchers in this field aim to conduct experiments to investigate physical processes at high pressures and temperatures, in order to obtain the experimental values and critical parameters needed to calculate the effectiveness of nuclear weapons and, maybe in the future, thermonuclear weapons. Another goal is to find an efficient source of neutron production in order to increase the efficiency of the nuclear process – producing a nuclear process while maximizing the utilization of fissile material with minimal loss.

All this activity indicates that the Syrian regime has nuclear aspirations – the desire to manufacture “off-the-shelf” and “ready-to-use” products. It seems that research into the subject is highly advanced, thanks to the expertise of the researchers, the most prominent of whom are [Mohammed Akel](#) and Mohammed Ismael. Research is in cooperation with scientists from leading international institutes.

Apart from reports regarding the activities of AECS researchers, there have been no reliable reports in recent years about the status of the Syrian nuclear project, or if it even still exists. The most recent evidence regarding the Assad regime’s intention to obtain a nuclear weapon surfaced in 2018, when Syrian opposition figures claimed that Damascus was planning to build a reactor or an enrichment facility with [Iranian support](#). Both the expertise that Syria has acquired over the years and the amount of natural uranium that it still has in its possession are worrisome in terms of the potential revival of the country’s nuclear program. These reports are also worrying because of the close relationship between the Syrian and Iranian regimes, and the possibility of close collaboration between them on the nuclear issue, including transferring natural uranium as a gesture of gratitude for Tehran’s help in suppressing the anti-Assad rebels.

Challenges in Rebuilding the Military

The main challenge in Syria’s military reconstruction – as well as in reconstruction of the country as a whole – is the [dire economic situation](#). This year, the Syrian economy [reached its lowest point](#) since the outbreak of the civil war, with rampant inflation, a foreign currency crisis, and a severe fuel shortage. The crisis has continued since 2019, in part due to a similar crisis in Lebanon. The COVID-19 pandemic, international sanctions, and the war in Ukraine also harmed the Syrian economy, exacerbated the fuel crisis, and diverted Russian resources from Syria to Ukraine. At the same time, the slowdown in oil shipments from Iran to Syria significantly harmed the regime’s economy.

In addition to the economic crisis, the Syrian military is faced with a [shortage of human resources](#). The existing forces, some of whom are former rebels who were

commandeered by the military, are questionable in terms of loyalty, operational training, and combat effectiveness. However, it is clear that the regime, with the cooperation of Russia and Iran, has taken [several measures](#) to restore the military's operational capabilities, led by the recruitment and training of new soldiers, appointment of new commanders, and improved routine training. It is widely believed that in recent years, the Syrian military has resumed the training program designed to prepare soldiers for war with Israel.

Significance and Recommendations for Israel

The Syrian military is still a long way from posing an immediate strategic threat to Israel. Many challenges remain before it recovers its full strength, led by insufficient funding and manpower to allow it to build up its forces. But Syria's capability to produce arms and ammunition and the efforts underway to rebuild the military, partly through air defense systems, as well as the regime's chemical weapons capabilities and the possibility that it could resume its nuclear program, signal that this is already an emerging threat to the State of Israel. Therefore, Israel must recognize this threat and prepare accordingly.

First, the security establishment, in conjunction with Israel's political leadership, must define the country's red lines – some of them for internal reference within the security establishment and some for external purposes – with regard to Syria's rearmament. It must, for example, define the quantities and types of arms and ammunition that Israel cannot accept. Setting well-defined red lines would help the security establishment formulate a clear plan of action for preventing Syria from becoming a strategic threat. It would also make the picture clearer for the Assad regime when Israel carries out operations against the Syrian regime and military – and even in cases when there was no direct cooperation with members of the Shiite axis. At the same time, Israel must declare publicly that procurement of nonconventional weapons and/or precision strategic munitions and their transfer to Hezbollah and Iran are red lines, and must relay this message through diplomatic channels, publicly, and through direct and indirect messages to the Syrian regime.

In particular, the security establishment's plan of action could include a plan to strike CERS, which acts as a hub for the rearmament program. Israel could do so in a number of ways other not limited to airstrikes: analyzing and monitoring the supply chains, and then attacking them; calling on the United States to impose sanctions against individuals involved in the military rearmament; and diplomatic and public relations activities. These could all be incorporated in the campaign between wars, which should include clear goals and objectives related to Syria,

alongside objectives that focus on its partners in the Shiite axis. These activities are only imperative if the red lines are crossed – that is, if Syria continues to engage in activity to obtain the capability to produce nonconventional weapons and if it continues to stockpile strategic arms and ammunition, as well as if it continues its collaboration with Iran and Hezbollah. In order to create strategic clarity between Israel and Syria, Israel should allow Damascus to rebuild its military, as long as this does not abet Iran’s military strength and does not cross any of the red lines defined by Israel.

At the same time, Israel can use its ties with the Arab world and the return of Syria to the Arab League to promote Syria’s civilian reconstruction, at the expense of its military recovery. It seems that Assad’s return to the Arab world will lead to more Arab countries investing in Syria and helping to rebuild the regime. Israel can help in ensuring that the money reaches a variety of civilian causes by collecting intelligence information about the regime’s military buildup apparatus and plans, as well as by tracking the money that it receives. To this end, Israel must strengthen intelligence and operational cooperation with the countries with which it has longstanding peace agreements and with the countries that have normalized relations with it in recent years. Together, they can formulate a response to the common challenges posed by Syria.