

JINSA's Gemunder Center for Defense and Strategy

Iran's Projectile Threat to U.S. Interests and Partners

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For the second time since February, President Biden has ordered airstrikes on Iranian-backed militias after they fired munitions at American servicemembers in Iraq. This action will be insufficient to deter further Iranian aggression throughout the region. Instead, Tehran will perceive the recently announced withdrawal of U.S. air defense assets from the region as a victory, continuing, if not further increasing its attacks, to achieve its goal of driving the United States out of the Middle East.

Iranian-fired, -designed, -produced, and/or -supplied projectiles are the greatest current threat to not just to U.S. forces in Iraq but the security of the Middle East more broadly. Comprehensive data assembled by JINSA shows that projectile attacks by Iran and its proxies have roughly doubled every year since 2018 and are on pace to set a new record again in 2021. They shortly subsided following the January 2020 U.S. strike that killed Iranian Major General Qassem Soleimani once Iran had launched its initial retaliation. Moreover, these attacks are increasingly using drones and sophisticated techniques to avoid air defense systems.

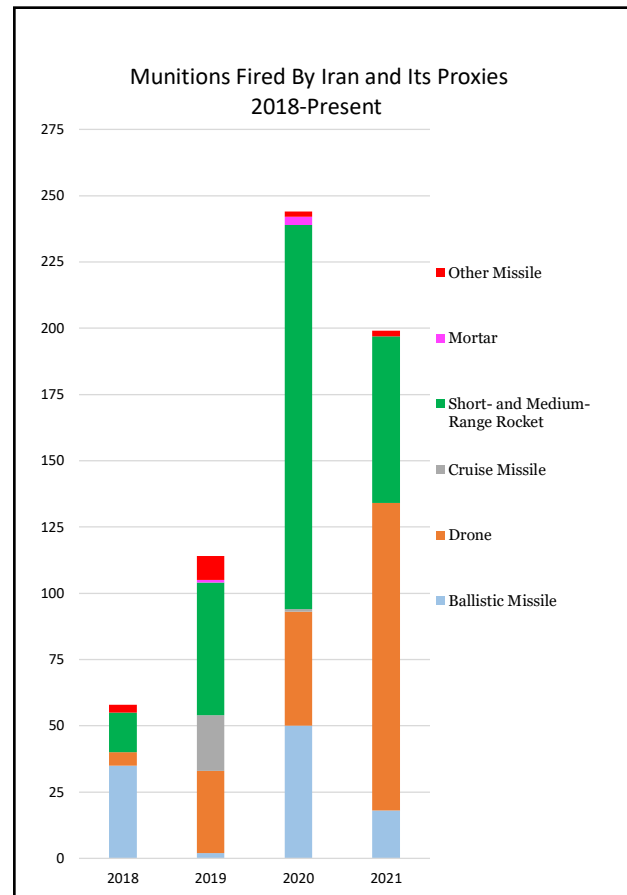
Rather than removing military assets that U.S. allies depend on for defense against Iran's projectile threat and inconsistent retaliation, the United States should adopt a comprehensive regional strategy, collaborating with regional partners to enhance their offensive and defensive capabilities, particularly to address the rising threat from drones.

What Happened?

- On June 27, President Biden [ordered three airstrikes](#)—two in Syria and one in Iraq—against facilities used by Iranian-backed Iraqi militias to launch drone attacks on U.S. personnel in Iraq.
 - [U.S. F-16s and F-15Es](#) based in the region dropped 500- and 2,000-lb. satellite-guided bombs on locations used by Kata'ib Hezbollah and Kata'ib Sayyid al-

- Shuhada along the Syrian-Iraq border. The facilities in Syria were used for storage and logistics and the one in Iraq was used for launching and recovering Iranian-linked drones.
- Biden took similar action against the facilities of Iranian-linked Iraqi groups in Syria on February 25, but [within a week of the U.S. airstrike](#) Iran and its proxies attacked U.S. forces at Al Asad Air Base in Iraq, Israeli-owned ships, and Saudi Arabia.
 - Biden has calibrated his airstrikes to avoid escalation; however, the growing frequency of attacks on U.S. personnel and interests in Iraq and the rest of the Arab Gulf indicate that Biden's February airstrikes did not deter Iranian-backed militias.
 - There were 46 munitions fired at positions hosting American personnel in Iraq between the February and June U.S. strikes.
 - In April, a [JINSA memo](#) cautioned against drawing down military assets in the Middle East when reports indicated the Biden Administration was in the process of removing Patriot missiles from Saudi Arabia. The Houthis launched three ballistic missile attacks against Saudi Arabia in May after the announced withdrawal.
 - On June 28, [local reports indicated](#) that a U.S. military base at the Omar Oil Field in Deir ez Zor, Syria, came under fire from Iranian-backed militias.
 - On June 29, Middle East Eye [reported](#) that members of Iranian-backed Iraqi militias known as the Popular Mobilization Forces (PMF) have offered an unofficial truce with the United States because they were "satisfied with the attack in response to the American raid."
 - It is not clear that the PMF proposed the truce in response to the U.S. airstrikes in Syria or if all of the militias will uphold the deal. The report quoted a PMF commander as saying, "some of them [the armed groups] are considering another attack inside Syrian territory, but there was no agreement on this proposal."
 - The recent U.S. airstrikes follow a June 18 [Wall Street Journal](#) report that the Biden administration has begun withdrawing some U.S. air defense assets from the Middle East as part of its push to posture the military for strategic competition with China and Russia.
 - Reportedly, the Pentagon will remove eight Patriot antimissile batteries from Iraq, Kuwait, Jordan and Saudi Arabia, a Terminal High Altitude Air Defense (THAAD) system from Saudi Arabia, and hundreds of troops that operate the systems.
 - In October 2019, the United States began [surging these air defense assets](#) to the region after a coordinated [attack on Saudi oil facilities at Abqaiq and Khurais](#) the previous month by Iranian-designed armed drones and cruise missiles.

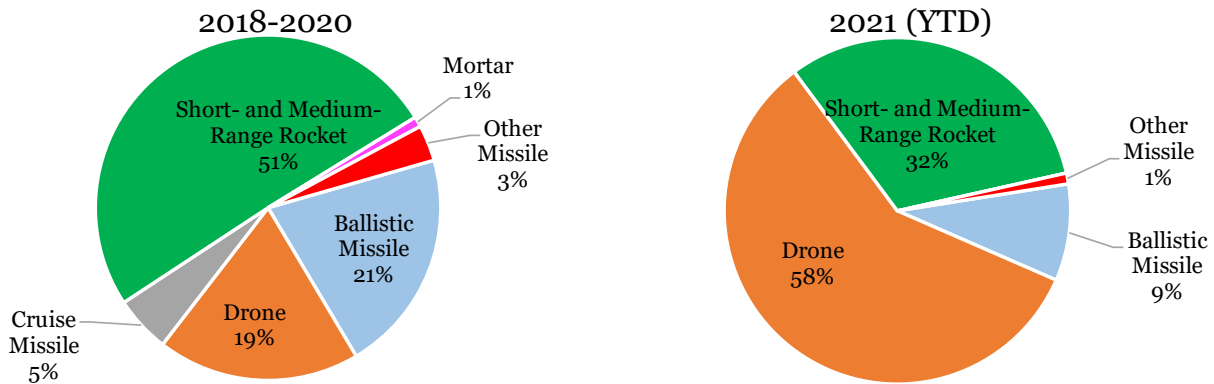
- The United States similarly [deployed Patriot batteries to Iraq](#) in April 2020 after [Iranian ballistic missiles targeted](#) the Al Asad air base, which hosted U.S. troops.
- The repositioning comes after the United States, in January 2021 under President Trump, reduced its presence to 2,500 troops each in Iraq and Afghanistan and as it continues its complete withdrawal from Afghanistan this summer.
- The Biden administration is been conducting indirect talks with Iran with the goal of negotiating a return to the 2015 Joint Comprehensive Plan of Action (JCPOA).
 - There have been six rounds of negotiations since the talks began in April. There are [conflicting reports](#) of when a [subsequent round](#) will be scheduled.



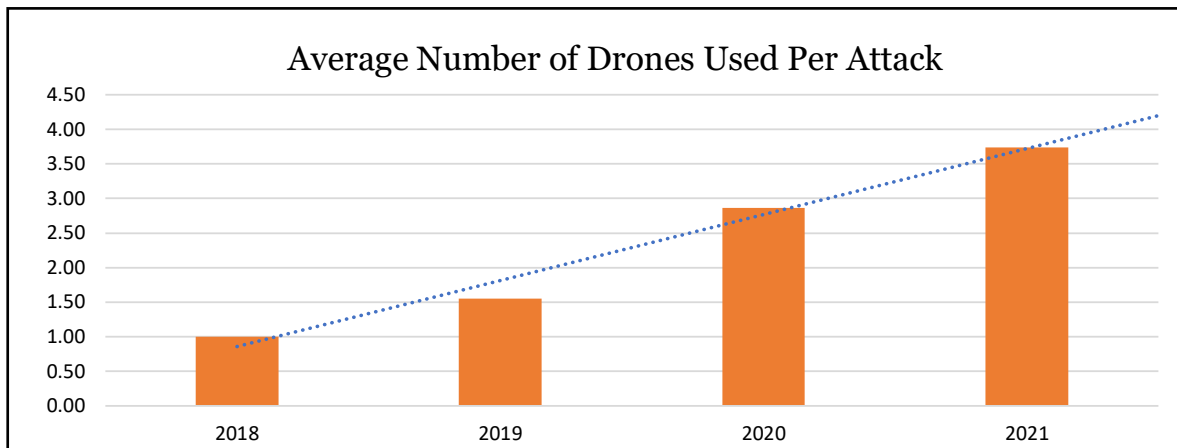
- Despite the Biden administration’s pledge that it would not lift sanctions on Iran until Iran returns into compliance with the JCPOA, the United States has already granted Iran several significant and [unilateral concessions](#):
 - Ending support for Saudi-led “offensive operations in Yemen, including relevant arms sales”;
 - Removing the designation of Iran-backed Houthis in Yemen as a terrorist organization;
 - Rescinding UN “snapback” sanctions on Iran;
 - Lifting certain U.S. energy sanctions on Iran during JCPOA reentry negotiations.
- Despite U.S. attempts to withdraw from the region and negotiate with Iran, Iranian-linked rocket, drone, missile, and mortar attacks on U.S. personnel and allies throughout the region have been growing since 2018—roughly doubling in each of the past two years—and are on track to increase again in 2021. Since 2018, Iran and Iranian-backed groups have fired:

- 607 munitions at American servicemembers, partners, and interests across the region, including critical shipping lanes and energy resources. Of these, 191 were fired in 2021;
- 297 projectiles at U.S. personnel in Iraq, with 68 of those launched in 2021;
- 261 projectiles at Saudi Arabia, with almost half—118—fired in 2021.

Country	Year	Total	Country	Year	Total	Country	Year	Total	Country	Year	Total
Iraq	2018	10	Saudi Arabia	2018	33	Syria	2018	8	Yemen	2018	7
	2019	46 (360% Increase)		2019	47 (43% Increase)		2019	12		2019	9
	2020	173 (276% Increase)		2020	63 (34% Increase)		2020	0		2020	9
	2021	68		2021	118		2021	12		2021	1
	Total	297		Total	261		Total	32		Total	26

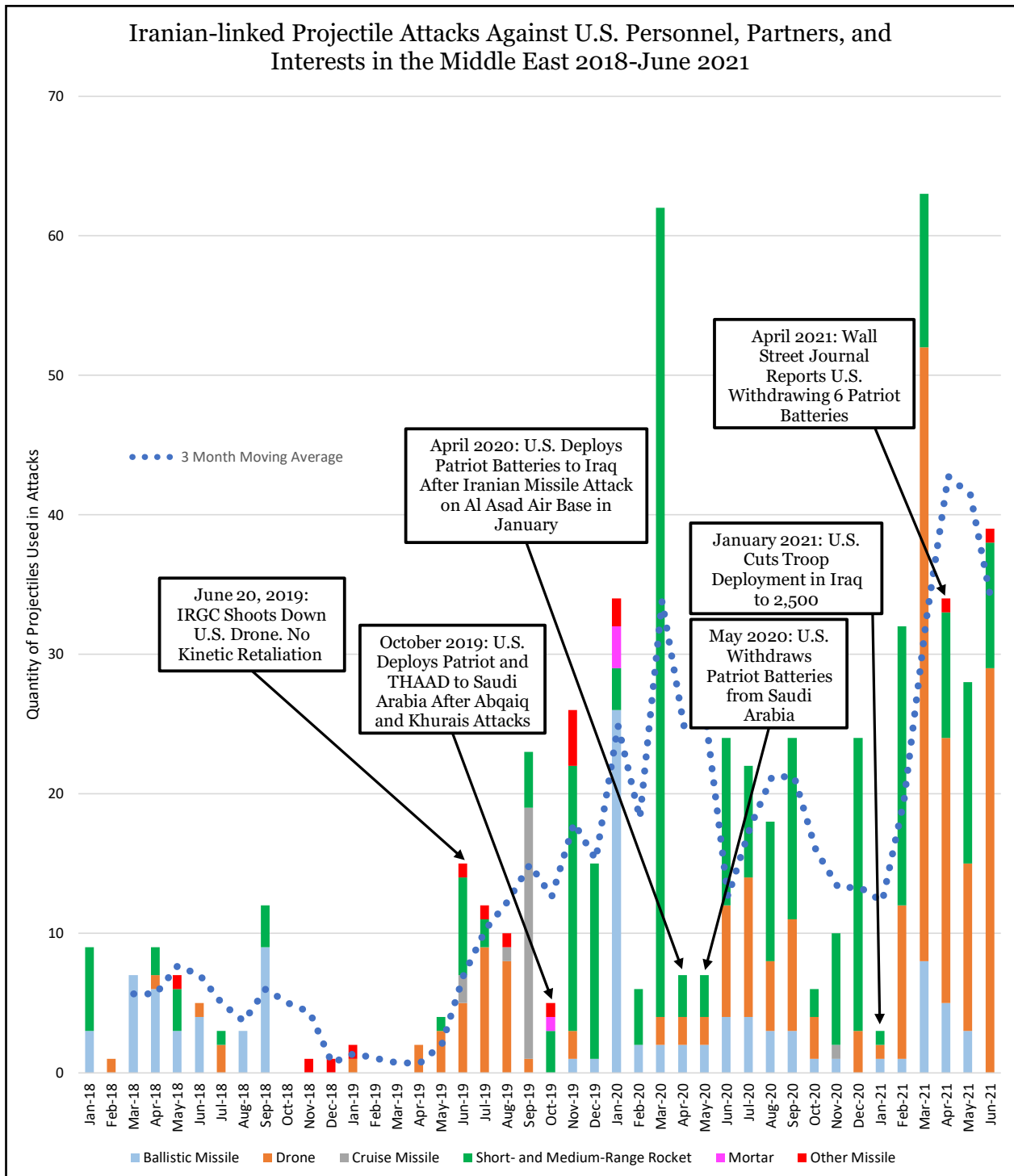


- Iranian-backed attacks in 2021 have noticeably shifted toward using more frequent and larger barrages of drones, whose maneuverability poses a particular challenge for the region’s current air defenses, compared to the use of short- and medium-range rockets in the past.



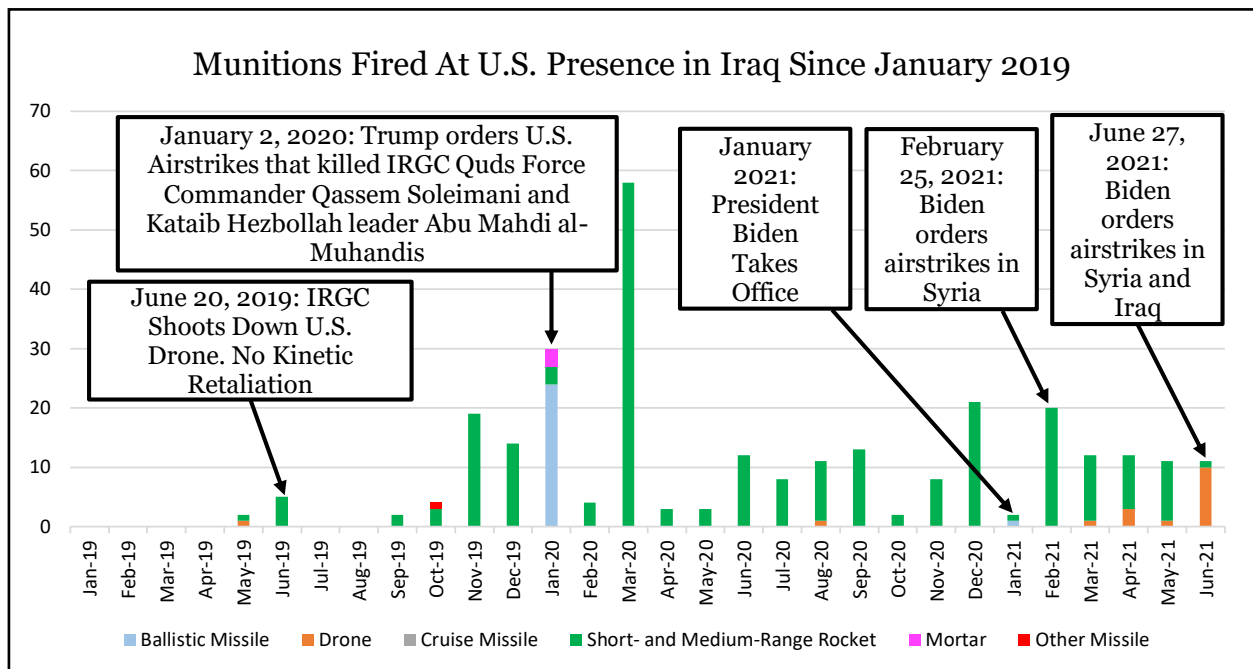
- With 116 drones used this year, there have already been 37 more drones used in 2021 than the 79 launched during the entire 2018-2020 period (a 46% increase).
- Drones are also becoming the preferred munition of Iranian-backed groups. In 2021, they account for 58% of the total munitions used, compared to just 19% between 2018-2020.
- In an attempt to overwhelm air defense systems, Iranian-linked groups are also using more drones with each attack.
 - The number of drones used per attack has increased from an average of 2.9 drones in 2020 to 3.7 in 2021, with several attacks this year including dozens of drones.
 - At a briefing on June 7, the head of [U.S. Central Command General Frank McKenzie](#) said that “we are seeing pressure from Iranian-affiliated militant groups that want to push us out of Iraq, and the latest manifestation of that has been the use of small unmanned aerial systems, or drones.”
 - McKenzie added “Some of them are very small; some are a little bit larger; all can be very lethal... And they are resorting to this technique because they have been unable to force the government of Iraq to require that we leave. So political pressure has not worked for them; now they’re turning to a kinetic approach. And that is very concerning to me. As always, we have a variety of measures there to defend ourselves.”
 - In testimony before the House Armed Services Committee, [McKenzie commented](#) that “first time since the Korean War, we are operating without complete air superiority” and that “the future is going to demand bigger and better ... more sophisticated” weapons and aircraft.
- Iranian Revolutionary Guards commander-in-chief Hossein Salami told Iranian-state television on June 27 that Iran has drones capable of reaching 7,000 km (4,375 miles).
- The United States is working with regional allies on addressing this drone threat, but U.S. missile defense assets will have departed the region well before any solutions are produced.
 - While Washington approved the sale of THAAD systems to Saudi Arabia in 2017 for \$15 billion, it was only last year that Pentagon awarded Lockheed Martin \$1 billion to begin work regarding the sale, which is not expected to be completed until 2026. Riyadh is set to receive 44 THAAD batteries, including 360 missile interceptors.
 - The United States recently took delivery of the Israeli Iron Dome missile defense system in 2021, but has [not yet decided](#) where and when to deploy it.
 - On June 23, [Barak Ravid reported](#) that the “Biden administration and the Israeli government held talks recently on countering the proliferation of Iranian drones and cruise missiles among its proxies in Iraq, Yemen, Syria and Lebanon.”

- The U.S. and Israeli national security advisors agreed on April 23 to set up a working group to address the Iranian drone and precision munitions threat. This working group reportedly held its first meeting in early June.
- At the April 23 meeting, Israel also proposed setting up a framework with Arab nations for regional cooperation on shared drone and missile threats.
- Israeli officials recently announced the successful testing of a [plane-mounted laser](#) that can shoot down drones, with a ground-based version three to four years away.



Why is it Important?

- As evidenced by attacks on a U.S. base in Syria only one day after President Biden's June 27 airstrikes in Syria and Iraq, President Biden's calibrated military force has not deterred further Iranian-backed aggression. Instead, Iran is likely to continue perceiving the withdrawal of U.S. air defense systems and personnel from the region as a victory, continuing, if not further increasing its attacks, in order to achieve its goal of driving the United States out of the Middle East.
 - The possibility of a conditional truce with the PMF may protect U.S. troops in Iraq but the region could also view it as the United States cutting a deal with Iran and its proxies that decreases the security of U.S. partners in the long-term.
 - The recent increase of projectile attacks by Iranian proxies is part of a counterpressure strategy that seeks to achieve sanctions relief and raise costs on America's military presence and drive it toward reducing its regional posture. The U.S. withdrawal of such assets amid significant escalation of attacks is likely to encourage Tehran's belief that this strategy is effective.
 - More forceful U.S. military response targeting Iran's command and control network, as in the case of the January 2020 strike against the commander of the Islamic Revolutionary Guards Corps' Quds Force, Major General Qassem Soleimani, has proven more effective at reducing, at least temporarily, Iranian attacks than the more limited actions taken by the Biden administration thus far.



- With Iranian-backed projectile attacks increasing in the Middle East, the United States needs to update and expand—not retract—its air defense posture to bolster its partners’ capabilities. Withdrawing air defenses at this time could encourage an escalation of Iranian-backed attacks and leave U.S. partners with less capability to defend against them.
 - Attacks on U.S. personnel, partners, and interests by Iranian-backed groups has previously increased in response to similar withdrawals.
 - After the [Pentagon removed Patriot systems](#) from the Middle East, including Saudi Arabia, in May 2020, there were 24 projectiles fired in June, a 271% uptick that held relatively steady until October. The June-October period also included the 14 ballistic missiles that the Patriot could have intercepted.
 - With reduced air defenses, Tehran and its proxies are more likely to increase the frequency and intensity of their attacks, potentially copying the large-scale salvos employed by Hamas in May 2021 in its attempts to overwhelm Israeli air defenses.
- Reducing U.S. defensive assistance to partners at a time when Iranian attacks are increasing could prove counter-productive to U.S. global strategic objectives vis-à-vis Russia and China.
 - Already, regional U.S. partners, like Egypt, have turned to Russia to purchase weapons as a hedge against the perceived U.S. departure from the region.
 - Any further sense that Washington is abandoning the region in the face of Iranian aggression could open the door for greater Russian and Chinese presence and influence in the region.
 - Iran would also likely benefit as U.S. partners previously opposed to Tehran might seek to accommodate it, rather than repel its attack on their own.
 - Saudi Arabia has already begun such outreach to Tehran.
 - A U.S. return to the JCPOA would only further accelerate this trend.
- The frequency and firepower of ongoing attacks, despite a surge of U.S. military assets, suggests that the Arab Gulf needs more capable defenses against the short-range rockets, missiles, drones, and mortars that Iranian proxies increasingly use.
 - The United States currently has counter-rocket, artillery and mortar systems (C-RAM) deployed to Iraq, which have had reported success [intercepting a handful of drones](#) at a time; however, C-RAM is an inefficient system that typically launches hundreds of 22mm rounds to successfully destroy its target, and it has a 50-60% effectiveness rate.
 - The trend of Iranian-backed militias launching more drones during each attack is alarming since it could allow them to potentially overwhelm such systems.

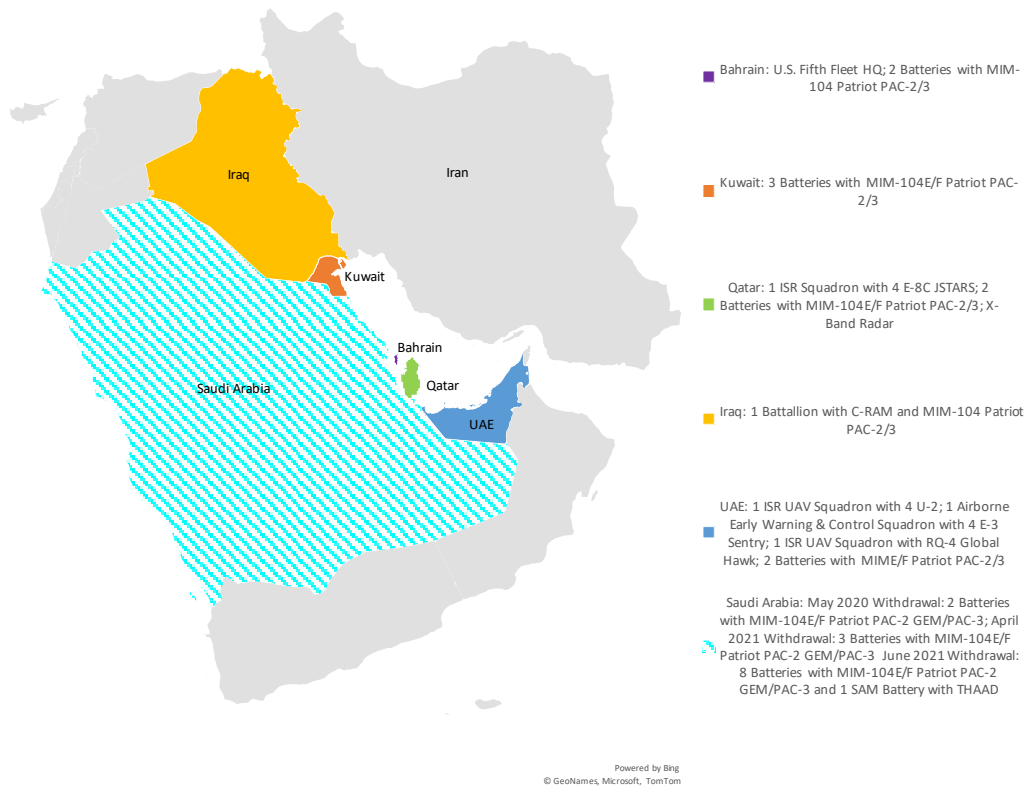
- Patriot batteries are not designed to defend against many of the short-range rocket attacks that the Houthis or Iraqi Shia militias commonly launch, but they are more effective against ballistic missile and unmanned aircraft attacks and provide limited protection from maneuvering cruise missiles.
 - Shi'a militias involved with the PMF and other umbrella groups in Iraq have become increasingly aggressive, and their possession of Iranian-made projectiles like the Zolfaqar short-range ballistic missile could have consequences for Israel. If deployed in western Iraq, the Zolfaqar missile could [potentially strike](#) as far as Tel Aviv, as it has a range of approximately 750 km (466 miles).
- In contrast to America's reduction of regional air defenses, Israel is constantly expanding and upgrading its defenses in the face of this growing threat.
 - Israel's Iron Dome short-range air defense system shot down its first drone during Operation Guardian on the Walls, Israel's recent conflict with Gaza in May, making it an excellent option for deployment elsewhere in the Middle East.
 - With a 90% interception rate in the May 2021 conflict and an ability to quickly determine which projectiles do not require interception, Iron Dome boasts a much higher efficiency and effectiveness rate than U.S. C-RAMs.
 - The U.S. Army has acquired and is testing and training on two Iron Dome batteries, which will reportedly be ready for deployment by the end of 2021.
- However, maintaining the effectiveness of current air defenses is not enough since Iran continues to seek improvements for its weapons and to proliferate them to its proxies throughout the Middle East.
 - Circumventing sanctions and a U.N. embargo, Iran seeks to improve the range, precision, maneuverability and payload of its weapons with better guidance systems, engines, fuels, body designs, reentry vehicles and other components.
 - Iran has consistently exported components of short-range Katyusha rockets, as well as component parts for explosive-laden drones and mortars, to proxy entities in both Iraq and Yemen.
 - Iran has begun producing and proliferating increasingly sophisticated UAV technology, including loitering munitions (also known as a suicide or kamikaze drones) that can hover above a target before quickly initiating an attack.
 - Iran has [supplied](#) the Qasef 1-k drone and the visibly identical Qasef 2-K drone, which has a [reported range of 124 miles](#), to Hamas and Houthi forces.
 - Qasef drones have been involved in at least 20 strikes since January 2018, representing roughly 10% percent of drone attacks, although these numbers are likely higher given that the type of drone often goes unreported in many attacks.

What Should the United States Do Next?

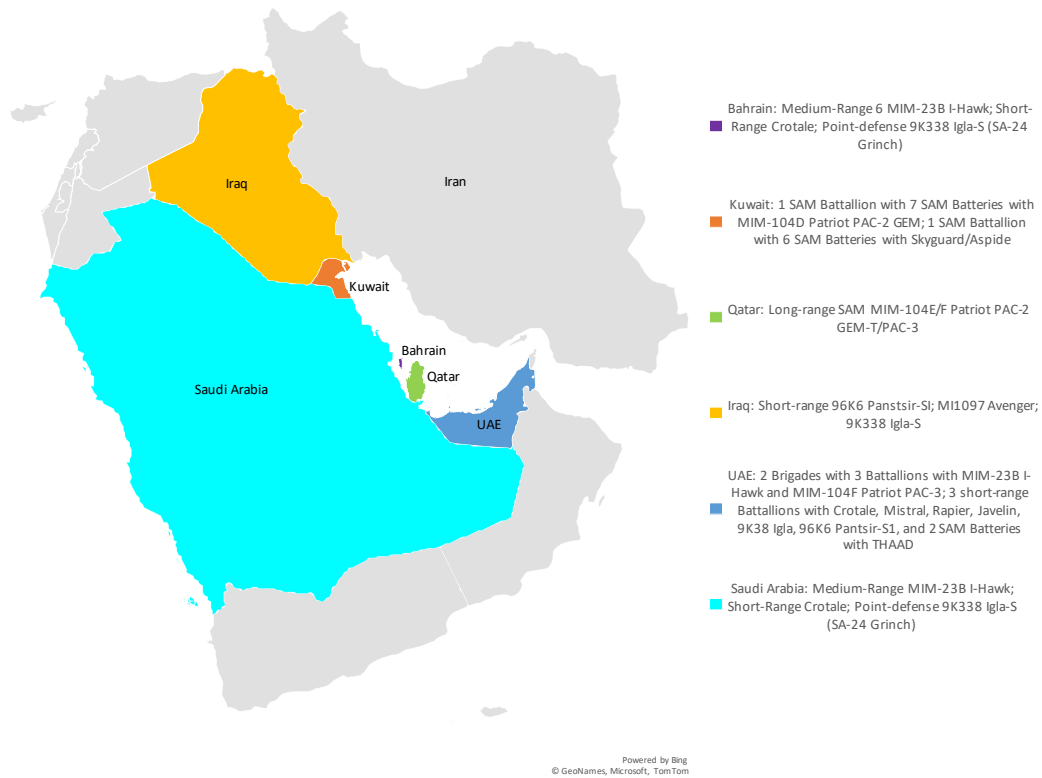
- The United States must approach Iranian aggression as a region-wide problem, rather than reacting only to attacks on U.S. interests in Iraq and leaving other partners to deal with the Iranian projectile threat on their own.
- To re-iterate and demonstrate its support for its Middle Eastern partners, the Biden administration should develop a multi-faceted and comprehensive regional strategy aimed at preventing, defending against, and deterring Iranian-backed projectile attacks. This should include:
 - An international coalition to enforce the UN embargo on Iranian arms shipments.
 - U.S. Central Command (CENTCOM) should intensify its efforts to interdict Iranian weapons proliferation to Yemen, Syria, and Iraq via land, air, and sea.
 - Washington should lead the formation of an international coalition to protect shipping in the Gulf and stop weapons shipments to Yemen, Gaza, and Lebanon based on Iran's violation of UN Security Council resolutions.
 - The Department of Defense should increase the frequency and scope of joint military training and collaboration with Israeli and Arab partners to develop a regional multi-layered air defense system that can protect against the short-, medium-, and long-range weaponry that Iran proliferates.
 - Leaving in place U.S. air defense systems, at least until alternatives can be acquired, installed, and rendered operational.
 - The U.S. Army should expedite the deployment of the two Israeli Iron Dome systems it has acquired to the Middle East as soon as full testing and integration is complete. The Pentagon should also procure Israel's David's Sling medium- to long-range air defense system. Both Israeli-designed systems are coproduced in the United States by Raytheon as the SkyHunter and SkyCeptor, respectively, and would fill the current gap in coverage between the C-RAM and Patriot systems.
 - Since the United States currently lacks a persistent aircraft carrier presence in the Middle East, the Pentagon should help defend and deter airstrikes by deploying unpredictable naval rotations so that ships with anti-missile capabilities like the Aegis Combat System in the Indo-Pacific and Europe travel through, participate in joint training, and conduct operations in Middle Eastern waterways, specifically the Arabian Gulf and Red Sea.
 - Leading the effort to create a regional, layered early warning and missile defense capability.
 - The United States should coordinate with its regional partners, particularly Saudi Arabia, Israel, Egypt, and Jordan, to establish a shared early-warning network in the Red Sea to better enable air defense networks to reduce the time necessary to close the "kill chain," or the time between identifying and destroying an incoming projectile.

- The Arab Gulf states are well-positioned to provide intelligence, surveillance and reconnaissance (ISR) on Iran, its proliferation of projectiles, and its regional proxies like the Houthis.
 - Israel has repeatedly proven the effectiveness of its multi-tiered missile defense architecture, and the combination of Israeli-made short-, medium-, and long-range systems could enhance existing defense capabilities in the Gulf, [as JINSA proposed in 2018](#).
 - Cooperation to preserve America's legal obligation to maintain Israel's qualitative military edge (QME) over potential threats, including bolstering both countries' counter-drone capabilities.
- Creating joint research and development and procurement initiatives to devise new systems for countering the growing drone threat.
 - The United States and its partners should increase funding for research and development of more cost effective and accurate air defense capabilities, such as counter-drone technologies, directed energy, and unmanned boost-phase engagement systems. The price per interception with directed energy technologies, like lasers, is small compared to the Iron Dome's Tamir interceptors, which each cost roughly \$100,000.
 - With such technologies the risk of running out of interceptors is greatly reduced, as the number of possible interceptions is only limited by the ability to generate and store the electricity needed to power such systems.
 - A consistent U.S. military response to Iranian aggression.
 - President Biden should launch additional retaliatory and preemptive airstrikes on perpetrators of attacks on U.S. personnel or interests in the region.
 - The provision of U.S. precision munitions to regional partners for their own use in defending against and responding to Iran's projectile threat.
 - Through its "Campaign Between the Wars," Israel has proven itself as America's most reliable partner to interdicting Iranian weapons proliferation. Therefore, President Biden should upgrade America's supply of prepositioned weaponry in Israel, named WRSA-I. The stockpile is outdated and lacks the weaponry that Israel will need in a major war, such as Joint Direct Attack Munitions (JDAM) tailkits that convert unguided bombs into precision munitions, and precision-guided GBU-39 and GBU-53/B small diameter bombs.
 - The Pentagon can use its Special Defense Acquisition Fund (SDAF) or the United States could temporarily loan weapons to Israel.
 - The Pentagon should also consider regionalizing WRSA-I so that it could be more effective at countering Iranian proliferation throughout the Middle East.

Location of U.S. Air Defenses in the Arab Gulf as of June 2021



Arab Gulf Air Defenses As of June 2021



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