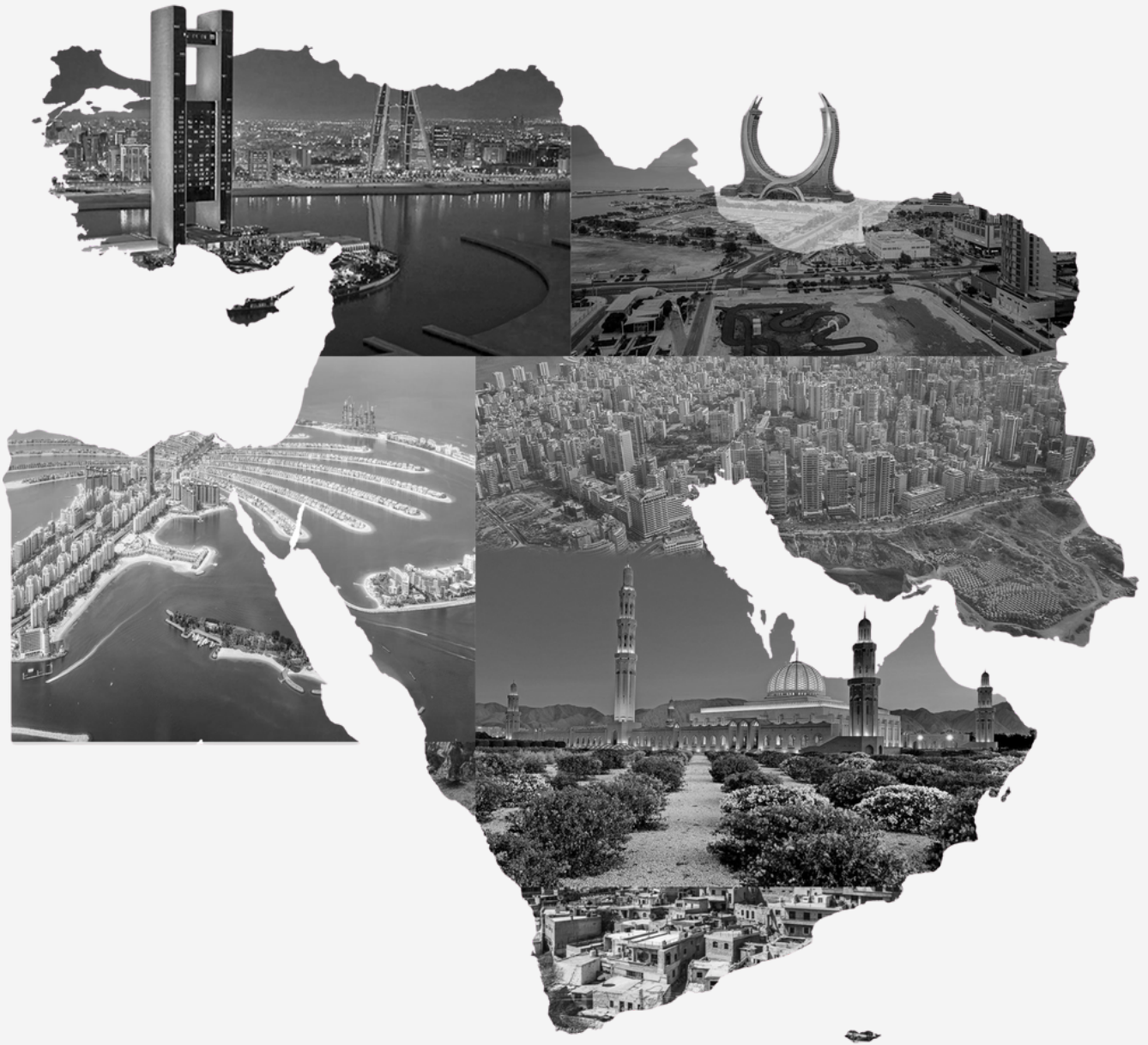


Militarization in the Middle East

STRATEGIC AUTONOMY OR ESCALATION?



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ARMS RACE: THE ANALYSIS OF THE MIDDLE EAST CONTEXT

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Introduction To the Arms Race

An arms race is a competitive dynamic between two or more states continuously expanding and modernizing their military capabilities to maintain or achieve strategic advantage over their rivals. Encyclopedia Britannica states that the arms race represents "a pattern of competitive acquisition of military capability between two or more countries".

^[1] The term is frequently used broadly to describe any increase in military forces or defense spending by a group of states. Additionally, Cambridge Dictionary defines an arms race as "the situation in which two or more countries try to have more and stronger weapons than each other".^[2] This process often involves the development of new weapons systems, the enlargement of military forces, investments in advanced technologies (such as nuclear, hypersonic, or cyber weaponry), and constructing military bases or forming strategic alliances.

Throughout the XX century, many scholars from various disciplines sought to apply formal and quantitative methods to studying war and conflict. Kenneth Boulding, for instance, integrated systems theory and economic principles in his seminal work *Conflict and Defense: A General Theory* (1962), aiming to establish a general science of conflict. Similarly, Anatol Rapoport employed game theory to analyze strategic behavior, contributing significantly to the understanding of cooperation and escalation through models like "Tit for Tat" in iterated

prisoner's dilemma games. The foundational work of John von Neumann and Oskar Morgenstern on game theory in *Theory of Games and Economic Behavior* (1944) laid the groundwork for subsequent applications to military and political strategy, particularly during the Cold War. Thomas Schelling further advanced this tradition in his influential book *The Strategy of Conflict* (1960), where he explored concepts of deterrence, credibility, and bargaining behavior, earning widespread acclaim and a Nobel Prize in Economics.

Further advancing these insights, Thomas C. Schelling applied game theory to international conflict in his landmark book *The Strategy of Conflict* (1960). Schelling focused on credible threats, commitment, and bargaining power, emphasizing the importance of signaling, perception, and strategic communication.^[1]

In his influential works, Lewis Fry Richardson, particularly *Statistics of Deadly Quarrels* (1960) and *Arms and Insecurity* (1960), proposed that conflicts' occurrence and intensity could be analyzed statistically and predicted using differential equations. One of his key models involved a pair of differential equations describing an arms race between two rival states, where each side's military buildup was a function of the other's level of armament, alongside internal pressures and economic constraints.^[2]

Drawing on the existing literature on arms races, several key characteristics of this phenomenon can be identified. First, external factors, which foster mutual distrust, cause each state to fear being outpaced by others, prompting constant efforts to enhance its military power.

In addition, various internal motivations for increasing one's military capabilities may provoke a reaction from another

state or state, even if such intentions were not present. Consequently, another element emerges—namely, the security dilemma, where one state’s attempt to increase its security through armament leads to increased insecurity in others, who respond in kind, perpetuating the cycle. In principle, these situations are based on an “action-reaction” process.

also be mentioned—where this dynamic can escalate tensions, increase the risk of conflict, and potentially lead to war. Very often, all these elements interact with one another, making it extremely difficult to precisely and scientifically determine all the causes behind the initiation of an arms race and its possible implications.

Meanwhile, internal limiting factors may encourage or reduce military spending in a given state, thereby increasing or decreasing fear and insecurity in other states. As a final element, escalation can

The essence lies in balancing external stimuli and internal constraints, which can prevent potential escalation and military conflict (see Table 1).

Table 1: Arms Race Stimuli and the Behavior of States (Own depiction, based on Richardson’s model)

STIMULI	BEHAVIOR
External Factors	Even without deterrence, security concerns, or power projection, a state may choose to escalate its armament levels solely <i>in response</i> to a rival’s actions (<i>action-reaction process</i>). This triggers a cycle in which both states continuously enhance their military capabilities, driven by ongoing competitive dynamics.
Internal Limitations	Economic costs. This involves allocating significant resources to defense, which may affect other sectors like education, healthcare, or infrastructure. Public opposition. Resistance from the population or civil society groups who may be against higher military spending.
Internal Motivations	Nationalism, ideological ambitions, or perceived threats unrelated to the rival state’s behavior. These factors suggest that military increases or aggressive posturing may be motivated more by internal desires or external fears not directly tied to another state’s actions.

However, in practice, so many factors influence a given situation that it is often difficult to quantitatively determine the likelihood of war arising from an imbalance in the arms race. Many regions worldwide are susceptible to this, but here, we will focus on the context of the Middle East, where all the previously mentioned elements interact simultaneously.

The Middle East Context

The Middle East context is ideal for analysis due to its enduring rivalries, ideological polarization, and history of external intervention. The geopolitical dynamics of the Middle East are shaped not only by regional actors such as Saudi Arabia, Iran, Israel, the United Arab Emirates (UAE), Qatar, Turkiye ^[1], and Egypt^[2] but also by major global powers (USA, Russia, China, European powers/EU) that influence military balances through arms trade, strategic alliances, and regional ambitions. The text below will present the main characteristics of a particular state concerning its role in the arms race.

[1] Turkey is not usually considered a part of the Middle East as a whole, but it is often included in the broader definition of the region due to its geographical, historical, and political ties.

[2] Egypt is often included in the Middle East region due to its strong ties with the Arab world.

Saudi Arabia: Regional Military Power and Modernization

Saudi Arabia has consistently sought to maintain its status as a dominant regional power, with its military modernization driven by both internal factors and external threats, particularly from Iran. Saudi Arabia is one of the world's largest arms importers, with significant defense acquisitions from the United States, France,

and the UK. As a curiosity, the USA supplied the most weapons to Saudi Arabia (19 percent of total US arms exports)^[1]. The kingdom's armed forces have undergone significant modernization, focusing on air defense, advanced fighter jets, and missile defense systems.

Between 2015–19 and 2020–24, Saudi Arabia's arms imports dropped 41%. It fell from being the world's top arms importer in 2015–19 to the fourth-largest in 2020–24.^[1] In 2020–24, the USA was Saudi Arabia's primary arms supplier, responsible for 74% of its imports, followed by Spain (10%) and France (6.2%).^[2] This decline in arms imports during 2020–24 can be partly attributed to the cyclical nature of arms procurement.^[3] Given pending deliveries, Saudi Arabia is expected to remain a significant arms importer in the upcoming years.

Saudi Arabia's Vision 2030 focuses on military self-sufficiency, aiming to produce more of its weapons domestically.^[4] Among the various obstacles facing Saudi Vision 2030, perhaps the most significant is the threat Iran poses to Saudi Arabia's national security. To achieve its goals, Saudi Arabia must both strengthen its defenses against future attacks from Iran and the Houthis and develop effective deterrence measures to counter Tehran. Furthermore, the kingdom's involvement in the conflict in Yemen has led to increased investments in asymmetric warfare capabilities, including drones and specialized military units designed to counter insurgent groups. The US Navy has been intercepting Iranian weapons bound for Yemen as the blockade exacerbates the humanitarian crisis. Saudi Arabia and the UAE have led over 25,000 airstrikes, causing 19,000 civilian casualties.^[5]

Additionally, Saudi Arabia's and Israel's

shared “antipathy for Iran is the principal factor drawing them together. However, for the foreseeable future, this relationship will remain in the shadows, both because of the nature of the cooperation and because formal Saudi diplomatic recognition of Israel depends upon an Israeli-Palestinian peace agreement, which does not seem forthcoming,”^[1] says Perry Cammack.

Iran: Military Modernization and Arms Trade

Iran’s military capacity is shaped by its geopolitical position and the need to counter external threats, particularly from the United States and its allies in the region. While Iran has been largely excluded from the global arms market due to sanctions, it has developed significant indigenous military capabilities. Iran’s strategic focus is on asymmetric warfare, with an emphasis on missile systems, including ballistic and cruise missiles, as well as a robust network of proxy forces across the region. The Islamic Revolutionary Guard Corps (IRGC) is a key pillar of Iran’s defense and military apparatus. In addition to its domestic military functions, the IRGC provides support to militant groups operating in Iraq, Lebanon, the Palestinian territories, Syria, and Yemen. These groups collectively form what is often referred to as the “axis of resistance,” which seeks to eliminate Western and Israeli influence in nations such as Syria, Iraq, and Lebanon.^[1]

Iran’s arms trade largely involves acquiring advanced systems from Russia, such as the S-300 and S-400 air defense systems, bolstering Iran’s defensive capabilities.^[1] As stated in the magazine Iran International (2024):

Multiple reports by Tehran’s media outlets often spoke of negotiation to acquire the S-400 and there were even reports as recently as in August that Moscow had delivered the missiles. Russia completed its

delivery of the S-300 air defense missile systems to Iran in 2016, according to its state arms export agency, after years of delays due to international pressure. Moscow initially suspended the contract in 2010 under Western pressure, but President Vladimir Putin lifted the ban in 2016 following an interim agreement with Iran. The decision to proceed with the delivery at the time raised concerns in Israel, as the S-300 systems could significantly bolster Iran’s air defense capabilities.^[2]

While Iran’s arms industry faces technological limitations, it compensates with a focus on quantity and strategic partnerships with non-Western powers like Russia and China. Iran, Russia and China “have begun joint naval drills in the Gulf of Oman, marking the fifth year the three countries have conducted military drills together”.^[3] The drills coincide with a major USA-led maritime exercise in the region. This 18-day operation brings together around 50 countries and international agencies, making it the Middle East’s largest naval drill.^[4] The parallel timing of these exercises underscores rising geopolitical tensions and competing spheres of influence in the strategic waters of the region.

Israel: Technological Superiority and Regional Defense

Israel’s military superiority is built on its advanced technological capabilities, supported by substantial USA military aid. Israel’s defense posture focuses on maintaining its Qualitative Military Edge (QME), ensuring it retains superior technological capabilities relative to its neighbors, particularly in air defense, intelligence, and cyber warfare. The Israeli Defense Forces (IDF) possess a high level of specialization in aerial operations, utilizing advanced F-35I and F-15I fighter jets, along with Apache and

Black Hawk helicopters. This capability enables them to address regional threats effectively. The Iron Dome missile defense system also offers a significant strategic advantage in regional conflicts.

Israel's arms trade is extensive, with its advanced technology being exported to countries across the world. In 2023, Israel imported weapons valued at approximately \$935 million, with the majority coming from the United States (\$772 million), followed by India (\$122 million) and Austria (\$11.6 million).^[1] Israel maintains a robust arms trade, exporting its advanced military technology to countries around the globe. In the same year, Israel exported weapons worth a total of \$489 million, with the primary recipients being India (\$135 million), the United States (\$122 million), and Estonia (\$62.1 million).^[2]

In 2023, Eviatar Matanya and Menachem Bachrach suggested that preventive measures against nuclear weapons should be clearly defined, proposing that the "Campaign Between the Wars" be categorized as "Strategic Prevention"—a proactive strategy designed to neutralize a strategic threat either before or during its development, forcing the adversary to rebuild its capabilities from the ground up. They introduced this approach as the fifth principle of Israel's national security doctrine—alongside deterrence, early warning, defense, and battlefield decision—to offset the diminishing effectiveness of achieving decisive outcomes on the battlefield.^[3]

Despite that, The Swords of Iron War^[4] refers to the military campaign launched by the State of Israel against the Hamas terrorist organization following a surprise and deadly assault by Hamas. In retaliation, the Israeli government initiated a full-scale and uncompromising military operation aimed at dismantling Hamas's armed capabilities and overthrowing its rule in the Gaza Strip.

UAE: Military Modernization and Strategic Alliances

Given the evolving regional and global dynamics, the UAE concentrates on economic and strategic diversification. Recognizing the trend of "multi-vector partnerships," "multi-alignment," and "multipolarity" in shaping the new world order, the UAE aims to avoid alignment with any single dominant global power. Instead, it seeks to carve out its path as a distinctive and authentic international actor, balancing East and West and Global South and North. The UAE aspires to become a global pivot, committed to peace, stability, and economic prosperity while preserving its sovereignty, identity, and prominent position as a middle power on the world stage.

The UAE has pursued a highly advanced military modernization strategy to enhance its domestic security and project power beyond its borders. The UAE has invested heavily in modern military technology, including advanced air defense systems, fighter jets, and drones, primarily sourced from the United States and Europe. According to the Stockholm International Peace Research Institute (SIPRI), the United Arab Emirates ranked as the world's ninth-largest defense importer between 2016 and 2020. The United States was its primary arms supplier during this period, providing 64% of the UAE's total defense imports.^[1] The UAE hosts several prominent military and security exhibitions, including the International Defence Exhibition and Conference (IDEX), one of the world's largest defense expos, and the Dubai Airshow, a major event showcasing global aerospace and defense technology. This event is held under the patronage of His Highness Sheikh Khalifa Bin Zayed Al Nahyan, President of the UAE and Supreme Commander of the UAE Armed Forces.

In addition to its military modernization, the UAE has increasingly sought to exert influence in regional conflicts, particularly in Yemen and Libya. The UAE's involvement in these conflicts has spurred the development of specialized forces, including paramilitary groups and mercenaries. In 2020, the UAE reportedly paid \$27 million to Rapid Support Forces (RSF) leader Mohamed Hamdan Dagalo ("Hemedti") to deploy his fighters as mercenaries in Yemen and Libya, according to The Wall Street Journal.^[1]

The UAE's regional strategy is shaped by ambitions for economic dominance, political influence, and countering threats from Iran and Islamic political movements. Central to its approach is securing port concessions around Africa to control key trade routes, supported by logistics hubs across the continent. While closely aligned with the USA on Iran and Israel, the UAE has strengthened ties with China and Russia—evident in its \$95 billion trade with China and China's role in operating a terminal at Khalifa Port.^[2] Its 2024 entry into BRICS and military deals with France, China, and South Korea further reflect its strategic diversification. Despite its modern image, the UAE's sub-imperialist actions^[3] warrant scrutiny from the global community.

Qatar: Strategic Balancing and Soft Power Projection

Qatar has adopted a distinctive approach to regional influence, combining selective military investment with a robust strategy of soft power and diplomatic engagement. While not as expansive in defense procurement as its neighbors, Qatar has recently upgraded its military capabilities significantly, particularly following the 2017 Gulf diplomatic crisis. This diplomatic crisis was a major geopolitical dispute between 2017 and 2021, marked by a sharp decline in relations between Qatar and several Arab League members. The standoff effectively isolated Qatar until January 2021, when a reconciliation agreement

between Saudi Arabia and Qatar ended the crisis.

Qatar's regional strategy has relied heavily on mediation and influence-building through its global media empire—most notably Al Jazeera—and its financial support for Islamist political movements such as the Muslim Brotherhood. Qatar transformed its "engagement with Islamist movements from a fortuitous convergence of interests to a calculated geopolitical strategy."^[1] In order to protect its ties with its main Western ally, the United States, Qatar has enhanced its position as a non-NATO strategic partner in the Middle East.^[2]

V Qatar's foreign policy is marked by strategic balancing. It has maintained strong relations with the West while cultivating ties with Iran and Türkiye, allowing it to navigate regional rivalries and sanctions. Qatar's key soft power move has been hosting the 2022 FIFA World Cup, highlighting its advanced infrastructure, national aspirations, and capacity to influence global narratives. Although the event garnered exceptional visibility, it faced criticism over human rights and labor conditions, revealing the contradictions in Qatar's international image.

Qatar's strategy combines military modernization, energy diplomacy, and soft power influence.

The Stockholm International Peace Research Institute (SIPRI) reports that Qatar ranked among the leading global arms importers from 2016 to 2020, with the USA and France serving as its main suppliers.^[1] Qatar ranked as the world's third-largest arms importer from 2020 to 24, a significant rise from its position as the 10th-largest importer from 2015 to 19. In contrast, Saudi Arabia saw a 41 percent decrease in its arms imports between the 2015–19 and 2020–24

periods.^[2]

Qatar is home to the Al Udeid Air Base, the largest USA military facility in the Middle East, which plays a vital role in regional operations and boosts the country's geopolitical importance. This partnership with the United States is a cornerstone of Qatar's defense strategy, providing security assurance and a valuable diplomatic asset.^[3] Qatar can extend its influence by presenting itself as a mediator and a force for modernization while cautiously managing the risks of regional conflicts and global attention.

Turkiye: A Rising Regional Military Power

Turkiye has emerged as a key player in the Middle East, balancing its NATO membership with an increasingly assertive foreign policy. Despite being a NATO member, Türkiye and Russia signed a significant defense agreement to deliver advanced S-400 surface-to-air missile systems to Ankara. The deal marked a notable shift in Türkiye's military procurement strategy, raising concerns among its Western allies about interoperability and strategic alignment within NATO.

Moreover, Türkiye's military modernization is focused on reducing its reliance on Western arms suppliers by developing indigenous defense technologies. The Turkish defense industry is one of the most advanced in the region, with a particular focus on drones, missile defense systems, and armored vehicles. Turkish drones, such as the Bayraktar TB2, have been deployed effectively in Ukraine, Syria, Libya, and Nagorno-Karabakh, showcasing Türkiye's growing military capabilities. In the Gulf Cooperation Council (GCC) countries, Türkiye has established strong defense ties with countries like Qatar, Saudi Arabia, and the United Arab Emirates (UAE). These relationships have been solidified through significant defense contracts, such as Saudi Arabia's \$3 billion purchase of

unmanned combat aerial vehicles (UCAVs) last year, which marked the largest defense export deal in Türkiye's history.

The deal stands as another example of Türkiye's willingness to accept stipulations for technology transfer and joint production.^[1]

Turkiye's arms trade extends beyond NATO allies, with significant sales to countries in the Middle East and North Africa. Türkiye's emphasis on the defense industry, especially its commitment to domestic defense production, is growing.

While the local content rate in the defense sector was under 20% in 2000, it rose to 80% by 2022.^[2]

Also, the Kurdish issue has long stood as a major barrier to Turkey's democratization.

On February 27, 2025, Abdullah Ocalan's call for the dissolution of the PKK could represent a turning point in the protracted Kurdish-Turkish conflict.^[3]

The outcome holds broader regional implications, influencing Kurdish dynamics across the Middle East and shaping Türkiye's relations with Iraq and post-Assad Syria. Therefore, factors driving an increase in the defense sector include national security and strategic autonomy concerns.^[4]

Egypt: Military Strength and Regional Influence

Since taking office in 2014, Egypt's President Abdel-Fattah el-Sisi has pursued a highly militarized approach to countering the insurgency in Sinai.

The primary objective has been to dismantle militant groups, especially Wilayat Sina, and eradicate the

insurgency from the region.

To this end, the Egyptian military launched operations in key areas such as Rafah, Sheikh Zuweid, and Al-Arish.^[1]

Additionally, President el-Sisi—a former military figure—has declared an all-encompassing campaign against government corruption a top priority.

This move aligns with a broader trend among authoritarian leaders who leverage corruption and anti-corruption initiatives to reinforce and preserve their grip on power.

In parallel, Egypt's military modernization is deeply influenced by its strategic position as the largest Arab country and its role as a key player in the Arab world.

Egypt's military is one of the largest in the region, and its modernization efforts have focused on acquiring advanced systems from the United States,

Russia, and France. Egypt's defense industry is also bolstered by the production of its military equipment, including small arms and armored vehicles.

A 2020 SIPRI study shows that Egypt's military budget has either slightly increased or decreased, depending on the measurement, with the 48% devaluation of the Egyptian pound in 2016 complicating calculations.

Measured in US dollars, the budget declined from \$3.7 billion in 2011-12 to \$3.3 billion in 2019-20.^[1] In terms of Egyptian pounds, it decreased by 18%.

In 2019, Egypt ranked last in military burden among 12 MENA countries, spending just 1.2% of GDP on defense, well below the regional average of 4.4%.^[2]

Between 2015 and 2019, Egypt became the third-largest arms importer globally and

the second-largest in MENA after Saudi Arabia.^[3]

Its military modernization is partly driven by the need to counter regional threats and internal instability.

Egypt's arms trade involves a mix of Western (US, France) and Russian systems, acquiring advanced aircraft, naval systems, and air defense technologies to maintain its military edge as a regional leader.

Primary Factors Driving the Arms Race

Middle Eastern countries like Saudi Arabia, Iran, Israel, the UAE, Qatar, Türkiye, and Egypt are pursuing militarization and expanding their arsenals due to a complex interplay of geopolitical tensions, historical rivalries, and ambitions for regional

dominance, strategic international partnerships, and internal security concerns. Hence, Table 2 outlines the main drivers behind each country's military buildup.

Table 2: Primary Factors Driving the Arms Race (Own depiction)

Country	Key Drivers of Arms Race	Strategic Focus	Major Arms Sources / Strategy
Saudi Arabia	- Countering Iran - Yemen conflict - Regime protection - Keeping parity with UAE/Israel	Regional deterrence and intervention	US, UK (F-15s, missile defense), high-tech imports
Iran	- Power projection via proxies - Deterrence (missiles, drones) - Sanctions-driven self-reliance - Nuclear ambiguity	Asymmetric warfare, missile and drone arsenal	Domestic production, some Russian/Chinese support
Israel	- Existential threats (Iran, Hezbollah, Hamas) - Maintaining QME - Preemptive defense doctrine - Swords of Iron War	Air dominance, cyber warfare, missile defense	US-backed (e.g., F-35s, Iron Dome, AI tech)
UAE	- Regional middle-power ambitions - Countering Iran and Islamism - Defense industry development	Power projection, smart defense, tech leadership	US, France, local production (EDGE Group)
Qatar	- Post-blockade self-defense - Small state deterrence - Alliance with the US and Turkiye	Air superiority, host nation for bases	US, France, Turkiye; strong defense diplomacy
Turkiye	- Strategic autonomy - Kurdish conflict - Eastern Mediterranean ambitions - Declining NATO	Hybrid: counterinsurgency + regional projection	Domestic industry (Baykar, Aselsan), S-400 (Russia)
Egypt	- Regime protection - Sinai counterterrorism - Regional leadership	Stability, air/naval modernization	US, France, Russia; diversified suppliers

Conclusion

The arms race dynamics across the Middle East and its surrounding regions are deeply rooted in perceived insecurity and persistent regional instability. A comparative examination of Saudi Arabia, Iran, Israel, the United Arab Emirates (UAE), Qatar, Türkiye, and Egypt reveals that while distinct domestic priorities and strategic imperatives shape each state's militarization, common patterns highlight the region's volatile security landscape.

Proxy conflicts and ideological rivalries are central in shaping national defense strategies, as seen in the Saudi-Iranian rivalry, Iran's support for non-state actors, and Türkiye's ideological-driven interventions. Simultaneously, a desire for regional leadership or deterrence fuels military modernization and force projection, particularly in the cases of Israel, Saudi Arabia, the UAE, and Türkiye. These ambitions are further magnified by a heavy reliance on external arms suppliers, which not only sustain but often accelerate the arms race, limiting national autonomy in defense planning and reinforcing regional dependencies on major global powers.

Amid this environment, some states—notably Türkiye and the UAE—have begun developing emerging defense industries, seeking greater self-reliance and technological independence. However, this trend has not reduced tensions; rather, it has added new layers of complexity to regional competition, as indigenous capabilities enable more assertive and prolonged military engagements.

Moreover, the involvement of external powers such as the United States, Russia, and China transforms the region into a geopolitical chessboard, where local actors serve as proxies or strategic platforms for global rivalries. These powers

supply advanced weaponry and entrench their influence through military bases, alliances, and defense cooperation, exacerbating regional militarization and narrowing diplomatic options.

Addressing the escalating arms race requires more than managing bilateral tensions—it demands a comprehensive, multilateral governance framework that prioritizes diplomacy, regional cooperation, arms control, and mutual security guarantees. Only by fostering transparency, reducing dependency on militarized solutions, and embracing shared commitments to peace and stability can the Middle East hope to escape the entrenched cycle of insecurity and build a sustainable and secure future.

References

- Al Jazeera. "Iran, Russia, China Conduct Joint Naval Drills in Gulf of Oman." Al Jazeera, March 12, 2025. <https://www.aljazeera.com/news/2025/3/12/iran-russia-china-conduct-joint-naval-drills-in-gulf-of-oman>.
- Arms Race." Cambridge Advanced Learner's Dictionary & Thesaurus, Cambridge University Press. Accessed April 16, 2025. <https://dictionary.cambridge.org/dictionary/english/arms-race>.
- Center for Preventive Action. "Conflict in Yemen and the Red Sea." Global Conflict Tracker. Updated March 26, 2025. <https://www.cfr.org/global-conflict-tracker/conflict/war-yemen>.
- Council on Foreign Relations. "Iran's Revolutionary Guards." Backgrounder. Last modified November 12, 2024. <https://www.cfr.org/backgrounder/iran-revolutionary-guards>.

- Czulda, Robert. "UAE Transitions From Arms Importer to Competitor With the West." Stimson Center, February 26, 2025.
- <https://www.ispionline.it/en/publication/qatar-a-small-power-with-big-ambitions-passing-also-through-political-islam-203340>.
- Egypt's Counterterrorism Strategy in Sinai: Challenges and Failures. Arab Center Washington DC, August 28, 2020. <https://arabcenterdc.org/resource/egypts-counterterrorism-strategy-in-sinai-challenges-and-failures/>.
- Finkel, Meir. "Preventive War: Its Disappearance from Israel's Security Toolbox and the Need for Its Return." Begin-Sadat Center for Strategic Studies, April 21, 2024. <https://besacenter.org/preventive-war-its-disappearance-from-israels-security-toolbox-and-the-need-for-its-return/>.
- Farhat, Jawhar. "Al Udeid Air Base: The Largest US Military Installation in the Middle East." Grey Dynamics, April 16, 2024. <https://greydynamics.com/al-udeid-air-base-the-largest-us-military-installation-in-middle-east/>.
- George, Mathew, Katarina Djokic, Zain Hussain, Pieter D. Wezeman, and Siemon T. Wezeman. "Trends in International Arms Transfers, 2024." Fact Sheet, March 2025. Stockholm International Peace Research Institute. https://www.sipri.org/sites/default/files/2025-03/fs_2503_at_2024_0.pdf.
- Iran Dismisses Need for Russia's S-400, Touts Domestic Missile Strength. Iran International, November 19, 2024. <https://www.iranintl.com/en/202411171565>.
- Knesset. "Swords of Iron War." Lexicon of the Knesset. Accessed April 16, 2025. <https://main.knesset.gov.il/en/about/lexicon/pages/swordsiron.aspx>.
- Mahjoub, Husam. "The Emerging Sub-Imperial Role of the United Arab Emirates in Africa." Transnational Institute, February 4, 2025. <https://www.tni.org/en/article/the-emerging-sub-imperial-role-of-the-united-arab-emirates-in-africa>.
- Mekay, Emad. "Saudi Arabia and Israel Quietly Prepare 'Deal of the Century'." International Bar Association, April 2025. <https://www.ibanet.org/article/d2659617-4cab-4fe9-8b60-a971485ec3d6>.
- Perlo-Freeman, S. "Arms Race." Encyclopedia Britannica, April 19, 2024. <https://www.britannica.com/topic/arms-race>.
- Richardson, Lewis F. Arms and Insecurity: A Mathematical Study of the Causes and Origins of War. Edited by Nicolas Rashevsky and Ernesto Trucco. Pittsburgh: Boxwood Press, 1960.
- Schelling, Thomas C. The Strategy of Conflict. Cambridge, MA: Harvard University Press, 1960.
- Sidhu, Arman. "Turkiye's Defense Industry Emerges as a Global Player." Geopolitical Monitor, September 19, 2024. <https://www.geopoliticalmonitor.com/turkiyes-defense-industry-emerges-as-a-global-player/>.
- SIPRI: Significant Rise in Arms Imports in Europe." Militär Aktuell, April 9, 2023. <https://militaeraktuell.at/en/sipri-significant-rise-in-arms-imports-in-europe/>.
- Stockholm International Peace

- Research Institute (SIPRI). "Ukraine the World's Biggest Arms Importer; United States' Dominance of Global Arms Exports Grows as Russian Exports Continue to Fall." SIPRI, March 10, 2025. <https://www.sipri.org/media/press-release/2025/ukraine-worlds-biggest-arms-importer-united-states-dominance-global-arms-exports-grows-russian>.
- South China Morning Post. "Chinese, Russian, and Iranian Navies Launch Five Days of Drills in Gulf of Oman, Close to US-Led Middle East Sea Exercise." South China Morning Post, March 12, 2025. <https://www.scmp.com/news/china/military/article/3213657/chinese-russian-and-iranian-navies-launch-five-days-drills-gulf-oman-close-us-led-middle-east-sea>.
- "Turkey is not usually considered a part of the Middle East as a whole, but it is often included in the broader definition of the region due to its geographical, historical, and political ties."
- "Egypt is often included in the Middle East region due to its strong ties with the Arab world."
- TRT World Research Centre. "Turkiye's Defence Industry: Rise of the Phoenix." TRT World Research Centre, February 20, 2024. <https://researchcentre.trtworld.com/featured/turkiyes-defence-industry-rise-of-the-phoenix/>.
- "UAE Hired Sudanese Mercenaries to Fight in Yemen and Libya, Documents Reveal." Emirates Leaks, February 10, 2025. <https://emiratesleaks.com/uae-hired-sudanese-mercenaries-to-fight-in-yemen-and-libya-documents-reveal/?lang=en>.
- "Saudi Vision 2030." Kingdom of Saudi Arabia, March 2025. https://www.vision2030.gov.sa/media/rc0b5oy1/saudi_vision203.pdf

MAPPING THE GULF ARMS TRADE: EXPORTS FROM THE UK, GERMANY, AND SCANDINAVIA TO SAUDI ARABIA AND THE UAE

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Introduction

Tainted with copious amounts of conflicts and instability in the past few decades, the Middle East has emerged to be one of the most significant regions to spend on its defense budget in order to assert regional geopolitical influence and enhance national security measures. Among all the Gulf Cooperation Countries (GCC), Saudi Arabia and UAE remain the top countries to spend on their military budgets. The Stockholm International Peace Research Institute (SIPRI) reports Saudi Arabia to maintain a top position in the world in terms of military spending. In 2023 alone, Saudi Arabia allocated approximately \$61 billion to the defence department and the pattern has remained steady over the years, underscoring the kingdom's sustained focus on military modernisation. The United Arab Emirates follows with a substantial defence budget of around \$22 billion. Meanwhile, countries like Qatar, Bahrain, and Kuwait continue to make significant investments in their armed forces, driven by the regional instability and active roles in multinational military coalitions.

In recent years, however, UAE and KSA have started focusing on local industries of arms

production as is evident from the establishment of government owned defense contractors such as UAE based EDGE and Saudi Arabian Military Industries (SAMI) that aims to localise defense production and lessen dependence on foreign countries, thus diversifying their arms resources.

Despite the localisation of military industries by UAE and KSA, both the states rely heavily on arm imports from the Western world. According to Middle East Eye, the highest arms imports in the world are by the UK and the USA and among the buyers, KSA remains the top buyer, having purchased \$116bn worth of arms in the past decade. It has been reported that more than half of the UK arms are exported to KSA alone, emphasising the urgency to discuss this issue amidst the changing global and regional geopolitics of Middle East, ethical and legal challenges presented by the public and political pressure in the Western countries. Not just the UK, but Germany after a temporary arms export ban (due to Yemen war) to Middle Eastern countries, resumed in 2022. Similarly, amidst the Yemen war and afterwards, Scandinavian countries, especially export of Swedish munitions, has faced criticism and needs to be addressed.

Arms trade has emerged as one of the biggest challenges in contemporary geopolitics, underscored not as a cause of instability in the MENA region but amidst the Israel-Palestine war, public engagement with the arms export policy has raised political, ethical, and economic concerns in the UK, Germany, and Scandinavian countries.

In this backdrop, this report maps the arms exports from the UK, Germany, and Scandinavian countries to the biggest importers from the Middle East, that is, KSA and UAE. The report has been divided into three parts. The first part

discusses the exporter country profiles and their relevant policy frameworks followed by the second part discussing the strategic rationale, defense spending and diplomacy of the client states (KSA, UAE in this case). The third part discusses the intersections and contradictions of the exporter states as well as the legal and ethical debates followed by Concluding remarks.

Country Profiles and Policy Frameworks

United Kingdom (UK)

The UK has been one of the most prominent figures in the global arms industry exporting more than half of its arms production to the Middle East. Since the onset of the Saudi-led coalition's air campaign in March 2015, the UK has licensed arms exports valued at £9.7 billion. Of this value, £8.2 billion has been reported to go to Saudi Arabia. However, the Campaign Against Arms Trade (CAAT) estimates the true value of UK arms exports to Saudi Arabia exceeds £29 billion, with total sales to the coalition that includes UAE and other members with a total value approaching £31 billion.

Under the project 'Salam Deal' valued at £4.4 billion, Typhoon Block-20 and Block-8 variants were delivered (2013–2017) to KSA as well as different precision guided munitions. In 2013, Raytheon UK secured a £150 million contract to supply approximately 2,400 Paveway IV bombs. These munitions have been operationally deployed by the Royal Saudi Air Force since 2015 in the Yemen conflict. Similarly, 1,000 Brimstone air to surface missiles have been integrated into both Tornado and Typhoon aircrafts by the Royal Saudi Air Force along with the ALARM (Air-Launched Anti-Radiation Missile) and 350 long-range cruise missile Storm Shadow delivered between 2011–2013.

Along with KSA, UAE has been the major importer for military equipment licensing from the UK and the numbers have risen

since the Coalition government came to power. According to AOAV, 9,003 export licenses were granted by the UK government to UAE between 2008–2017 that included 6,038 licenses directed exclusively at military equipment. In this vein, the value of dual use licenses (military equipment and cyber surveillance material for civilian use) peaked at £7.2 billion between 2008–2017.

From 2010–2019, weapons such as Air Refuel System, AS-5 (SIGINT System), Seaspray-MP Aircraft Radar and Trent-700 (Turbofan) have been transferred from the UK to UAE under the Arms Trade Treaty that ratified and entered to force since April 02, 2014.

While the UK occupies a significant position in the global weapon industry, earning billions of pounds, it faces political and legal challenges at home. Amidst the Yemen crisis, UK arms sale to Saudi Arabia was ruled as unlawful and judges ruled to review the licenses. Different non-profit organisations have launched campaigns (Campaign Against Arms Trade- CAAT being the most notable) against the exports of arms to Saudi Arabia and UAE given their involvement in Yemen that killed more than 150,000 people resulting in one of the largest humanitarian catastrophes. This situation demands that the UK's arms industry needs to be reviewed.

Germany

A fact sheet published by Stockholm International Peace Research Institute (SIPRI) in March 2023 has reported Germany as one of the countries among top five arms exporters in the world along with USA, Russia, China, and France. Together, these five countries exported 76% of the global arms between 2018–2022. The Middle East and in particular, Saudi Arabia stands at top among the recipient states accounting for 9.6% of the global imports share.

Between 2018–2022, however, UAE decreased its arms imports by 38% as compared to the period between 2013–2017. Overall, Germany's share of global arms exports was 4.2% with 36% exported to the Middle East. The German Institute for International and Security Affairs reports that Saudi Arabia and UAE along with Algeria, Egypt, and Qatar purchased ammunition worth 4.7 billion euros from Germany that makes about one quarter of total sale.

Following 2022, after a brief ban on arms exports to KSA by Germany imposed in 2018, Bundestag approved renewal of licenses that enabled KSA to purchase equipment and ammunition for Eurofighter and Tornado jets worth €36 million (\$35.2 million). In 2023, the German government approved the export of 150 IRIS-T air-to-air missiles for use with Saudi Arabia's Eurofighter fleet. Germany, as a part of the European Cooperation Project, also pledged to provide spare parts for the Airbus A330 MRTT worth €2.8 million.

Similarly, in 2017, Germany authorised the supply of over 200,000 detonators for 40mm shells from Junghans Microtec and approved €126million worth of armoured-vehicle armour plating by Dynamit Nobel Defence for the UAE followed by the approval of reactive armour systems valued at €126million for UAE-leased Leclerc tanks operating in Yemen in 2019. That same year, the German government green-lit €26.1million in defense exports to the UAE, part of over €1billion in arms sales to members of the Saudi-led coalition.

This debate of arms export has been situated in the German policy framework as a part of coherent foreign and security strategy. Germany's arms export policy is shaped by a combination of legal frameworks at both the national and European levels. These include the EU's Council Common Position 2008/944/CFSP (which sets out common rules for military exports), Article 26(2) of the German Basic

Law, as well as national legislation such as the War Weapons Control Act, the Foreign Trade and Payments Act, and the Foreign Trade and Payments Ordinance. Additionally, the policy is guided by the Federal Government's Political Principles on the Export of War Weapons and Other Military Equipment, which provide further criteria and oversight.

Despite the legal regulations of German arms export, there has been a debate for reviewing the arms export policies given the export to countries/regions marred with instability and volatile human rights situation resulting in ethical and political challenges.

Scandinavian Countries

Among all the Scandinavian countries, the minimal arms exports to KSA and UAE have been reported by Norway. In 2023, US\$557 worth of swords, cutlasses, bayonets, and military weapon parts were exported to Saudi Arabia, according to United Nations COMTRADE data. In 2017, Arms exports to UAE and KSA were banned by Norway amidst the rising concerns of the humanitarian crisis in Yemen, though Type B non-lethal military equipment continued to be traded.

In the similar context, Finland exported 36 NEMO 120mm mortar systems to Saudi Arabia via state-owned Patria Weapons Systems in 2011 followed by 40 amphibious Patria AMVs to the UAE in 2016. Before freezing the arms export to KSA and UAE in 2018 amidst the Yemen war, Finland had exported around €1.5 million worth of military goods to Saudi Arabia and €36 million to the UAE in 2017, making the UAE its top arms export destination that year.

Like Finland, Denmark also imposed a ban on arms sales to KSA and UAE in 2018 and 2019 but reversed this ban in 2023 under the foreign policy doctrine of

'pragmatic realism'. With its 200 defense industries, Denmark calls for equal opportunities regarding economic incentives as well as creation of jobs within the industry.

Among all Scandinavian countries, Sweden has been a consistent supplier of military hardware to both KSA and UAE except for a moratorium on new licenses for Yemen-involved states in January 2019. According to a report published by SIPRI, Sweden is 15th largest global exporter of arms despite reducing its arms sale by 62% since 2009. In March 2021, the Swedish Inspectorate for Strategic Products (ISP) submitted its 2020 report on national munitions exports to the UAE. Despite the implementation of stricter arms control measures, Sweden exported munitions worth over SEK 16.3 billion in 2020. This reflects a more than fivefold increase in arms exports since the early 2000s. The United Arab Emirates, an active member of the Saudi-led coalition in Yemen, emerged as the largest recipient of Swedish arms during this period.

Between 2010-2019, Sweden has exported 71 MD5 Diesel Engines, 200 RBS-56B Bill-2 (Anti-tank missile), 2 Saab-2000 AEW to Saudi Arabia while 45 DI-12, 07 Erieye SRSS, 12 Ghannatha, 6 Air search radars, 2 Saab-340 AEWand, 2 naval guns SAK-70 Mk-2 57mm have been exported to UAE in the same time period.

No new export deals have been approved since 2013 with KSA or UAE in compliance with Sweden's policy for global development (PGU) adopted by Riksdag in 2003 but new regulations apply to new deals only initiating the debate regarding loopholes in Swedish legislations on arms export control.

Gulf States as Clients; Strategic Rationale

Gulf States remain the highest defense procurement market spending billions of dollars on technologically advanced and

lethal weapons, serving as a highly value-added market for Western defense industry. Military expert Jean-Loup Samaan in his book 'New Military Strategies in the Gulf' underscores the strategic rationale of Saudi Arabia, UAE, and Qatar and explicates their diversification of traditional military procurement. Arab Gulf states have long pursued the development of indigenous defense industries, but recent years have seen a notable intensification of these efforts given the evolving geostrategic landscape, internal socio-economic transformations, and an ambition for assertive role in regional and global affairs. Samaan discusses four key pillars of Gulf nations defense strategy that are; diversifying traditional military procurement sources, building robust domestic defense manufacturing capabilities, forging regional and international defense-industrial partnerships, and enhancing geopolitical influence through arms exports, military aid, and strategic defense investments in third countries. These policies reflect a desire for greater self-reliance in defense and an effort to convert military-industrial development into foreign policy leverage.

Although UAE, as a member of the Saudi-led military coalition, possesses a highly advanced air defense system, largely reliant on the U.S.-made platforms such as the older HAWK missiles, the Patriot PAC-3 system, and THAAD, it continues to seek enhancements to its strategic and military posture, especially after the recent Houthi led attacks. In the changing geostrategic landscape, UAE and KSA are trying to diversify their military resources. Recent examples is the largest arms deal in history of South Korea where it has agreed with the UAE to sell \$3.5bn worth of these advanced missiles, along with accompanying radars.

These developments are emblematic of

Saudi Arabia and UAE defense procurement policies that rely heavily not only on UK, Germany, and Scandinavian countries but cater to the ammunition and military hardware market of the USA and now expanding to far-east countries as well.

Intersections and Contradictions

Along with all the military cooperation and trade deals between KSA, UAE and European nations, there has been a parallel debate and critique on this strategic cooperation from an ethical, legal, and political perspective. Different intersections and joint ventures can be underscored in this context that determine the strategic rationale of countries on one hand but also reflect the contradictions and loopholes at policy level and diverging ethical standards on the other hand.

In this vein, joint ventures of UK-Germany defense firms is a primary example such as MBDA (missiles), Airbus (aerospace and drones), and Rheinmetall UK that combine technological expertise and market access to accelerate arms production and its exports to global clients such as Saudi Arabia and UAE. As a result, both of these countries have faced widespread criticism and global calls to review their arms export policies amidst the humanitarian crises in the Middle East and involvement of client states, that is KSA and UAE. While Germany halted its exports to KSA in 2018 amidst Yemen conflict, UK faced severe criticism for its export licenses to Saudi Arabia. In 2023, Germany reviewed its policies to facilitate the arms export to KSA except for the Euro jet fighters that have been pushed by the UK in return.

NATO members, including the UK and Germany, tend to align their arms exports with alliance strategy, emphasizing interoperability and support for partner states. In contrast, neutral countries like Sweden and Finland adopt more cautious

export policies, often restricting sales to conflict zones or contentious regimes to uphold neutrality and human rights standards.

This complex landscape and the intersection of national interests, strategic rationale as well as ethical imperatives and international legal obligations reveals the inherent contradiction. Balancing these competing demands continues to challenge policymakers, industry stakeholders, and civil society actors striving for greater transparency and accountability in global arms trade.

Conclusion

The complex nexus of arms exports from UK, Germany, and Scandinavian countries to Saudi Arabia and the UAE is emblematic of multifaceted intersections of global and regional geopolitics, political economy as well as legal and ethical issues. In recent decades, the Gulf's substantial defense spending has positioned it as a major arms importer, driven by regional dynamics and to assert regional influence. The diverse portfolio of suppliers, from British Typhoons and German missiles to Swedish munitions, underscores the commercial opportunities and the geopolitical dependencies embedded in these transactions.

At the core of these arms deals lies a dual reality shaped by offensive and defensive realism. Gulf states pursue military modernization not only to bolster defense capabilities amid regional volatility but also to diversify their supply chains, mitigating risks associated with overreliance on a single exporter. Meanwhile, exporting countries balance economic interests and alliance commitments against rising domestic

and international scrutiny over the ethical implications of supplying arms to conflict zones, especially given the humanitarian toll in places like Yemen.

The policy frameworks governing arms exports vary significantly.

The UK's continued licenses to Saudi-led coalition members contrast with Germany's more restrictive stance, while Scandinavian countries tend to emphasize stricter ethical controls, reflecting their neutrality or cautious foreign policy orientations.

Yet, joint ventures between UK and German firms highlight the practical complexities of disentangling cooperation in defense production from differing national export controls.

The EU's Common Position attempts to harmonize standards but faces challenges in consistent enforcement, exposing contradictions between economic ambitions and legal-ethical commitments.

Emerging trends such as arms diplomacy, the integration of dual-use technologies, and Gulf investments in European defense firms illustrate the evolving landscape where military and economic interests intertwine further.

Simultaneously, the green transition and global calls for demilitarization add new layers of tension, questioning the sustainability of continued militarization alongside environmental and ethical responsibilities.

The Gulf arms trade exemplifies a delicate balance of power projection, economic gain, and ethical accountability, one that demands ongoing scrutiny, transparent policymaking, and multilateral dialogue to navigate its contradictions and global consequences situated in the ethical International Relations framework.

FROM MIRAGE DEALS TO JOINT VENTURES: 30 YEARS OF GULF– SOUTHERN EUROPE DEFENSE TIES

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Over the past three decades, defense relations between Gulf Arab states and Southern European countries have evolved from transactional arms deals into strategic partnerships marked by industrial cooperation, joint ventures, and operational collaboration. While the United States continues to dominate arms exports to the Gulf Cooperation Council (GCC), countries like France, Italy, Spain, and, more recently, Greece have carved out significant and growing roles in the region's military procurement landscape. These relationships now encompass joint production, know-how transfer, joint military drills, cyber-defense, and space cooperation. This article maps out the evolution of this relationship, beginning with a historical overview and then diving into the recent transformations driven by localization strategies, regional security imperatives, and shifting geopolitical alignments.

Early stages of European arms engagement in the Gulf: 1990s to Late 2010s

France: The Legacy Power

France has been a cornerstone of Gulf defense partnerships since the early 1990s, particularly with the United Arab

Emirates. Paris's approach—emphasizing technology transfer, operational autonomy, and political flexibility—resonated strongly with Gulf monarchies seeking diversified procurement portfolios beyond U.S. influence.

In particular, Abu Dhabi's acquisition of nearly 60 Dassault Mirage 2000 multirole fighter jets in these years marked one of the first significant non-American arms deals in the region. This considerable Franco-Emirati fighter jet deal include the 1983 contract for 36 Mirage 2000s (SAD-8 standard) and the 1998 follow-up deal worth \$3.2 billion for 32 strike-configured Mirage 2000-9s and the upgrade of 30 existing units, delivered by 2003.^[1] As of the late 2010s, the UAE's Mirage 2000 fleet enumerated 59 platforms, some of which were used operationally in Libya and Yemen—where one platform was downed.^[2] Qatar became France's second Gulf customer for the Mirage 2000-5, ordering twelve aircraft in 1994 and continuing to rely on Paris as a preferred supplier.^[3]

On the ground systems front, France distinguished itself early on from other European suppliers by actively focusing on tracked and wheeled land warfare platforms at a time when Arab Gulf states' land forces were beginning to modernize. Notably, since the late 1980s, France delivered AMX-30 MBTs, AMX-10P IFVs, VAB APCs, and AMX AuFl howitzers to Saudi Arabia, along with MILAN and HOT anti-tank missiles and Mistral air defense systems.^[4] With over 1,300 armoured vehicles delivered, French-supplied equipment formed the backbone of Saudi Arabia's land forces for two decades.

In the case of the UAE, French cooperation intensified in the 1990s, culminating in one of the most significant European land arms deals with any Gulf country: the acquisition of 388 (initially 436) Leclerc main battle tanks (MBTs). Delivered between 1994 and 2003, the UAE

Leclercs were customized with German

engines and new battle management systems, as well as tailored for desert warfare,^[1] symbolizing both high-end capability transfer and French responsiveness to Emirati requirements. More recently, France's relevance in the Gulf market persisted via the 132 CAESAR 6x6 self-propelled howitzers—the Wests best-selling wheeled system of its category—delivered to Saudi Arabia between 2010 and 2016.^[2]

In naval defense, France's early footprint began with the Saudi Sawari programs. Under Sawari I (1980s), France's DCNS (now Naval Group) built four Al Madinah-class frigates, while, the following Sawari II (1990s–2000s) delivered three Al Riyadh-class frigates. In the UAE, CMN shipyard partnered with Abu Dhabi Ship Building (ADSB) on six Baynunah-class corvettes and later on two Gowind-based Bani Yas-class corvettes delivered in the early 2020s. Altogether, these programs accounted for more than 65% of the Royal Saudi and Emirati navies' major surface combatants delivered between 1980 and 2020.^[1]

Italy: From early aviation diplomacy to strategic defense partner

Italy's entry into the Gulf arms market was more gradual but strategically focused, evolving steadily from training and niche aerospace capabilities in the 1990s to full-spectrum naval-industrial partnerships by the 2010s. The roots of this relationship trace back to the 1920s–1930s, when the then Regia Aeronautica played a formative role in assisting the nascent Royal Saudi Air Force, through a combination of training programs and technical guidance.

Decades later, Italy featured—albeit marginally—in one of Saudi Arabia's most significant military programs: the Panavia Tornado. As part of the UK-led Al-Yamamah arms deal,^[1] Saudi Arabia purchased 96 IDS and ADV Tornados in the 1990s. While the final assembly was

conducted in the UK, the Tornado program was a tri-national venture involving Italy (wings

production) and Germany (center fuselage), granting Italy a modest but notable industrial stake in one of the RSAF's cornerstone platforms.

Italian rotary-wing, multi-role transport platforms played a more direct and visible role in the 2000s and 2010s. The AgustaWestland AW139 became a staple helicopter for both the UAE (9 units) and Qatar (18 units), with deliveries beginning in the late 2000s. These included training packages and spares, while private aviation transport companies – such as Falcon Aviation Services in Abu Dhabi – expanded their fleets with AW189s in 2014. Saudi Arabia also procured two AW101 VVIP-configured helicopters by 2013. By 2019, these Gulf countries deployed over 50 AgustaWestland's platforms altogether.^[1]

Italy has also sought to carve out a specialized role in the Gulf's aviation export market by offering niche yet adaptable aerospace platforms. On the unmanned side, Italy's Falco tactical UAV, developed by Selex Galileo, was sold to Saudi Arabia by 2012.^[2] With more than 50 air vehicles exported globally, the Falco became one of Europe's few operational UAVs in Gulf service during that period. In parallel, Italy had delivered a dozen of MB-339A training aircraft to the UAE, six of which were later upgraded to the MB-339NAT variant for the Al Fursan aerobatic team.^[3] Introduced in 2010, the aircraft reflect a blend of pilot training, public diplomacy, and air show visibility, further highlighting Italy's strategy of leveraging adaptable, mid-tier platforms to gain traction in the Gulf's competitive defense aviation space.

In the naval realm, Italy's rise was anchored by its work with the UAE, where Fincantieri delivered one Abu Dhabi-class corvette and multiple Falaj 2-class patrol vessels between 2011 and 2013. Signed in

2009, the program also led to the establishment of Etihad Ship Building LLC, a joint venture between Fincantieri, Al Fattan Shipyard, and Melara Middle East.^[4] This venture enabled design, production, and maintenance operations in the Gulf, advancing Abu Dhabi's localization agenda and extending Italy's footprint in regional shipbuilding.

Italy's biggest leap, however, came with Qatar's 2016 order for a comprehensive naval package valued at nearly €5 billion. The deal included four Al Zubarah-class multi-mission corvettes, two Musherib-class offshore patrol vessels (OPV/FACM, based on the UAE's Falaj 2-class), and one Al Fulk-class Landing Platform Dock (LPD).^[5] This diversified fleet dramatically enhanced the Qatar Emiri Naval Forces' (QENF) capabilities, enabling them to project maritime power across anti-air, anti-ship, and anti-submarine warfare domains. The LPD added an expeditionary amphibious dimension to Doha's naval doctrine. To support long-term lifecycle needs, Italy established Fincantieri Services Middle East in Doha in 2017—a wholly owned subsidiary responsible for training, logistics, and in-service support. This move embedded Italy within Qatar's defense ecosystem, enabling a sustained after-sales presence well beyond the initial delivery window.

Italy's appeal rested not only on its hardware but also on its operational willingness to engage in cooperative maritime security, a growing concern for Gulf states amid threats from Iran and regional instability. Rome also emerged as a diplomatic partner, aligning its naval presence with multilateral anti-piracy missions and security operations in the Red Sea and Gulf of Oman.

Spain: From discreet entrant to naval powerhouse

Spain's defense relationship with the Gulf began discreetly in the early 1990s but matured into a more assertive presence by the end of the following decade. Its first notable military export to the region was the delivery of over 5,000 C90-CR (M3) anti-tank rocket launchers to the Saudi Arabian Army.^[1] This marked quiet Spain's entry into a Gulf arms market then dominated by the United States, France, and the UK, reflecting Madrid's early intent to establish a foothold in the region.

By the late 1990s, Madrid had also cultivated ties with the UAE. In 1998, Abu Dhabi placed an order for seven CASA CN-235 Maritime Patrol Aircraft (MPA)—jointly developed with Indonesia's IPTN. Saudi Arabia also became a CN-235 operator, acquiring the aircraft for tactical transport roles.^[2] In the late 2010s, both Abu Dhabi and Riyadh upgraded their transport fleets by purchasing Airbus C295 aircraft—a CN-235 successor following Airbus' acquisition of CASA. These joined an existing Airbus transport fleet that already included CN-235s and A330 MRTTs.^[3]

Spain's presence in the Gulf's land systems sector grew further in 2010, when UROVESA delivered around 30 VAMTAC S3 armored vehicles to Saudi Arabia.^[4] Though not a flagship program, the VAMTAC export—well received for their adaptability in desert and urban operations—symbolized Spain's growing interest in diversifying its defense offerings across land, air, and maritime domains.

The culmination of this progressive build-up came in 2018, when Navantia signed a landmark €1.8 billion

agreement with the Royal Saudi Naval Forces to deliver five Avante 2200-class corvettes under the Al-Sarawat program. The contract represented Spain's largest naval export to the Middle East and a major leap in its defense-industrial engagement with the Gulf. More than just a sales agreement, the deal included training programs, logistics support, and potential for future joint industrial ventures, signaling a shift from traditional procurement to operational partnership. Construction began in 2019, and deliveries extended into the early 2020s, cementing Spain's role as a credible maritime partner for the Gulf's largest military spender.

The Eurofighter connection

Italy and Spain also benefitted industrially from their role in the Eurofighter Typhoon production line, a multinational program involving the UK, Germany, Italy, and Spain. Both Rome and Madrid contribute to this European Joint Venture (JV) with key components, respectively via Leonardo and Airbus Spain groups. Leonardo, Italy's flagship defense conglomerate, produces the left wing, outer flaperons, and rear fuselage sections, while Airbus Spain—former CASA—handles the right wing and slats.

This cooperative framework enabled Italy and Spain to indirectly benefit from Gulf acquisitions – although final assembly and sales were secured by BAE Systems. Saudi Arabia ordered 72 Typhoons in 2007—24 Tranche 2 and 48 Tranche 3 variants—delivered in three batches and partially assembled domestically. The first aircraft entered service in 2009 and, as of 2017, 71 remained in service after one loss in Yemen. Qatar followed suit a decade later, signing a deal for 24 Typhoons in December 2017, with deliveries beginning five years later. These include 20 single-seat and 4 twin-seat variants.^[1]

The Saudi and Qatari Typhoons

complement similar deals signed by Kuwait (28 Tranche 3A Typhoons in 2016) and Oman (12 in 2012), making the Eurofighter the backbone of Arab Gulf fighter jets aviations, alongside Dassault's and US systems. While final integration is UK-based, these transactions extend the industrial benefits across all four Eurofighter partner states—including Italy and Spain.

The New Strategic Era (2022–2025): From Procurement to Partnership

The early 2020s marked a turning point in Gulf–Southern European defense ties. While past decades were largely characterized by direct arms procurement, the current era is increasingly defined by joint industrial ventures, co-production agreements, and technology transfer. This evolution aligns with the broader strategic ambitions of Gulf states like the United Arab Emirates and Saudi Arabia, which seek to localize 50% or more of their defense spending under national visions such as UAE's EDGE strategy and Saudi Arabia's Vision 2030^[1].

European defense firms from Italy, France, and Spain have adapted to this changing environment by shifting from transactional arms sales to long-term industrial and strategic partnerships. The result was a sharp increase of arms exports. Between 2020 and 2024, while half of arms imports by MENA states were still of US origins, European states like Italy and France were capable of carving a considerable slice of the region's arms market, respectively at 12 and 9.7 per cent.

Together, these developments mark a qualitative shift in Euro-Gulf defense relations. What was once a buyer–supplier dynamic has become a

landscape of shared production, co-designed platforms, and integrated defense planning, reinforcing both operational autonomy for Gulf states and long-term industrial presence for Southern Europe.

France: Still Leading the European Pack in Air and Naval Exports

France has retained its central role in Gulf defense procurement, particularly in the naval and air sectors. Between 2019 and 2023, France overtook Russia as the world's second-largest arms exporter, capturing 12% of total Middle East arms imports, according to SIPRI. In 2024 alone, French defense exports exceeded \$19.5 billion, with Rafale fighter jets and submarines accounting for over \$10.8 billion.^[1]

A cornerstone of France's Gulf engagement and its enduring partnership with the United Arab Emirates has been the landmark \$18.5 billion deal for 80 Rafale F4 fighter jets—the largest export order in Dassault Aviation's history. Signed in December 2021 in the presence of President Emmanuel Macron and UAE President Mohammed bin Zayed, the contract marked a turning point in Franco-Emirati defense ties.^[2] Deliveries began in early 2025, making the UAE not only the largest Rafale operator outside France but also the first international user of the advanced F4 variant. Equipped with AI-enhanced sensor fusion, the Thales RBE2 radar, and the SPECTRA electronic warfare suite, the Rafale F4 significantly boosts the UAE's airpower and sovereignty in an environment increasingly shaped by missile and drone threats.^[3]

The deal also served as a stopgap measure and signal of strategic autonomy during Abu Dhabi's temporary pause in F-35 talks with

Washington, reflecting the UAE's long-term plan to diversify its security partnerships and upgrade its mission-ready fleet.^[4]

Qatar, another longstanding French partner, completed the delivery of all 36 Rafale jets by 2023–24 ordered in 2015 and an additional 12 in 2018. The 2019 handover of the first aircraft occurred during the Saudi-led blockade, underscoring Doha's pivot toward strategic diversification. Notably, France accounted for 14% of Qatar's arms imports between 2020 and 2024.

While deepening air cooperation, France also reinforced its naval posture across the Gulf. Naval Group delivered two Gowind-class corvettes (Bani Yas class) to the UAE, following earlier cooperation on the Baynunah-class with CMN. In Saudi Arabia, three Al Riyadh-class frigates from the Sawari II program remain central to RSNF operations, while discussions for a Sawari III follow-up continue.^[1]

While the Kingdom remains primarily aligned with US and UK suppliers, Paris has gradually expanded its footprint, supplying 6.2% of Riyadh's total arms imports during 2020–2024. In particular, Paris provided 58 HSI32 fast interceptors to RSNF for littoral operations.^[2] This naval engagement was complemented by MBDA's missile systems (Exocet, MICA, Aster) and consistent customization of French-built vessels to Gulf maritime doctrine. Naval Group, CMN, and MBDA became embedded in Gulf shipbuilding and combat systems strategies.

Rotary-wing platforms feature prominently in France's Gulf strategy. In 2024, Saudi Arabia's Public Investment Fund-backed Helicopter Company (THC) signed a deal with Airbus to acquire 120 helicopters—including H125 and H145 models—over 5–7 years. Airbus

also reached a \$6.7 billion agreement with Saudi firm Scopa to establish local helicopter manufacturing.^[3]

Paris' presence is not limited to hardware. Companies such as Thales and Nexter have expanded operations in the UAE and Saudi Arabia, offering cyber-defense systems, anti-drone capabilities, and armored vehicle upgrades. Nexter continues to provide sustainment, training, and urban combat enhancements for the UAE's Leclerc tanks, including the AZUR package.

Operationally, France has scaled down its presence in Africa while reinforcing deployments in the Gulf. French forces are stationed at Al Dhafra air base, Zayed Military City, and a naval base in the UAE. In 2023, France launched trilateral naval drills with the UAE and India and has co-led exercises like Medusa 13 alongside Greece and Gulf partners. In 2024, it participated in joint drills such as Al Mohed Al Hind with Saudi naval forces in the Red Sea, reflecting the growing overlap between industrial cooperation and operational interoperability in key maritime theatres.^[1]

Italy: From Helicopters to Strategic Industrial Ties

Italy's presence matured into diversified cooperation from 2022 to 2025. Rome's role is especially prominent in Qatar, the second-smallest GCC state but the region's top arms importer between 2020 and 2024, accounting for 23% of MENA imports. SIPRI data show Italy was Qatar's second-largest supplier during this period, accounting for 20% of its total arms imports.^[1] Rome has indeed emerged as a central partner in Doha's naval modernisation efforts, competing closely with Turkey in the

maritime domain. Since 2017, Italian shipbuilder Fincantieri has delivered a €5 billion program including four Al Zubarah-class corvettes, two Musherib-class OPVs, and the Al Fulk landing platform dock (LPD), handed over in November 2024.^[2]

Fincantieri has also supported personnel training, alongside initiatives to send Qatari naval cadets to Italy and bolster Qatar's maritime training capacity. Doha's vision includes acquiring two Italian-built midget submarines, known as M23, to enhance its deterrence posture.^[3] Notably, in 2022, Italy and Turkey deployed joint forces to support Qatar during the FIFA World Cup, reflecting expanding military cooperation.

Beyond Qatar, Italy has deepened defense-industrial ties with Saudi Arabia and the UAE. In 2023, Fincantieri and Abu Dhabi's EDGE Group launched MAESTRAL, a joint venture for co-developing and producing advanced naval platforms, including offshore patrol vessels (OPVs) for the UAE Navy and potential export clients.^[1] This partnership illustrates Italy's emphasis on joint shipbuilding, modular design and lifecycle support—a model well-suited for Gulf nations aiming to localize capabilities. Parallel efforts are underway in the air domain as well, culminating in a landmark agreement signed at the International Defence Exhibition (IDEX) in Abu Dhabi in February 2025 between Leonardo and EDGE. The deal targets the creation of a joint venture covering six key domains: airborne capabilities (including radar for multi-mission aircraft), anti-tactical ballistic missile defense, counter-drone and mobile surveillance systems, naval combat management systems, radio communications, and optronics.^[2] The agreement supports the UAE's defense-industrial goals under its EDGE strategy while enabling both parties to pursue joint export opportunities.

Leonardo has simultaneously expanded its regional footprint in Saudi Arabia. In January 2025, Riyadh and Rome signed a

€10 billion defense package, covering helicopter manufacturing, avionics co-development, and integration into Saudi Arabia's defense ecosystem via the General Authority for Military Industries (GAMI). This followed a 2024 memorandum of understanding (MoU) between GAMI and Leonardo establishing localization pathways for rotary-wing platforms and electronic warfare technologies.^[3]

On the hardware front, Leonardo has supplied Gulf states with the AW139, AW169, and AW189 multi-role helicopters for search and rescue, medical, and VIP transport. In 2024, Saudi Arabia's THC ordered 20 AW139s and signed a framework agreement for over 130 more units over five to seven years.^[1] Earlier deliveries included six helicopters in 2023 to the Kingdom.

Italy is also championing Saudi Arabia's inclusion in the Global Combat Air Programme (GCAP), a next-generation stealth fighter project developed jointly with the UK and Japan. The program aims to deliver a sixth-generation fighter by 2035 featuring manned-unmanned teaming (MUM-T), AI-enabled mission systems, and advanced sensors. Rome sees the Kingdom as a valuable co-developer, bringing significant financial clout and aligning with Riyadh's Vision 2030 localization goals. Italian officials have reportedly lobbied their British and Japanese counterparts in favor of Saudi inclusion, highlighting the potential benefits for the program's funding and export reach.^[2]

However, Japan has raised strong objections. Tokyo fears that Riyadh's inclusion could complicate sensitive domestic efforts to ease defense export controls and might delay the program's already ambitious delivery timeline. This divergence has created a friction point within the consortium—Italy argues for greater strategic integration with Saudi

Arabia, while Japan prioritizes regulatory caution and disciplined development.^[3]

Spain: A Rising Defense Partner in Naval and Air Transport

Spain, too, has made steady progress in expanding defence-industrial cooperation with the Gulf. In 2020–2024, Madrid became the third for Saudi Arabia (10%), according to SIPRI.^[1] While it may lack the high-profile political leverage of France or Italy, Spain's reliability and strategic patience have earned it growing favor among Gulf buyers.

Madrid's most emblematic achievement remains the Navantia–Saudi Arabia Al-Sarawat program, involving the joint construction of five Avante 2200 corvettes, completed in late 2024. In December of the same year, SAMI inked a new contract with Navantia to supply three additional corvettes, identical to the units already in service with the RSNF. The program represents a landmark in Saudi naval renewal under Vision 2030, featuring integrated logistics, training, and support. It also marked Spain's growing embrace of localisation, with the SAMI–Navantia joint venture facilitating training and technology transfer.^[2]

Another key milestone came almost simultaneously, when EDGE Group and Spain's Indra signed a landmark joint venture agreement to launch PULSE, a radar design and manufacturing hub based in Abu Dhabi. The deal aligns with Indra's "Leading the Future" strategic plan and EDGE's industrialization goals. It will focus on engineering, developing, and producing next-generation radar systems, including those for air, land, and maritime applications.^[3]

Spain's aerospace footprint also expanded. Airbus Spain delivered CN-235 and C-295 transport aircraft to Gulf states, with five C-295s ordered by the UAE in 2017 and four C295Ws by Saudi Arabia in 2023.^[4] Altogether, the 2022–2025 period

confirmed that while new major contracts were relatively limited, Spain has consolidated its earlier successes and scaled up industrial partnerships. Through consistent delivery, localization efforts, and tech-driven cooperation, Madrid has positioned itself as a trusted and capable defense partner to Gulf clients.

Greece and the Birth of Naval-Air Defense Diplomacy (2021–2025)

Although not a major exporter of weapons platforms, Greece has emerged as a significant partner for Arab Gulf states in terms of defense diplomacy, joint drills, and interoperability-building since the late 2010s. Athens's role expanded in the aftermath of the 2017–2021 Gulf diplomatic crisis and the sharp rise in Turkish assertiveness in the Eastern Mediterranean. As Saudi Arabia, the UAE, and even Qatar^[1] sought new security partners beyond their traditional suppliers, Greece presented itself as a capable and like-minded partner.

The groundwork for this emerging relationship was laid between 2019 and 2020. By November 2020, UAE Crown Prince Mohammed bin Zayed and Greek Prime Minister Kyriakos Mitsotakis signed a strategic partnership agreement and a joint foreign policy and defense cooperation pact in Abu Dhabi. These agreements, though not made public in detail, signaled a shared interest in containing Turkish expansionism across the Eastern Mediterranean, Libya, and the Horn of Africa.^[2]

The defense partnership was operationalized through a flurry of joint exercises and deployments beginning in early 2021. In March 2021, the Royal Saudi Air Force participated in the "Falcon Eye 1" joint air drill at Souda Air Base in Crete, featuring F-15, F-16, Mirage 2000, and F-4 Phantom aircraft.^[3] Just a month later, Riyadh and Athens signed a defense

cooperation agreement that included the deployment of a Greek Patriot missile battery to the Kingdom and broader commitments to defense support.

That same year, in November, Saudi naval forces took part in the multinational “Medusa 11” naval-air exercise near Crete, alongside Egypt, France, Cyprus, and Greece. The drills included amphibious landings, anti-submarine warfare, and joint naval maneuvers, with the UAE joining the Medusa framework for the first time.^[4] These joint engagements marked a turning point for Gulf-Greek cooperation, with Greece emerging as a central node in the Gulf states’ military diplomacy toward Europe.

This momentum continued into 2022 and 2023. The UAE participated as an observer in the “Medusa 12” exercise in November 2022 and then took on a more active role in “Medusa 13” in October 2024, held off Crete. These exercises offered Gulf forces valuable exposure to NATO-standard naval procedures, particularly in amphibious operations and maritime interdiction. In “Medusa 13,” Saudi special naval and marine infantry units performed live-fire landings, drawing praise for their professionalism.^[1]

The UAE and Saudi Arabia further deepened their ties with Greece through participation in the INIOCHOS air drills, held annually in Andravida. While Qatar had taken part in earlier editions, 2024 marked the first time both the UAE and Saudi Arabia deployed combat aircraft to the exercise.^[2] The INIOCHOS series—focused on air combat, multi-threat scenarios, and joint command operations—allowed Gulf aviators to train alongside NATO and European air forces, reinforcing shared operational practices.

Parallel to the drills, new bilateral military agreements reinforced these dynamics. On February 13, 2024, Greece and the UAE signed a new Military Cooperation

Program (MCP), according to the Hellenic National Defence General Staff. This MCP included cross-service training in crisis management, mine disposal, electronic warfare, disaster response, and special operations. It also incorporated training modules at the NATO Maritime Interdiction Operational Training Center in Crete, a strategic facility hosting multinational naval training.^[3]

In the Saudi case, naval modernization under Vision 2030 created additional incentives to deepen ties with Greece. With a large fleet but aging platforms, Riyadh sought to diversify its partnerships to offset gaps left by a U.S. naval presence increasingly stretched across the Indo-Pacific.

Joint exercises with Greece offered not only tactical familiarity but also diplomatic signaling. Participation in Medusa 13 and earlier iterations helped Saudi Arabia showcase its naval modernization progress and gain experience in cooperative missions across the Mediterranean. However, the Royal Saudi Naval Forces still lack a robust operational track record and have not taken part in high-stakes missions such as anti-Houthi maritime operations.

Taken together, these developments signal that Greece has become a valued partner for Arab Gulf states seeking to expand their military diplomacy, enhance regional deterrence, and develop multilateral security partnerships outside their U.S.-centric frameworks.

While arms transfers remain minimal, Athens has positioned itself as a hub for Gulf-European cooperation, leveraging its geography, shared threat perceptions, and NATO membership to foster trust and operational convergence with the UAE, Saudi Arabia, and beyond.

IRAN AND CHEMICAL WEAPONS: A STRATEGY OF AMBIGUITY

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Iran's relationship with chemical weapons (CW) defies simple categorization. While officially portraying itself as a victim of chemical warfare and a party to the Chemical Weapons Convention (CWC), Tehran has long operated in strategic gray zones—developing capabilities, conducting dual-use research, and fostering ties with partners who could serve as deniable vectors for use. Its doctrine reflects a logic not of clear red lines, but of calibrated ambiguity: a preference for tools that offer tactical utility and plausible deniability, particularly in asymmetric environments.

This paper argues that the Islamic Republic's chemical weapons history cannot be understood solely through the lens of victimhood or restraint. Instead, it traces a pattern of adaptation—initially driven by the Iran–Iraq War, but later institutionalized through covert proliferation, doctrinal development, and scientific investment. From unacknowledged retaliatory use and undeclared weapons transfers to the cultivation of pharmaceutical-based agents (PBAs) and riot control agents (RCAs) under a “law enforcement” cover, Iran's posture evolved into a hybrid model that deliberately challenges the boundaries of the CWC.

The analysis draws on a wide range of sources, including UN investigations, declassified intelligence records, open-source research, and recent disclosures by the U.S. State Department. It examines

Tehran's chemical doctrine across four dimensions: wartime behavior and lessons learned in the 1980s; postwar transfers and dual-use adaptations; the institutionalization of CW-related research and proxy capabilities; and present-day noncompliance concerns based on missing declarations, ambiguous agents, and operational linkages.

At stake is more than just Iran's historical record. The case of the Islamic Republic underscores enduring vulnerabilities in the international chemical weapons regime—specifically, the difficulty of detecting hybrid programs that operate below the threshold of declared warfare. By exploiting the ambiguities of the CWC, Tehran has carved out strategic space for chemical capabilities that fall between prohibition and permissibility. Understanding this trajectory is essential not only for arms control accountability, but for anticipating how chemical tools may be used in the next phase of regional or proxy conflict.

VCatalyst: The Iran–Iraq War and the Chemical Dimension (1980–1988)

The eight-year Iran–Iraq War (1980–1988) marked the first sustained use of chemical weapons since World War I and had a lasting impact on Tehran's strategic outlook and chemical weapons policy. Initiated by Iraq on September 22, 1980, the war was envisioned by Saddam Hussein as a swift campaign to seize the oil-rich province of Khuzestan and destabilize Iran's new revolutionary government. But those ambitions quickly faltered: by early 1981, Iraqi forces were bogged down, and by mid-1982, Iran had launched major counteroffensives and regained most of its lost territory.

What began as a conventional border conflict devolved into a brutal war of attrition—one that increasingly featured chemical weapons. Confronted with

eroding manpower, battlefield losses, and collapsing morale, Baghdad turned to chemical warfare first as a tactical stopgap and later as a tool of mass punishment, targeting both Kurdish civilians and Iranian cities.

By mid-1982, Iranian forces had retaken Khorramshahr and reversed many of Iraq's early territorial gains. Confronted with mounting deficits Baghdad turned to chemical weapons as a way to blunt Iran's offensives and reassert control over the battlefield. The shift began with the use of riot control agents like CS gas to disrupt Iranian troop concentrations.

Iraq began using more aggressive chemical weapons on the battlefield in 1983. The earliest confirmed large-scale use occurred during Operation Valfajr II in July–August 1983 near Haj Omran, where mustard gas was deployed against Iranian positions. These initial attacks lacked tactical sophistication and were often counterproductive. According to a 1988 CIA assessment, pilots often released munitions from altitudes too high for effective dispersal, or they flew too low for the fuses to arm properly, causing many bombs to fail to detonate. Iran recovered some of this unexploded ordnance and used it to highlight Iraq's violations of the Geneva Protocol.

In other cases, strikes were carried out in poor weather, especially in the damp terrain of the southern front. Prevailing winds often blew chemical agents back toward Iraqi positions. In 1983, near Mount Kordeman, fighter-bombers, artillery, and helicopters delivered mustard gas in an effort to dislodge Iranian troops holding elevated ground. Unfamiliar with the behavior of the heavier-than-air agent, Iraqi forces advanced, only to be exposed when the vapor flowed down the hill. As the CIA dryly concluded, these efforts were "probably militarily ineffective" and ultimately backfired, damaging Iraq's credibility and strengthening Iran's position

in the diplomatic arena.

Despite early setbacks, Baghdad quickly adapted its chemical warfare strategy—targeting Iranian forces with increasing scale and precision. In February 1984, tabun nerve agent was used for the first time during Operation Kheibar in the Majnoon Islands—marking the modern battlefield debut of a nerve agent. The escalation continued with the deployment of "dusty mustard," an aerosolized form intended to cause severe lung damage, reportedly applied in marshland operations near the Iran–Iraq border.

These developments signaled a doctrinal shift: chemical weapons moved from ad hoc use to a central role in efforts to halt Iranian advances and wear down enemy forces. By 1985, United Nations Special Commission (UNSCOM) and CIA assessments indicated that Iraq's arsenal included mustard gas, tabun, and sarin, with production centralized at the Muthanna State Establishment.

Between 1983 and 1988, an estimated 1,800 tons of mustard gas, 600 tons of sarin, and 140 tons of tabun were produced and delivered via 19,500 aerial bombs, 54,000 artillery shells, and 27,000 rockets—most of them directed against Iranian military formations. This prolonged use of chemical weapons had a direct impact on how Iran viewed the threat. It forced Tehran to rethink its stance and sparked internal debates over whether to develop a chemical deterrent of its own.

As the war dragged on, Iraq intensified its chemical warfare operations. In April 1987, during Operation Karbala VII, it used both sarin and mustard gas to disrupt Iranian staging areas and blunt the momentum of an expected assault. A year later, one of the most decisive chemical attacks took place during the

battle for the Fao Peninsula. Iraqi artillery blanketed the area with sarin to prepare the ground for a conventional advance. According to U.S. intelligence, troops were instructed to wait 30 to 60 minutes for the gas to dissipate before moving in, equipped with full protective gear to limit exposure.

Beyond the battlefield, Iraq also turned its chemical arsenal against internal opposition. During the Anfal campaign, it used CW against Kurdish insurgents and civilians. The March 1988 chemical assault on Halabjah killed an estimated 3,200 to 5,000 people and involved a combination of mustard gas, sarin, and possibly tabun. Human Rights Watch later confirmed widespread chemical attacks during Anfal and described the campaign as a case of chemical genocide.

The psychological and strategic impact of Iraq's chemical weapons campaign was profound. Repeated attacks eroded morale among Iranian forces and discouraged recruitment, particularly among Basij volunteers. During the 1988 "War of the Cities," when chemically armed Scud missiles were feared, Tehran witnessed a temporary mass exodus. Chemical weapons also served as a tool of strategic signaling. Iraq's decision to combine chemical attacks with its final military offensives, particularly in Fao, Dehloran, and Shalamcheh, contributed to Iran's decision to accept UN Security Council Resolution 598 in July 1988.

Although chemical weapons were not the sole factor behind Iran's ceasefire decision, they played a visible role in exhausting public resilience and reinforcing the widening military imbalance. The cumulative exposure affected an estimated 100,000 Iranian personnel. This experience helped establish a lasting national narrative of victimhood, which later became central to Tehran's diplomatic positioning in arms control forums.

Iran's own position evolved under these pressures. In the early phase of the war, Supreme Leader Ayatollah Ruhollah Khomeini reportedly issued a religious ruling forbidding the use of chemical weapons. However, the continuation of chemical weapons attacks, combined with the international community's failure to respond meaningfully despite formal Iranian complaints to the United Nations beginning in late 1983, prompted a reassessment. In 1984, Iran's ambassador to the UN, Said Rajaie Khorassani, publicly declared that Tehran was capable of producing chemical weapons and warned that retaliation would be considered if Iraq continued its "crimes." In December 1986, Prime Minister Mir Hossein Mousavi stated that Iran had developed "sophisticated chemical weapons," although he insisted that these would not be used unless necessary.

U.S. diplomatic and intelligence sources date the start of Iran's offensive chemical weapons program to 1983—the same year Iraq escalated to industrial-scale CW use. For Tehran, rejecting chemical weapons at that time came at no cost and allowed the regime to appeal to international norms. As Iraqi attacks intensified, Iran began to explore retaliatory options, though cautiously.

Available evidence suggests that Iran's retaliatory use of chemical agents was limited and sporadic. A 1987 DIA assessment, corroborated by a 2021 U.S. State Department compliance report, indicates that Iranian forces likely used phosgene or cyanogen chloride near Basrah in April 1987 and conducted a mustard gas attack in the Surnar area in October of the same year. In March 1988, Iranian units reportedly used cyanogen chloride near Halabjah. However, United Nations forensic teams later attributed the vast majority of casualties in Halabjah to Iraqi chemical weapons, not Iranian use.

The UN dispatched several CW inspection missions between 1984 and 1988. The March 1984 investigation confirmed the use of mustard and tabun by Iraqi forces through aerial delivery. Later missions reviewed both Iranian claims and Iraqi counterclaims. In April 1987, Baghdad presented the UN team with 130 mm artillery shells allegedly captured from Iranian troops. The inspectors found no trace of chemical agents or any chemical-resistant coatings, and concluded that the origin and use of the rounds could not be confirmed. A follow-up visit in July 1988, prompted by similar Iraqi allegations, also failed to produce evidence of Iranian CW use. These findings highlighted the asymmetry in chemical warfare throughout the conflict.

More conclusive findings surfaced after the war. In 1991, during a UNSCOM inspection of Iraq's Muthana State Establishment, UN inspectors discovered 165 81mm mortars filled with sulfur mustard. Iraqi authorities claimed the mortars had been captured from Iran. The munitions' design did not match known Iraqi types, and laboratory analysis revealed impurities in the agent inconsistent with Iraqi production. These findings strongly suggested the shells originated in Iran. This episode later featured in U.S. assessments of Iranian noncompliance with the Chemical Weapons Convention and was cited as evidence that Iran had developed and weaponized mustard agents despite its wartime claims to the contrary.

In the years that followed, Iran formally acknowledged aspects of its chemical program. Upon joining the Chemical Weapons Convention in 1997, it declared limited production of sulfur and nitrogen mustard agents. A 2004 clarification to the Organization for the Prohibition of Chemical Weapons (OPCW) stated that these substances were produced in 1987 and 1988, stored in barrels, and destroyed by 1992. Tehran maintained that the agents were never weaponized. However,

the discovery of mustard-filled aerial bombs in Libya between 2011 and 2012 cast doubt on that claim. Additional evidence from Iraqi archives, Iranian official statements, and U.S. intelligence indicates that Tehran developed a modest retaliatory capability, albeit on a much smaller scale than Iraq's.

The Iran-Iraq War became a catalyst for regional chemical weapons proliferation. For Baghdad, it proved that large-scale CW use could achieve military goals without triggering serious international consequences. For Tehran, the war justified building a limited deterrent and reinforced a sense of victimhood that still shapes how it talks about WMDs today.

Libya Connection

The discovery of Iranian-manufactured chemical weapons in post-Gaddafi Libya offered a rare glimpse into one of the most obscure and diplomatically sensitive chapters in Iran's chemical weapons history. In late 2011 and early 2012, Libyan rebels uncovered two separate caches of sulfur mustard-filled munitions. The stockpiles included 517 artillery shells and eight aerial bombs, marked in Persian and never declared by Libya to international arms control bodies. Hidden in remote desert depots that had evaded years of inspections, the munitions immediately raised questions about their origin, purpose, and the state actors involved.

Their discovery pointed to more than just an undeclared transfer. It revived long-standing suspicions that Iran had exported chemical weapons during the final stages or aftermath of the Iran-Iraq War. Tehran has consistently claimed it never weaponized its chemical agents. But the presence of fully assembled munitions contradicted that narrative and reopened questions about Iran's compliance with the Chemical Weapons



Convention. The incident also linked Iran's chemical program to covert military ties with pariah states, complicating both nonproliferation diplomacy and threat assessments across the Middle East.

The configuration of the weapons stood out. Unlike Libya's declared stockpile of bulk mustard agent, these munitions were factory-filled, sealed, and ready for use. The weapons—517 155mm artillery shells and eight 500-pound bombs—bore Persian-language markings and had been stored in remote sites that international inspectors had never visited. Their configuration stood out. While Libya's declared arsenal consisted mostly of bulk mustard agent in large containers, these munitions were factory-filled, sealed, and combat-ready. The presence of aerial bombs pointed to a level of production and weaponization that Tripoli had neither acknowledged nor appeared capable of executing independently.

The design of the munitions made it unlikely they were repurposed Iraqi weapons. Although both sides operated 155mm artillery systems, Iranian forces never captured enemy air bases and had no known access to Iraqi aerial bomb stockpiles. For years, Tehran worked to document Baghdad's chemical attacks, even coordinating on-site inspections with UN teams between 1984 and 1988. Exporting captured shells would have undermined those efforts. None of the rounds found in Libya ever appeared in UN investigations, which further weakens the theory of redistributed battlefield captures. Western intelligence and media reports from the mid-to-late 1980s provide additional context for suspected Iranian-Libyan chemical cooperation. As early as 1985, U.S. assessments flagged concerns that Tehran was seeking chemical agents from Tripoli, along with Scud missiles and naval mines. By 1987, officials and journalists were openly discussing what appeared to be an arms-for-chemicals arrangement. Both American and Soviet

diplomats reportedly urged Qaddafi to abandon the deal. Egyptian intelligence, meanwhile, warned that a formal agreement had been reached: Iran would provide chemical weapons in exchange for advanced Scud-B missiles. These ballistic systems later surfaced in Iran's arsenal and featured prominently in the missile exchanges with Iraq during the "War of the Cities."

Libya's suspected use of chemical weapons during the final phase of its 1987–1988 conflict in Chad added credibility to allegations of an Iranian transfer. According to both U.S. and Iraqi sources, Libyan aircraft dropped chemical bombs on Chadian positions in the closing months of the war. Though tactically limited in effect, the incidents revealed a capability that aligned with the suspected timeline of Iran's delivery. While accounts differed on what Libya offered in return—some citing naval mines, others Scud missiles—both American and Iraqi assessments agreed on the core issue: Iran's supply of chemical weapons to Tripoli appeared credible, and deeply concerning.

After Qaddafi's fall in 2011, the existence of the mustard-filled munitions was finally confirmed. U.S. intelligence began tracing their origin, and by 2011, reporting in the Washington Post cited unnamed officials who concluded the weapons had been custom-designed in Iran for delivery to Libya. Their absence from Tripoli's 2003 disarmament declarations reinforced the view that they had been transferred covertly. The munitions' advanced state—fully loaded and ready for use—stood in stark contrast to Libya's known production capabilities, suggesting they were not only filled in Iran but likely manufactured and assembled there as well.

This episode later became a key factor in the U.S. State Department's decision to designate Iran as non-compliant with

the Chemical Weapons Convention. Reports from 2020 and 2021 highlighted Tehran's failure to disclose the transfer of chemical-armed munitions to Libya as a central concern. The findings undermined Iran's long-standing claim of moral restraint in the use of chemical weapons and pointed to a broader pattern of behavior involving covert proliferation ties. Although its chemical exports were limited in scope compared to Iraq's extensive wartime use, the Libya case showed that Iran was prepared to violate international norms when strategic interests were at stake.

The Libya transfer remains unacknowledged by Iran, and its omission from formal declarations continues to cast a long shadow over nonproliferation diplomacy. For many in the arms control community, the episode exemplifies the limits of verification and the persistence of strategic opacity in Tehran's WMD posture. While Libya remains the only confirmed recipient of Iranian chemical munitions, the episode reflected a broader pattern of clandestine military ties between Tehran and outlier regimes. Alongside relationships with Syria and North Korea, it exposed a dual posture: Iran continued to publicly condemn chemical warfare, even as it covertly supported its proliferation when strategic interests aligned.

Weaponization of Pharmaceutical Agents and Iran Proxy Warfare

According to Western assessments, by the late 2010s and early 2020s, Iran began to invest more seriously in pharmaceutical-based agents (PBA) designed to incapacitate rather than kill. These compounds, typically framed as law enforcement tools, offered both plausible deniability and operational utility in proxy conflicts. The shift gained momentum following the October 7, 2023, Hamas-led attack on Israel, which reshaped regional threat perceptions. In this environment,

arms control officials have voiced growing concern that Tehran may be testing nontraditional chemical agents through its network of non-state partners. By combining research, doctrine, and proxy operations, Iran is challenging the boundaries of existing nonproliferation norms.

The roots of Tehran's PBA program can be traced to the early 2000s, particularly after the 2002 Moscow theater hostage crisis, where Russian forces used a fentanyl-derived aerosol to end a Chechen standoff. Although the operation killed over 120 hostages, it demonstrated the tactical utility of aerosolized opioids in enclosed environments. Iranian security and military planners took note. The incident catalyzed internal discussions about incapacitating agents that could be deployed with deniable use under the guise of law enforcement or counterterrorism operations.

Over the following decade, Iran began investing in dual-use research through IRGC-linked universities, chemical defense centers, and military medical institutes. Scientific publications from Iranian researchers increasingly explored the pharmacology of potent opioids, CNS depressants, and novel synthetic compounds with disabling effects. These agents were presented as riot control tools or as products of medical research. When deployed through proxy groups, their use became easier to deny or obscure. This tactic fits within Iran's broader hybrid warfare model, which prioritizes ambiguity and undermines straightforward deterrence.

According to U.S. government disclosures, Iranian military-linked institutions such as Imam Hossein University and Malek Ashtar University have played a central role in developing incapacitating agents. Research papers from these institutions referenced

fentanyl's use in the 2002 Moscow theater crisis and framed such substances as permissible under the CWC's "law enforcement" exception. In 2014, Imam Hossein University sought kilogram quantities of medetomidine from Chinese suppliers, enough for over 10,000 doses, despite having no record of medical or veterinary research, raising concerns about offensive intent.

Allegations of PBA use by Iranian-aligned proxies have surfaced intermittently over the past decade, particularly in Iraq and Syria. Western intelligence sources have pointed to incidents involving incapacitating agents during protest crackdowns in Baghdad in 2019 and 2020, where demonstrators reported sudden loss of consciousness, disorientation, and respiratory distress inconsistent with conventional riot control agents. While direct attribution remains difficult, some reports suggest the possible use of opioid-based compounds deployed in confined urban environments.

In Syria, opposition-linked medical personnel have documented cases of unexplained mass incapacitations in areas where Iranian-affiliated militias were present, though no definitive forensic evidence has been publicly disclosed. These accounts reflect growing concern that Iran is willing to test or supply PBAs in asymmetrical theatres where oversight is weak and attribution can be plausibly denied.

Hezbollah's operational capabilities and close ties to Iran have prompted growing concern that pharmaceutical-based agents could be integrated into its arsenal. The group already possesses delivery mechanisms, such as mortar shells and improvised grenades, suitable for deploying incapacitating compounds in cross-border raids or urban operations. Israeli intelligence and Western security analysts have warned that, under the cover of civil unrest or low-intensity

conflict, Hezbollah could employ such agents to disorient or neutralize targets without immediate attribution. While no confirmed use has been publicly disclosed, the combination of Iranian research, Hezbollah's tactical sophistication, and the fog of asymmetric warfare has elevated PBAs as a latent but credible threat vector.

In parallel, Iran has failed to declare possession of riot control agents (RCAs) such as dibenzoxazepine (CR), despite public advertisements by the Ministry of Defense promoting personal defense sprays, irritant hand grenades, and high-volume fogging systems capable of disseminating chemical agents over broad areas. These platforms, marketed by the Shahid Meisami Group and other state-linked entities—further erode the distinction between permitted law enforcement tools and prohibited chemical weapons. As Iran's investment in PBAs and RCAs continues, the line between internal security technologies and offensive capabilities grows increasingly blurred.

Iran's Ongoing Noncompliance and Strategic Adaptation

As of 2024, Iran remains formally assessed by the United States as being in noncompliance with the Chemical Weapons Convention (CWC). This assessment is based on four main findings: Iran's failure to declare its transfer of chemical weapons to Libya during the 1980s; its incomplete declaration of Riot Control Agents (RCAs); its failure to submit a full Chemical Weapons Production Facilities (CWPF) declaration; and its pursuit of pharmaceutical-based agents (PBAs) for offensive purposes.

These findings reflect not only technical shortfalls but deeper structural concerns. Tehran's persistent opacity regarding its chemical weapons history, its pattern of

dual-use research under security-affiliated institutions, and its resistance to OPCW transparency initiatives signal a longstanding reluctance to fully align with CWC obligations. The use of military-linked universities—such as Imam Hossein University and Malek Ashtar University—for researching incapacitating agents with central nervous system effects highlights the blurring of lines between legitimate scientific inquiry and prohibited weapons development. Documented procurement efforts, including Iran’s 2014 request for kilogram quantities of medetomidine, a potent sedative, reinforce this trend.

Sanctions designations further underscore these concerns. In 2020, the United States designated the Shahid Meisami Group, a defense-linked research entity, for its role in developing chemical incapacitating agents. In July 2024, the Hakiman Shargh Research Company was similarly sanctioned under Executive Order 13382 for contributing to Iran’s chemical weapons R&D.

Tehran’s pursuit of PBAs also intersects with the regional security landscape. Western intelligence assessments continue to warn that Iranian-aligned actors may employ these agents in asymmetric environments, including Iraq, Syria, and potentially in future conflicts involving Hezbollah. These assessments have elevated PBAs from an experimental research focus to a credible threat vector, especially in scenarios where attribution is difficult and oversight limited. At the multilateral level, Iran has consistently opposed international efforts to clarify the legal boundaries of incapacitating agents. Tehran joined Russia, China, and Syria in rejecting a 2021 OPCW decision affirming that the aerosolized use of CNS-acting chemicals is incompatible with CWC provisions on law enforcement purposes. Its continued resistance to annual transparency measures further limits OPCW’s ability to verify declared transfers of scheduled chemicals and investigate

past offenses. Looking ahead, Iran’s posture reflects a dual trajectory. On the one hand, it presents itself as a victim of chemical warfare and claims to uphold nonproliferation norms. On the other hand, it quietly develops and disseminates nontraditional agents with potential offensive use. This duality challenges the international regime’s enforcement mechanisms and raises broader concerns about norm erosion, particularly in contexts involving proxy actors, law enforcement cover, and contested battlefields.

The Libya case remains emblematic. Iran never declared the transfer of mustard-filled munitions later found in Libya, raising lasting doubts about its credibility. For many arms control experts, this episode illustrates the limits of verification and the strategic calculus that drives selective disclosure. When paired with more recent developments in PBA research, it reinforces the perception that Iran’s chemical weapons program is not a relic of the past, but an evolving capability shaped by deniability and asymmetry.

The "Connection" - Regional Dynamics and Proposed Solutions:

While this report does not assess the responses of other regional actors, Iran’s chemical weapons posture—particularly its emphasis on ambiguity, dual-use development, and proxy-enabled capability—inevitably shapes threat perceptions beyond its borders. The persistence of such a model underscores the difficulty of upholding nonproliferation norms in an environment where attribution is contested and legal boundaries are blurred. Understanding Iran’s trajectory remains critical not only for accountability, but for anticipating how chemical weapons may factor into future regional conflicts.

Thank You

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