

# The Saudi Air Defense Problem Is a U.S. Opportunity

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## ABOUT THE AUTHORS



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Brief Analysis

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**Washington can do much to help the kingdom close its serious air defense gaps, whereas acquiring Russian S-400s would be militarily insufficient and strategically disastrous.**

**W**hen Russian foreign minister Sergei Lavrov visited Saudi crown prince Muhammad bin Salman on March 10, the London-based news outlet *Al-Arab* reported that the S-400 air defense system “would be among the topics discussed in Riyadh, which needs advanced systems to counter Iranian threats.” The paper also characterized Lavrov’s Gulf tour as a Russian effort “to exploit Washington’s errors diplomatically, militarily, and economically.”

Indeed, the Biden administration has had to balance carefully between showing that it can advance human rights and avoiding moves that damage U.S. relations with Gulf governments. At the same time, Riyadh is looking to Washington for support amid sustained aerial threats from Iran and its regional proxies. If handled properly, the two issues can serve as counterweights: by offering to help the kingdom and its neighbors improve and coordinate their air defenses, the United States can ease some of the tensions inherent in holding Riyadh accountable for human rights abuses.

## Increased Vulnerability to Iranian and Proxy Attacks

**S**audi Arabia has faced growing aerial threats since its 2015 military intervention in Yemen. According to the Saudi coalition spokesman, 860 drone and missile strikes have been launched at the kingdom over this period. And several high-profile Iranian-backed attacks launched since 2019 have been especially notable for their scale, complexity, and strategically valuable targets.

Recent reports offered further evidence that the January 23, 2021, drone attack on al-Yamamah Palace in Riyadh originated from Iraq, making it the second attack on the kingdom publicly identified as originating from Iraq, and

the third in which U.S. officials have publicly assigned direct responsibility to Tehran. Saudi officials likely see this finding as a sign of Tehran's confidence that it will not face serious consequences from the Biden administration.

The other two Iran-attributed attacks on the kingdom targeted oil facilities: the May 14, 2019, strike on the East-West Pipeline (which originated from Iraq with Iranian support), and the September 14, 2019, attack on Saudi Aramco facilities. The latter strike caused the worst disruption in Aramco's history, halting daily production of 5.7 million barrels of crude.

The specter of such disruption materialized again on March 7, when the Iranian-backed Houthi rebels launched a series of drones and missiles against the massive oil loading facility at Ras Tanura. Fortunately, most of those thrusts were parried (<https://www.washingtoninstitute.org/policy-analysis/continued-houthi-strikes-threaten-saudi-oil-and-global-economic-recovery>), but the kingdom's threat forecast will only darken unless something is done to boost its defensive capabilities. Iranian-backed groups in Iraq and Yemen will likely increase their use of low-altitude, multi-vector, near-simultaneous time-on-target attacks, combining drones, ballistic missiles, and cruise missiles in ways that stress even the most advanced air defense operators.

## **Saudi Air Defenses Are Deficient, Divided**

**S**audi Arabia appears to lack the requisite operator proficiency and quantities of missiles/radars to protect all of its strategic infrastructure from the combined threats described above. In October 2017, the State Department approved the kingdom's purchase of the more capable Terminal High-Altitude Area Defense system (THAAD) as part of a \$15 billion agreement, but delivery is not expected until at least 2023, and acquiring new ground-based systems is only one component of an integrated air and missile defense plan.

To substantially improve their resiliency against aerial threats, the Saudis will also need increased support and training on command and control, as well as target hardening efforts, left-of-launch intelligence operations against threat networks, and offensive strike operations against enemy missile infrastructure. Moreover, they will need to address the seam they created by dividing these and related responsibilities between the Royal Saudi Air Force and the Royal Saudi Air Defense Forces—two entities that remain highly compartmentalized.

## **S-400s Not the Answer, and Not Likely**

**T**he Russian S-400 Triumph (SA-21) is a complex suite of missiles, radars, and support equipment. Designed to counter the most advanced Western fighter jets and missiles, the system is currently deployed by Russia and China. Turkey recently received it but has yet to deploy it, and India is expected to receive it later this year. According to data from Janes, the most capable missile that can be used in an S-400 network, the 40N6E, has a range of at least 380 km. Its overlapping radars can detect targets with a 4-square-meter radar cross-section out to 480 km, and smaller ballistic targets out to 250 km. (Though any export variant would likely have lesser capabilities.)

Russia has been hawking the S-400 to Riyadh for years. During King Salman's October 2017 visit to Moscow, the first for a Saudi monarch, the kingdom agreed to buy the system and approved a memorandum of understanding between Saudi Arabian Military Industries (SAMI) and Rosoboronexport to support wider defense development. In February 2018, Russian officials held further S-400 procurement discussions with the Saudi ambassador to Moscow. And following the 2019 Aramco attack, President Vladimir Putin publicly played the role of missile defense salesman, remarking, "Saudi Arabia just needs to make a wise state decision."

Yet the S-400 is not the answer to Saudi air defense needs, for reasons both practical and strategic. On the practical front alone, the downsides are legion: the system would lack interoperability with the vast U.S. regional air surveillance network, comprised of ground, sea, air, and space-based sensors that form the backbone of the kingdom's air defense; it would not recognize the transponders that enable U.S. and partner aircraft to "see" each

other; it could not leverage datalinks that allow partner radar operators in the Gulf to pass targeting data to a missile battalion defending, say, Abqaiq or NEOM; and it would take at least three years to arrive (judging by the Turkey and India cases), and even longer to operationalize and deploy.

On the strategic front, acquiring the S-400 would threaten Saudi relations with the United States and likely lead Washington to employ the Countering America's Adversaries Through Sanctions Act (CAATSA). This is partly because Moscow and Riyadh would have to exchange personnel in order to facilitate acquisition and training—a scenario that poses a significant counterintelligence threat to U.S. forces and systems such as the F-35 and THAAD. For this reason if no other, an S-400 sale would derail up to \$126.6 billion in U.S. contracts under the Foreign Military Sales system, including continued efforts to improve Saudi missile defense, C4ISR (i.e., command, control, communications, computers, intelligence, surveillance, and reconnaissance), and resupply of materiel expended against regional threats. Moreover, Russia would presumably leverage the sale to secure Saudi cooperation on other issues such as oil production, U.S. basing, and purchase of additional equipment.

For all these reasons, it is difficult to believe that the Saudis are seriously interested in the S-400. When they issued the 2017 memorandum with Russia, they likely intended it as a means of pressuring the United States rather than a prelude to an actual purchase. Still, S-400 rumors provide another opportunity to remind Riyadh of the advantages of U.S. strategic partnership—and to clearly communicate the consequences of transactions with Russia's defense or intelligence sectors, as delineated by CAATSA Section 231 (a message that **should be heard in Turkey** (<https://www.washingtoninstitute.org/policy-analysis/erdogan-will-play-biden-stick-putin>), India, and Egypt as well).

## Policy Implications

**C**reative working-level arrangements can help U.S. policymakers address various concerns expressed about wider military cooperation with Riyadh and reap important benefits at the same time. Regarding the potential use of American munitions in Yemen or other conflict zones, U.S. personnel can help Saudi forces improve their targeting processes, collateral damage estimates, weaponing, and proficiency. Increased intelligence, surveillance, and reconnaissance assistance would enhance Saudi capabilities and confidence as well.

Officials can also counter any talk of the S-400's claimed 360-degree coverage by offering to augment the kingdom's Patriot and THAAD systems with additional radars to provide comparable detection capabilities. Additional Patriot units and Sentinel radars were deployed to Saudi Arabia following the 2019 Aramco attack but then withdrawn in May 2020. Such units can be deployed or loaned out again until new Saudi defense measures come online.

In the longer term, the United States and its partners can commit to supporting and training Saudi forces such as airborne early warning squadrons and air defense battalions. External training could further Saudi development of systematized nationwide command-and-control procedures, and improve operator discipline and proficiency in distinguishing low- and slow-flying projectiles from spurious radar tracks. Washington can also lead the development of a regional aerial threat assessment group as an intermediary with the other Gulf Cooperation Council states, Jordan, and Israel (whose success with the Arrow, David's Sling, and Iron Dome systems **could prove particularly valuable** (<https://www.washingtoninstitute.org/policy-analysis/missile-defense-manhattan-project-middle-east>)).

Such initiatives would be a bilateral win-win: Riyadh would see them as evidence of U.S. commitment, while the Biden team could use them to advance a vital relationship that has challenged every previous administration. Ultimately, strong U.S. support for air defense would open the possibility for cooperation on a range of other issues, from proliferation to climate.

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USS Ronald Reagan. The views expressed in this article are his own and do not reflect the official position of the U.S. Navy, the Defense Department, or the U.S. government. ❖

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