

IRAN, ISRAEL, AND THE STRUGGLE FOR THE SKIES OVER THE MIDDLE EAST

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Israel and Iran have been engaged in an expanding conflict across the Middle East since the late 1990s. Iran continues its long-standing support of proxy forces that surround Israel, and Israel persists in its defense with a variety of air, ground, and sea capabilities, undermining Iran's power-projection efforts. Facets of this protracted conflict have been studied deeply, but this article addresses a gap in existing literature by examining Iranian attempts to undermine Israeli airpower strategy through weapons developments and deployments across the region. This analysis reveals lessons for an advanced air force facing a similar asymmetric challenge.

In March 2021, Israeli F-35s intercepted an unidentified aircraft speeding toward Israeli airspace. After identifying the aircraft as a hostile drone, the pilots shot it down, resulting in the first confirmed air-to-air kill for an F-35.¹ Upon subsequent investigation, Israeli authorities discovered the aircraft was one of three Iranian drones destined for Hamas-controlled territory in the Gaza Strip. In addition to collecting intelligence as they passed over Israeli territory, the drones carried weapons for Palestinian fighters.

This incident, conducted within the context of a broader struggle between the two rivals, is part of an increasing attempt by Iran to contest Israel's long-held supremacy in the skies over the Middle East. The two countries have been engaged in an expanding conflict across the Middle East since 2006. Iran has attempted to entrench its influence in the Levant by surrounding Israel with a ring of proxy forces, and Israel has relied on a range of capabilities to sabotage Iranian capability developments and undermine Iranian power-projection efforts.

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1. Thomas Newdick, "Israel Shows the F-35's First Aerial Kill in Newly Declassified Video," *Warzone*, March 7, 2022, <https://www.thedrive.com/>.

While cyberattacks and Mossad assassinations have garnered recent headlines, the focus of the conflict between Iran and Israel is best understood as one in which Iran seeks to deny Israel freedom of action in the air, while Israel attempts to counter these efforts.² This shift started gradually in the early 2000s but has grown more pronounced as Iran has improved its capabilities and Israel has increased its willingness to risk escalation.

Although Israel and Iran have been engaged in air combat operations—with the Israeli Air Force (IAF) on one hand and Iranian drones, air defenses, and missiles on the other—the current literature largely neglects to address the centrality of airpower in this conflict. Some analysts have pointed to the potential for Israel to lose air superiority but have attributed this to US sales of advanced weapons to Arab states while dismissing the threat posed by Iran’s antiquated fighter aircraft.³ Analyses by Israeli authors in particular have addressed the role of airpower in the ongoing Israeli campaign against Iranian targets in Syria but have examined the topic from the perspective of deterrence, evaluating the effectiveness of Israeli strategy.⁴

Likewise, Iran-focused literature has pointed to significant improvements in Iranian air defense, ballistic missile, and unmanned aerial vehicle (UAV) capabilities, but without reference to Iranian proliferation to proxies or challenges to the IAF.⁵ To date, the sole study that directly addresses Israel’s shrinking freedom of maneuver in the air domain has focused only on changes in Lebanon, obscuring the broader trend across the region.⁶ No study has directly addressed the challenge Iranian weapons advances pose to the IAF through the lens of a contest for the air domain.

This paper attempts to address the gap in existing literature by examining Israeli airpower strategy in light of Iranian weapons developments and deployments across the region. For the purposes of this paper, airpower is defined as the use of the air do-

2. David Vielhaber and Philipp C. Bleek, “Shadow Wars: Covert Operations against Iran’s Nuclear Program,” *The Nonproliferation Review* 19, no. 3 (2012), <https://doi.org/>; and Amos Harel, “Tehran Assassination: Latest Move in Secret Israel-Iran War,” *Haaretz*, May 24, 2022, <https://www.haaretz.com/>.

3. Yiftah Shapir, “Is Israel’s Air Superiority in Danger?,” *Israel Defense* (Summer 2017), <https://www.israeldefense.co.il/>.

4. Itai Brun, *From Air Superiority to Multidimensional Strike: The Use of Airpower and Its Place in Israel’s Overall Concept of War* (Tel Aviv: Institute for National Security Studies, [INSS], 2022) [in Hebrew], <https://www.inss.org.il/>; Itamar Lifshitz and Erez Seri-Levy, “Israel’s Inter-War Campaigns Doctrine: From Opportunism to Principle,” *Journal of Strategic Studies*, published ahead of print, August 10, 2022, <https://doi.org/>; and Michael Herzog, “Iran Across the Border: Israel’s Pushback in Syria,” Policy Notes 66, Washington Institute for Near East Policy (Washington Institute) (website), July 25, 2019, <https://www.washingtoninstitute.org/>.

5. Hadi Ajili and Mahsa Rouhi, “Iran’s Military Strategy,” *Survival* 61, no. 6 (2019), <https://doi.org/>; and Farzin Nadimi, “The Counterintuitive Role of Air Defense in Iran’s Anti-Status Quo Regional Strategy,” Policy Watch 2748, Washington Institute, January 11, 2017, <https://www.washingtoninstitute.org/>.

6. Assaf Orion, “Don’t Look Down: The Struggle over Lebanon’s Airspace,” Policy Watch 3626, Washington Institute, July 7, 2022, <https://www.washingtoninstitute.org/>.

main to attain strategic objectives and the denial of such use by the adversary.⁷ This definition, based on principles expounded by early airpower theorists, allows for an examination of Iranian efforts to challenge Israel in the air domain without itself fully controlling the domain. When Iranian weapons advancements and proliferation to proxy forces are juxtaposed against recent Israeli operational activities, the interplay of these factors in the ongoing conflict illuminates lessons for an advanced air force facing an asymmetric challenge.

Airpower in Israeli Military Strategy

By challenging Israel's decades-long dominance in the skies over the Middle East, Iran's efforts to contest the air domain as part of its broader strategy against Israel represent a departure from the status quo. Although the Israeli Air Force started the War of Independence in 1948—also known as the Arab-Israeli War of 1948—with severe shortfalls in aircraft and personnel, by the end of 1949, Israel enjoyed a qualitative advantage over its opponents. This was due largely to the technical expertise and combat proficiency of the volunteers who fought on the Israeli side.⁸

The IAF built upon this initial success in subsequent conflicts, repeatedly demonstrating the importance of airpower and its mastery over regional opponents. Israeli airstrikes in the opening of the June 1967 Six-Day War ensured air superiority throughout that conflict.⁹

Likewise, while the Israeli Air Force was unprepared in the initial onslaught of the Yom Kippur War in 1973, it demonstrated its worth through close air support contributions, even as attempts to destroy Arab air defenses fell short of expectations.¹⁰ The IAF contributed significantly to Israel's victory in 1973, but the conflict also reinforced the importance of air superiority as the force lost over 100 aircraft, the vast majority of those to surface-to-air fire.¹¹ Following the Yom Kippur War, the Israeli Air Force routinely reasserted its superiority in clashes over Syria and Lebanon.

Beyond declared wars and border clashes, Israel's leaders have turned to airpower to counter developments in adversarial states as well as to combat nonstate actors. In the post-1973 period, the IAF was dispatched to destroy an Iraqi nuclear reactor (1981) and a nascent Syrian weapons of mass destruction program (2007).¹² Likewise, Israel has used airpower to monitor restive populations in the Palestinian territories

7. Giulio Douhet, *The Command of the Air*, trans. Dino Ferrari (Maxwell AFB, AL: Air University Press, 2019), 24; and William Mitchell, *Winged Defense: The Development and Possibilities of Modern Air Power—Economic and Military* (Tuscaloosa: University of Alabama Press, 2009), xii.

8. Benny Morris, *Righteous Victims: A History of the Zionist-Arab Conflict, 1881–2001* (New York: Vintage Books, 2001), 217, 234–35, 241, 244.

9. Morris, *Righteous Victims*, 311, 316–18.

10. Brun, *Air Superiority*, 66–72.

11. David Rodman, *Sword and Shield of Zion: The Israel Air Force in the Arab-Israeli Conflict, 1948–2012* (Brighton, UK: Sussex Academic Press, 2022), 32.

12. Morris, *Righteous Victims*, 507; and Oliver Holmes, "Israel Confirms It Carried Out 2007 Airstrike on Syrian Nuclear Reactor," *Guardian*, March 21, 2018, <https://www.theguardian.com/>.

and in Lebanon as well as to strike Palestine Liberation Organization, Hamas, Hezbollah, and Palestine Islamic Jihad targets.¹³

Furthermore, since the early 2000s the Israeli Air Force has been preparing for potential strike options against key sites in Iran. While other services will play supporting and defensive roles at home, the IAF's ability to maintain freedom of maneuver will be critical to any attack against Iran.¹⁴ This has been routinely reinforced by Israeli exercises, training, and statements focused on preparing for long-distance precision airstrikes against Iran.¹⁵ The recent iteration of these preparations in June 2022 demonstrates the continued centrality of airpower to Israeli efforts to deter Iranian nuclear developments.¹⁶

Throughout its history, Israel has routinely turned to the IAF to solve strategic challenges. But the IAF relies on freedom of maneuver in order to sustain the sort of high-impact, low-casualty options that policymakers require. When that freedom of maneuver is curtailed, as it was during the Yom Kippur War, the IAF takes losses that can undermine its value proposition. Despite this risk, airpower remains one of the few viable options for Israeli policymakers as the country faces a growing threat from Iran.

Iranian Airpower Pre-Revolution to Operation Iraqi Freedom

The Islamic Republic of Iran has been forced to adjust its approach to the air domain as it developed a distinct asymmetric strategy following the 1979 revolution.¹⁷ Prior to the revolution, the Iranian military was closely tied to the United States, and during that time, the Shah purchased vast quantities of the latest American military equipment. Noteworthy among these purchases were cutting-edge American aircraft, including fighters such as the F-4, F-14, and the F-5, and a host of multirole assets such as maritime patrol craft, military transports, and helicopters.¹⁸

Following the revolution, however, the Iranian military no longer had access to those advanced systems. The Iraqi military invasion in September 1980 destroyed much of Iran's military hardware, including numerous aircraft, in the initial strikes.¹⁹ Without the ability to purchase parts and replacement aircraft, the Iranian military was initially forced to revert to the ground domain, where the barrier to entry was lower for fielding new recruits, and the benefits of human wave attacks could more quickly be brought to bear.

13. Rodman, *Sword and Shield*, 21.

14. Brun, *Air Superiority*, 165–66.

15. Emanuel Fabian, "Israeli Air Force Simulates Widescale Strike on Iran Nuclear Facilities," *Times of Israel*, June 1, 2022, <https://www.timesofisrael.com/>.

16. Fabian, "Israeli Air Force."

17. Gawdat Bahgat and Anoushiravan Ehteshami, *Defending Iran: From Revolutionary Guards to Ballistic Missiles* (Cambridge: Cambridge University Press, 2021), 8.

18. Bahgat and Ehteshami, *Defending Iran*, 76.

19. Afshon Ostovar, *Vanguard of the Imam: Religion, Politics, and Iran's Revolutionary Guards* (Oxford: Oxford University Press, 2016), 64.

The Iran-Iraq war brought a paradigm shift to the Iranian way of war; the success of human-wave tactics and the influence of the Islamic Revolutionary Guards Corps (IRGC) brought asymmetry to the forefront which functioned to delay, at least initially, the development of the advanced technology necessary to dominate the air domain.²⁰ Given the challenges of procuring weapons from the global market over the subsequent years, the Islamic Republic focused on producing weapons domestically.²¹ While Iran procured some Chinese and Russian aircraft after the late-1980s, and Iraqi pilots flew aircraft into Iran to avoid their destruction at the hands of the US-led coalition in 1991, none of these developments significantly altered the obsolescence of the Iranian Air Force.

Finally, the Iranian regime's focus on its self-ordained role as defender of the Shiite community quickly led to its preference to work through proxy forces in places like Lebanon, Iraq, Palestine, and Yemen.²² These developments prompted Iran to de-emphasize military development in the air domain through the early 2000s, relying instead on ballistic missiles, proxy forces, and sea-denial capabilities to make up for the lack of air capabilities.

Refocusing on the Air Domain

Iranian threat perception after the US invasion of Iraq in 2003 led the regime to shift military focus increasingly to the air domain to defend against potential US aggression.²³ This was accelerated following the election of Mahmud Ahmadinejad to the presidency in 2005, and further reinforced by fears of a US-Israeli strike against the nascent Iranian nuclear program in subsequent years. While former Israeli Prime Minister Ehud Olmert's cabinet spoke of an Israeli preemptive strike as a last resort, in a 2006 interview, his deputy defense minister made it clear that, for Israel, "even the last resort is sometimes the only resort."²⁴

Iran's Airpower Approach

Borrowing heavily from its asymmetric approach to land warfare (human-wave attacks and proxy forces) and maritime warfare (small-boat swarms), Iran formed an independent air defense force in 2008 to provide a similar focus in the air domain.²⁵ Since that time, Iran has invested heavily in improving its air and air defense forces,

20. Ostovar, *Vanguard*, 74–79.

21. Defense Intelligence Agency (DIA), *Iran Military Power: Ensuring Regime Survival and Securing Regional Dominance* (Washington, DC: Government Printing Office, 2019), <https://www.dia.mil/>.

22. Afshon Ostovar, "The Grand Strategy of Militant Clients: Iran's Way of War," *Security Studies* 28, no. 1 (2019).

23. Bahgat and Ehteshami, *Defending Iran*, 30–32, 35–36; and DIA, *Iran Military Power*, 12.

24. Yaakov Katz, "Meridor: Stop Talking about Iran," *Jerusalem Post*, December 7, 2006, <https://www.jpost.com/>.

25. Bahgat and Ehteshami, *Defending Iran*, 106.

while remaining true to its preference for asymmetry in military operations.²⁶ The result has been a unique approach to contesting the air domain, one that closely follows concepts pioneered by the early twentieth-century British maritime strategist Julian Corbett.²⁷

Iran's view of the air domain appears to parallel Corbett's approach to sea control: it recognizes contesting the domain does not require Iran to exercise full control over it. Corbett challenged the logic behind the tendency to view sea control as binary—either one has control or one does not, and control shifts to one's opponent—pointing to “the error that if we are unable to win the command [of the sea] we therefore lose it.”²⁸ Corbett instead saw sea control as inherently dynamic and argued merely contesting control could deny an adversary freedom of maneuver.

This approach to airpower is quite different from that of traditional airpower theorists like Giulio Douhet, who advocated that “command of the air” required one to “prevent the enemy from flying while retaining the ability to fly oneself.”²⁹ Iran appears to have adopted Corbett's logic in its approach to the air domain, realizing its objectives do not require control of the domain, nor do they require investments in advanced fighter and strike aircraft. Iran needs merely to contest the air domain by imposing costs on its adversaries while maintaining the ability to leverage the domain in a limited set of circumstances at times and places of its choosing. This approach has allowed Iran to build effective capabilities to contest and exploit the air domain, while also exporting low-cost capabilities to its proxy partners across the region as part of its broader “forward defense” strategy in places like the Levant.³⁰

Asymmetric Capabilities

Iranian efforts to build an asymmetric set of capabilities to contest the air domain have largely centered on three complementary components. The first is its ground-based air defenses. Iran's ground-based air defenses are largely focused on denying adversaries freedom of movement in the air and on imposing costs. These capabilities take the form of air surveillance equipment, radar sites, and electronic detection capabilities, as well as surface-to-air missiles and electronic warfare equipment. Recent Iranian advancements have focused on highly mobile, frequency-diverse systems to improve survivability and effectiveness against advanced fighter aircraft.³¹

26. DIA, *Iran Military Power*, 23.

27. Julian S. Corbett, *Some Principles of Maritime Strategy* (London: Longmans, Green and Co., 1918).

28. Corbett, *Principles*, 209.

29. Douhet, *Command of the Air*, 24.

30. Amr Yossef, “Military Doctrines in Israel and Iran: A Doctrinal Hybridity,” *Middle East Journal* 75, no. 2 (2021); and Shahram Akbarzadeh, William Gourlay, and Anoushiravan Ehteshami, “Iranian Proxies in the Syrian Conflict: Tehran's ‘Forward-Defence’ in Action,” *Journal of Strategic Studies*, published ahead of print, January 4, 2022, <https://doi.org/>.

31. Ajili and Rouhi, “Iran's Military Strategy”; and Nadimi, “Counterintuitive Role.”

The second component of Iranian capabilities are surface-to-surface missiles. Given Iran's lack of modern combat aircraft, ballistic and cruise missiles have become a centerpiece of its strike capabilities, allowing Iran to leverage the air domain in a limited manner to deliver offensive power and deter regional adversaries.³² But surface-based missiles require targeting information to determine locations for fixed and mobile targets as well as to conduct hit-and-damage assessments after a strike. For this, Iran has built the third component of its air capabilities, unmanned aerial vehicles (UAVs).

Unmanned aerial vehicles provide Iran with an inexpensive but effective means of intelligence, surveillance, and reconnaissance (ISR) as well as strike capability.³³ Iranian efforts to expand and integrate all three capabilities have accelerated in recent years as have the testing and deployment of these capabilities beyond Iran's borders.³⁴

Capability Development

Iran initiated development of the aforementioned air domain capabilities during the Iran-Iraq war, moving from development to deployment over the next two decades. While few outside Iran initially paid attention to these advances, by the early 2000s, Iran was exporting air defense, missile, and UAV technology to its allies and proxies.

Iranian proxies employed these new capabilities in regional conflicts over the ensuing years. Lebanese Hezbollah used Iranian-supplied UAVs alongside rockets and missiles during the 2006 war with Israel.³⁵ Houthi forces in Yemen likewise employed Iranian-supplied UAV and missile technology in attacks against Saudi refineries in 2017.³⁶ Meanwhile, Iran continued to perfect its mobile ground-based air defenses, dramatically demonstrating advances in those capabilities by downing a US RQ-4 UAV operating over the Persian Gulf in June 2019.³⁷ The events since 2006, especially the shootdown of the RQ-4, indicate Iran's willingness to escalate, leveraging its improved capability to contest the air domain.

As Iran refined and improved its air defense, UAV, and missile technologies, it transferred these advanced systems to proxies in Syria and Lebanon. In a key milestone in 2009, Iran transferred radars to Syria to provide advanced warning of an Israeli air incursion toward Iran.³⁸ Iran had long supplied weapons—especially rockets

32. DIA, *Iran Military Power*, 30–31.

33. Bahgat and Ehteshami, *Defending Iran*, 183–191; and Andrew Bowen, Carla Humud, and Clayton Thomas, "Iran's Transfer of Weaponry to Russia for Use in Ukraine," IN12042 (Washington, DC: Congressional Research Service, November 4, 2022), 2, <https://crsreports.congress.gov/>.

34. DIA, *Iran Military Power*, 41; and Nadimi, "The Counterintuitive Role."

35. Liran Antebi, "Unmanned Aerial Vehicles in Asymmetric Warfare: Maintaining the Advantage of the State Actor," in *The Quiet Decade: In the Aftermath of the Second Lebanon War, 2006–2016*, ed. Udi Dekel, Gabi Siboni, and Omer Einav (Tel Aviv: Institute for National Security Studies, 2017), 84.

36. Bahgat and Ehteshami, *Defending Iran*, 191.

37. Ajili and Rouhi, "Iran's Military Strategy," 139.

38. Charles Levinson, "Iran Arms Syria with Radar," *Wall Street Journal*, June 30, 2010, <https://www.wsj.com/>.

and small arms—to Lebanese Hezbollah and other proxies, but following the 2006 war, Iranian arms transfers included increasingly sophisticated weapons. These systems included air defenses, advanced surface-to-surface and antiship missiles, and UAVs, all with the potential to shift the balance of power in the region.

These capabilities presented a growing challenge to both Israeli air defenses over the homeland and Israeli freedom of maneuver in the skies over the Levant.³⁹ As Iranian weapons proliferation expanded, Israel determined it needed a new approach to respond to this escalating threat.

The Battle in the Levant: Israel's Campaign between Wars

Israel grew increasingly alarmed over the Iranian weapons transfers, and an internal debate raged over how best to respond. Israeli military and political leaders settled on a doctrine known as the “campaign between wars/*m'aracha bein ha-milchamot*” (referred to by the Hebrew acronym, מ"כ נ or MABAM) as Israel's response to Iranian provocations.⁴⁰ This doctrine represented a shift away from the traditional Israeli bifurcation of preparing for war and conducting war by adding a third component, sustained low-intensity conflict to prevent adversaries from building capabilities during peacetime.

Iranian weapons proliferation was the impetus behind the campaign between wars, but the key motivating factor revolved around Iranian attempts to challenge the Israeli Air Force's freedom of maneuver over Lebanon. The inaugural action in Israel's campaign between wars was a January 2013 airstrike on a convoy of advanced SA-17 surface-to-air missile systems near Damascus that were being transferred to Lebanese Hezbollah.⁴¹ This first strike was followed by others throughout 2013, and by 2016, the Israeli offensive expanded from Lebanese Hezbollah targets to Iranian targets and personnel in Syria.⁴²

Israel's MABAM concept was designed around airpower as the primary strike capability, paired with highly accurate and timely intelligence on target locations and composition.⁴³ The strategy looks quite similar to that of the war of attrition between Israel and Egypt in the late 1960s. In that war, Israel pursued limited objectives to curtail an Egyptian arms buildup along the Suez Canal, largely through the application of airpower.⁴⁴ The campaign between wars follows the same strategic logic and has in

39. Levinson, “Syria.”

40. Gadi Eisenkot and Gabi Siboni, “The Campaign between Wars: How Israel Rethought Its Strategy to Counter Iran's Malign Regional Influence,” Policy Watch 3174, Washington Institute, September 4, 2019, <https://www.washingtoninstitute.org/>.

41. Lifshitz and Seri-Levy, “Doctrine,” 8.

42. Herzog, “Across the Border,” 4.

43. Brun, *Air Superiority*, 176.

44. Morris, *Righteous Victims*, 347–63.

fact grown to rival the war of attrition in scale, with the IAF conducting hundreds of strikes and dropping over 5,500 munitions as of early 2022.⁴⁵

While the MABAM strategy has been accompanied by developments in UAVs and air defenses, the focus remains offensive with the IAF playing the signature role. In spite of upgrades, Israeli air defenses remain susceptible to saturation, making them a last line of defense as the primary focus has been attacking Iranian-supplied capabilities on the ground before they are employed.⁴⁶ Israeli leaders remain convinced of the viability of the MABAM doctrine and have shown a willingness to risk escalation by striking Iranian personnel and Iranian-aligned targets in Syria and Lebanon.⁴⁷

The air-domain-centric nature of this conflict is not lost on Iran or its proxies. Iranian forces continue to adapt and experiment with new methods to challenge the IAF to some success. In 2018, Iranian assets launched a UAV into Israeli airspace. In response, Israel launched fighter aircraft to attack the UAV control van in Syria, where air defenses succeeded in shooting down an Israeli F-16I during the engagement.⁴⁸

More recently, in early 2022, Israeli news sources reported that advanced Iranian air defenses first deployed to Syria in 2021 had begun firing on IAF aircraft during strike operations.⁴⁹ Thus far the new Iranian systems have not succeeded in engaging Israeli Air Force assets. Despite the outcome largely favoring the IAF to date, Israeli leaders remain concerned the enduring threat of Iranian UAVs, air defense systems, and increasingly accurate surface-to-surface missiles will erode Israel's hard-won freedom of maneuver in the air domain, while also providing Iran and its allies with a viable means of retaliation and deterrence. Analysts note the necessity of successful strikes without IAF casualties as central to the campaign-between-wars concept and point to fears of increasingly effective surface-to-air missile threats as an eventuality Israel must address.⁵⁰

In February 2022, senior Israeli officials admitted Lebanese Hezbollah had successfully flown UAVs into Israeli airspace and Israel was struggling to counter the combined UAV-ballistic missile threat.⁵¹ Likewise, partly in recognition of the challenge of countering UAVs in the air, Israeli assets conducted an attack against an Iranian drone

45. Anna Ahronheim, "Thousands of Airstrikes Carried Out by Israel in Past Five Years," *Jerusalem Post*, March 29, 2022, <https://www.jpost.com/>.

46. Emanuel Fabian, "In 'Game Changer,' Israeli Laser-based Air Defense Shoots Down Drones," *Times of Israel*, April 14, 2022, <https://www.timesofisrael.com/>.

47. Herzog, "Across the Border," 5.

48. Brun, *Air Superiority*, 177.

49. Anna Ahronheim, "Iran Has Used Advanced Air Defense Batteries against Israel in Syria," *Jerusalem Post*, March 6, 2022, <https://www.jpost.com/>.

50. Herzog, "Across the Border," 5–6; and Brun, *Air Superiority*, 177.

51. Yaniv Kubovich, "Israel is 'Having a Hard Time' Curbing Hezbollah Threat, Defense Officials Admit," *Haaretz*, February 20, 2022, <https://www.haaretz.com/>.

facility near Kermanshah in that same month using short-range quadcopter drones to destroy dozens of the Iranian UAVs on the ground.⁵²

As Israel has been forced to acknowledge the threat to its airspace and adapt to defend it from incursion, Iran has grown increasingly confident in its asymmetric airpower capabilities. These changes in the rivalry dynamic were clearly showcased following Israel's assassination of an Islamic Revolutionary Guards Corps colonel in May 2022. Iran responded by revealing a secret UAV base and new capabilities, including UAVs able to launch cruise missiles.⁵³ Israel in turn assumed a heightened air defense alert against potential Iranian UAV and missile attacks, indicating the seriousness with which it views these threats.⁵⁴

Implications and Lessons

While developments in the Iranian-Israeli rivalry have not led to a major war, Iranian actions have influenced Israeli strategic thinking. Importantly, Israel implemented its MABAM doctrine and also updated its airpower tactics. Israeli press sources report that in 2022 Israel modified strike tactics in Syria to account for the increased threat from Iranian air defenses.⁵⁵ Israel now uses larger formations in order to limit the window of risk by striking more targets simultaneously. This likely also allows Israeli fighters to provide better mutual support and warning against air defenses and to assist with verifying targets and gathering bomb hit assessments.

The changes in doctrine and tactics have thus far been successful, but the broader trend toward a more contested environment is one Israeli political leaders must now consider. The prospect of IAF casualties may undermine political will to continue MABAM strikes in Syria. Israel may mitigate this by enhancing capabilities to suppress enemy air defenses, but this is only a partial solution. The more difficult choice facing Israeli leaders is whether the gradual erosion of the IAF's freedom of maneuver requires escalation to restore Israeli air dominance. If Israeli leaders abandon efforts to fly over Syria, they must recognize the repercussions for Israeli deterrence. If Iran can deny IAF freedom of maneuver in the Levant, it stands to reason these same tactics and capabilities may also render the threat of Israeli airstrikes in Iran untenable.

Regardless of how Israel chooses to adapt its strategy, the IAF must also address a second challenge by adjusting aerial surveillance to account for increasingly contested skies. This process has already started in Lebanon where Lebanese Hezbollah anti-air-

52. Farnaz Fasshi, Ronen Bergman, and Eric Schmitt, "Iran's Attack was Response to Secret Israeli Attack on Drone Site," *New York Times*, March 16, 2022, <https://www.nytimes.com/>.

53. "Iran Shows off Underground Drone Base, but Not Its Location, State Media Report," Reuters, May 28, 2022, <https://www.reuters.com/>; and "Top Commander Underlines Iran's Drone Power," Fars News Agency, Iran, May 28, 2022.

54. Emanuel Fabian, "Iran Blames 'Zionists' for Killing Officer, Vows Revenge; Israel Boosts Air Defenses," *Times of Israel*, May 30, 2022, <https://www.timesofisrael.com/>.

55. Ahronheim, "Air Defense Batteries."

craft initiatives have forced Israel to reduce ISR overflights by more than 70 percent in 2021 compared to previous years.⁵⁶

As Iran and its proxies increasingly deny or degrade airborne ISR, Israel must find other methods to secure the highly accurate intelligence necessary for MABAM operations. This may come in part through modified tactics, but two alternatives are likely to provide better outcomes in the long run. The first option is a return to human intelligence sources, long a strength of Israel's intelligence organizations. The second option is to look to new domains, especially space and cyber, to stay ahead of Iran's growing capability to contest the air domain.

The best answer likely lies in a combination of the two, with human intelligence providing information on target locations and adversary intent, while timely space and cyber capabilities provide vital updates. The outgoing IAF commander recently acknowledged the challenge for intelligence collection, noting that improving intelligence collection efforts in the air and space domain was ongoing in response to the difficulty operating over Lebanon.⁵⁷

Conclusion

In the second decade of the twenty-first century, airpower has come to the forefront of the Iran-Israel shadow war. Israel has long recognized the centrality of airpower to its national security and historically has used it effectively to maintain a favorable balance of power in the region. Iran, having grasped that airpower is an Israeli center of gravity, has employed an asymmetric approach to contest this domain. Iran leverages air defenses, UAVs, and surface-to-surface missiles to contest Israeli operations in the Levant as well as to deter Israel from attacking the Iranian homeland. Israel views these developments with alarm, especially Iran's export of these capabilities to its proxies in the Levant.

Both countries have sought an advantage while thus far avoiding a broader regional war. Nonetheless, Israel is already recognizing the significance of this challenge and has been forced to adapt its approach strategically and tactically. While both nations view airpower as a critical aspect of their protracted conflict, they have shown a willingness to risk escalation in order to attain their individual objectives.

This conflict provides lessons for air forces facing an asymmetric threat. Conventional air forces should account for increasingly proliferated threats from both peer competitors and asymmetric opponents following Iran's approach. The most relevant initial lessons appear to be related to changes in Israeli intelligence collection and strike-package composition.

Air operations will continue to rely on high-quality intelligence, but in a contested domain, the methods used to collect that intelligence will increasingly shift outside

56. Roy Sharon, "Retiring Air Force Commander Tells of Preparations for Attack on Iran in Exclusive Interview," *Kann News* [in Hebrew], April 5, 2022, <https://www.kan.org.il/>; and Orion, "Don't Look Down."

57. Sharon, "Attack on Iran."

that domain. Renewed focus on human intelligence and a shift to space- and cyber-based intelligence collection provide plausible solutions. Yet the challenge should encourage a broader rethinking of airborne ISR as asymmetric threats appear poised to increasingly deny airspace to collection assets. For strike operations themselves, an emphasis on avoiding and suppressing ground-based threats reinforces the centrality of timely intelligence, both for warning and for targeting. It also encourages a renewed focus on strike packages with integrated suppression of enemy air defense assets.

As the IAF has demonstrated, airpower remains a valuable tool in an increasingly contested domain. The Israeli Air Force has remained relevant by adapting to the new reality, and other advanced conventional forces would be wise to incorporate these lessons. **Æ**

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