



**Congressional
Research Service**

Informing the legislative debate since 1914

U.S. Foreign Aid to Israel

Updated March 1, 2023

Congressional Research Service

<https://crsreports.congress.gov>

RL33222

CRS REPORT

Prepared for Members and
Committees of Congress



U.S. Foreign Aid to Israel

This report provides an overview of U.S. foreign assistance to Israel. It includes a review of past aid programs, data on annual assistance, and analysis of current issues. For general information on Israel, see *Israel: Background and U.S. Relations in Brief*, by Jim Zanotti.

Israel is the largest cumulative recipient of U.S. foreign assistance since World War II. Successive Administrations, working with Congress, have provided Israel with assistance reflective of robust domestic U.S. support for Israel and its security; shared strategic goals in the Middle East; a mutual avowed commitment to democratic values; and historical ties dating from U.S. support for the creation of Israel in 1948. To date, the United States has provided Israel \$158 billion (current, or non-inflation-adjusted, dollars) in bilateral assistance and missile defense funding. At present, almost all U.S. bilateral aid to Israel is in the form of military assistance; from 1971 to 2007, Israel also received significant economic assistance.

In 2016, the U.S. and Israeli governments signed their third 10-year Memorandum of Understanding (MOU) on military aid, covering FY2019 to FY2028. Under the terms of the MOU, the United States pledged to provide—subject to congressional appropriation—\$38 billion in military aid (\$33 billion in Foreign Military Financing (FMF) grants plus \$5 billion in missile defense appropriations) to Israel.

Israel is the first international operator of the F-35 Joint Strike Fighter, the Department of Defense's fifth-generation stealth aircraft, considered to be the most technologically advanced fighter jet ever made. To date, Israel has purchased 50 F-35s in three separate contracts, funded with U.S. assistance, and has taken delivery of 36.

For FY2023, Congress authorized \$520 million for joint U.S.-Israel defense programs (including \$500 million for missile defense) in the FY2023 James M. Inhofe National Defense Authorization Act. Per the terms of the MOU, Congress appropriated \$3.8 billion for Israel (FMF and missile defense) in the FY2023 Consolidated Appropriations Act, and added \$98.58 million in funding for other cooperative defense and non-defense programs.

The foreign aid data in this report are compiled by the Congressional Research Service from a number of resources, including USAID's U.S. Overseas Loans and Grants (also known as the "Greenbook"), CRS communications with the State Department and the United States Agency for International Development (USAID), and annual State Department and USAID Congressional Budget Justifications. For terminology and abbreviations used in this report, see Appendix A.

RL33222

March 1, 2023

Jeremy M. Sharp
Specialist in Middle
Eastern Affairs

Contents

Background	1
U.S. Aid and Israel's Advanced Military Technology	2
Qualitative Military Edge (QME)	5
U.S. Bilateral Military Aid to Israel	7
The Current 10-Year Security Assistance Memorandum of Understanding (MOU)	8
Foreign Military Financing (FMF) and Arms Sales.....	10
Cash Flow Financing	10
Early Transfer and Interest Bearing Account.....	11
Shorter Congressional Review Period	12
F-35 Joint Strike Fighter	12
KC-46A Pegasus	14
CH-53K Heavy Lift Helicopters	15
Excess Defense Articles	15
Defense Budget Appropriations for U.S.-Israeli Missile Defense Programs	16
Iron Dome	17
Co-production and U.S. Funding	18
Ukraine's Request for Israeli Missile Defense Systems	19
David's Sling.....	21
The Arrow and Arrow II.....	22
High Altitude Missile Defense System (Arrow III)	23
Export of the Arrow III to Germany	24
Emergency U.S. Stockpile in Israel.....	26
Defense Budget Appropriations for Anti-Tunnel Defense	30
Defense Budget Appropriations for Countering Unmanned Aerial Systems	30
Aid Restrictions and Possible Violations.....	31
Arms Sales and Use of U.S.-Supplied Equipment	32
Section 502B of the Foreign Assistance Act.....	32
End-Use Monitoring	33
Human Rights Vetting (Leahy Law)	33
Use of U.S. Funds within Israel's Pre-June 1967 Borders.....	35
Israeli Arms Transfers to Third Parties.....	36
Israel and China	36
Other Ongoing Assistance and Cooperative Programs.....	39
Migration and Refugee Assistance.....	39
Loan Guarantees.....	40
Overview.....	40
Loan Guarantees for Economic Recovery	40
American Schools and Hospitals Abroad Program (ASHA).....	41
U.S.-Israeli Scientific & Business Cooperation	41
U.S.-Israeli Energy Cooperation (BIRD Energy)	43
U.S.-Israel Center of Excellence in Energy, Engineering and Water Technology (Energy Center).....	44
BIRD Homeland Security (BIRD HLS)	44
BIRD Cyber	45
Other Congressionally Authorized Cooperative Endeavors.....	45

Figures

Figure 1. Israel's Annual Arms Exports: 2012-2021	3
Figure 2. Phasing Out Off-Shore Procurement (OSP) Under the MOU	9
Figure 3. U.S. Foreign Military Financing to Israel over Decades.....	9
Figure 4. U.S. and Israeli F-35s Fly in Formation.....	13
Figure 5. F-35 Helmet Mounted Display	14
Figure 6. The KC-46A Pegasus	15
Figure 7. The CH-53K Heavy Lift Helicopter for Israel.....	15
Figure 8. Iron Dome Launcher	18
Figure 9. David's Sling Launches Stunner Interceptor	22
Figure 10. Army Officers Inspect WRSA-I.....	27

Tables

Table 1. Total U.S. Foreign Aid Obligations to Israel: 1946-2023	1
Table 2. Selected Notified U.S. Foreign Military Sales to Israel	16
Table 3. U.S. Contributions to the Arrow Program (Arrow, Arrow II, and Arrow III).....	23
Table 4. Defense Budget Appropriations for U.S.-Israeli Missile Defense: FY2006- FY2023.....	25
Table 5. U.S.-Israeli Anti-Tunnel Cooperation.....	30
Table 6. U.S.-Israeli Anti-Drone Cooperation.....	31
Table 7. Migration and Refugee Assistance Funding Levels for Israel	39
 Table A-1. U.S. Bilateral Aid to Israel.....	47
Table B-1. Authorized Aid for Israel in P.L. 117-263, the James M. Inhofe National Defense Authorization Act (NDAA) for Fiscal Year 2023	48
Table B-2. Appropriated Aid to Israel in P.L. 117-328, the Consolidated Appropriations Act, 2023	49

Appendices

Appendix A. Bilateral Aid to Israel	47
Appendix B. Israel and FY2023 Legislation.....	48
Appendix C. Common Acronyms and Abbreviations used in this Report	53

Contacts

Author Information.....	53
-------------------------	----

Background

The United States and Israel have maintained strong bilateral relations based on a number of factors, including robust domestic U.S. support for Israel and its security; shared strategic goals in the Middle East; an avowed mutual commitment to democratic values; and historical ties dating from U.S. support for the creation of Israel in 1948. U.S. foreign aid has been a major component in cementing and reinforcing these ties. U.S. officials and many lawmakers have long considered Israel to be a vital partner in the region, and U.S. aid packages for Israel have reflected this calculation. Some U.S. citizens have worked to cultivate U.S. support for Israel since its creation in 1948, and since the 1973 Yom Kippur War, advocates for Israel have engaged in organized, broad-based domestic efforts to foster bipartisan support in Congress for the bilateral relationship, including for U.S. aid to Israel.

Table I. Total U.S. Foreign Aid Obligations to Israel: 1946-2023

current, or non-inflation-adjusted, U.S. dollars in millions

Fiscal Year	Military	Economic	Missile Defense	Total
1946-2020	104,506.200	34,347.500	7,411.409	146,265.110
2021	3,300.000	-	500.000	3,800.000
2022	3,300.000	-	1,500.000	4,800.000
2023	3,300.000	-	500.000	3,800.000
Total	114,406.200	34,347.500	9,911.409	158,665.110

Sources: U.S. Overseas Loans and Grants (Greenbook), the U.S. State Department, and the Missile Defense Agency.

Notes: The Greenbook figures do not include missile defense funding provided by the Department of Defense. According to USAID Data Services as of January 2023, in constant 2021 U.S. dollars (inflation-adjusted), total U.S. aid to Israel obligated from 1946-2023 is an estimated \$260 billion.

Some of the major advocacy organizations engaged on this issue, such as the American Israel Public Affairs Committee (AIPAC) and Christians United for Israel (CUFI), express unequivocal support for U.S. security assistance to Israel.¹ Another major advocacy organization, J Street, supports continued security assistance at current levels while arguing that U.S. funds should not be used to “trample on Palestinian rights” or “to implement or maintain annexation, the expansion of settlements, the demolition of Palestinian homes or other moves that entrench occupation” in the West Bank.² Some political groups that are not focused exclusively on Israel matters have advocated for increased scrutiny of U.S. military aid to Israel, particularly during the May 2021 conflict in Israel and Gaza.³ These groups have stimulated debates about possibly conditioning or cutting foreign aid to Israel,⁴ or supporting boycotts and sanctions.⁵

¹ For example, see AIPAC’s and CUFI’s policy agendas respectively at <https://www.aipac.org/s/policy-agenda> and <https://cufi.org/about/policy/policy-agenda/>

² See, J Street’s position on aid at <https://jstreet.org/policy/us-security-assistance-to-israel/#.YdR4gGjMKUk>.

³ Laura Kelly, “Progressive Groups Call for Biden to Denounce Evictions of Palestinians as ‘War Crimes,’” *The Hill*, May 13, 2021.

⁴ “America’s Democrats are increasingly divided over Israel,” *The Economist*, May 14, 2021.

⁵ Sean Sullivan, “Supporters of a Tougher Line on Israel Split over Tactics and Message,” *Washington Post*, May 30, 2021. See also, CRS Report R44281, *Israel and the Boycott, Divestment, and Sanctions (BDS) Movement*, coordinated

Israel's New Coalition Government: Implications for U.S. Aid to Israel

Prime Minister Benjamin Netanyahu's inclusion of ultra-nationalist parties in the coalition government he formed in December 2022 may, according to some commentators, strain relations with the United States.⁶ Though Biden Administration officials call their commitment to Israel's security "ironclad,"⁷ some former U.S. officials have advocated for the Biden Administration to communicate to Israel that while the United States will continue to provide military aid, it will restrict the provision of "offensive weapons" for "malign Israeli actions in Jerusalem or the occupied territories."⁸ Some former Israeli officials have argued that regardless of Israel's political orientation, U.S. aid to Israel should remain unconditional given the national security threats Israel faces and its value to U.S. interests in the Middle East.⁹ The Biden Administration has stated that it will continue to "support the two state solution and oppose policies that endanger its viability," and that it will "gauge the government by the policies it pursues rather than individual personalities."¹⁰ In one December 2022 media article, two unnamed U.S. officials were reported as saying that President Joseph Biden has "ruled out cutting U.S. military aid to Israel."¹¹ In February 2023, after the Israeli government authorized West Bank settlement expansion in contravention of U.S. requests, a reporter asked State Department Spokesperson Ned Price whether the Biden Administration was considering taking any punitive measures against Israel. In response, Spokesperson Price remarked that a component of close U.S.-Israeli relations is the U.S. "rock-solid commitment to Israel's security," and that despite steps Israel may take to "undermine the prospect" for a two-state solution to the Israeli-Palestinian conflict, the United States is going to "continue to stand by Israel's side when it comes to the security threats that it faces."¹²

U.S. Aid and Israel's Advanced Military Technology

Almost all current U.S. aid to Israel is military assistance.¹³ U.S. military aid has helped transform Israel's armed forces into one of the most technologically sophisticated militaries in the world (see, "**Qualitative Military Edge (QME)**"). U.S. military aid also has helped Israel build its domestic defense industry, which now ranks as one of the top global arms exporters.¹⁴ Israeli defense companies, such as Israel Aerospace Industries (IAI), Rafael, and Elbit Systems, export nearly 70% of their products.¹⁵ Rather than producing large-scale hardware (combat aircraft,

by Jim Zanotti.

⁶ See, for example, Dennis Ross and David Makovsky, "A Narrow Government with Ben Gvir and Smotrich Threatens US-Israel Ties," *Times of Israel*, November 2, 2022.

⁷ U.S. Department of Defense, Remarks by Secretary of Defense Lloyd J. Austin III at the AIPAC Political Leadership Forum, January 10, 2023.

⁸ Aaron David Miller and Daniel C. Kurtzer, "Biden should respond boldly to a radical Netanyahu government," *Washington Post*, November 29, 2022.

⁹ Chuck Freilich and Danny Ayalon, "Military aid to Israel must remain unconditional," *Jerusalem Post*, December 14, 2022.

¹⁰ See, The White House, Statement from President Joe Biden on the New Government of the State of Israel, December 29, 2022 and U.S. State Department, Secretary Antony J. Blinken At the J Street National Conference, December 4, 2022.

¹¹ Nahal Toosi, "Biden's strategy for a far-right Israel: Lay it all on Bibi," *Politico*, December 20, 2022.

¹² U.S. Department of State, Department Press Briefing, February 13, 2023.

¹³ For many years, U.S. economic aid helped subsidize a lackluster Israeli economy, but since the rapid expansion of Israel's high-tech sector and overall economy in the 1990s (sparked partially by U.S.-Israeli scientific cooperation), Israel has become one of the world's most dynamic economies (as of 2022, Israel's Gross Domestic Product per capita ranks 14th worldwide)., Israel and the United States agreed to gradually phase out economic grant aid to Israel. In FY2008, Israel stopped receiving bilateral Economic Support Fund (ESF) grants. The country had been a large-scale recipient of grant ESF assistance since 1971.

¹⁴ According to the Stockholm International Peace Research Institute (SIPRI), from 2017 to 2021, Israel was the 10th largest arms exporter worldwide, accounting for 2.4% of world deliveries. See, "Trends in International Arms Transfers, 2021," SIPRI Fact Sheet, March 2022.

¹⁵ Sasson Hadad, Tomer Fadlon, and Shmuel Even (editors), "Israel's Defense Industry and US Security Aid," INSS,

tanks), Israeli companies generally export advanced technological products (such as missile defense systems, unmanned aerial vehicles, cybersecurity products, radar, and electronic communications systems) to numerous customers globally. India, Azerbaijan, and Vietnam are Israel's three largest export markets.¹⁶

Figure 1. Israel's Annual Arms Exports: 2012-2021



Source: Created by CRS. Information from Israel Ministry of Defense, International Defense Cooperation Directorate (SIBAT), as reported by various media sources.

Notes: SIBAT does not produce a specific list of Israeli customers by country.

As Israel has become a global leader in certain niche defense technologies, Israeli defense exports to the U.S. market have grown substantially.¹⁷ According to one report, the U.S. military purchased \$1.5 billion worth of Israeli equipment in 2019, representing a five-fold increase from two decades before.¹⁸ In addition to the U.S. purchase of Iron Dome (see below), the United States has purchased, among other items, the following Israeli defense articles: Trophy active protection systems for M1 Abrams tanks, enhanced night-vision goggles, laser range finders for the U.S. Marines, helmets for F-35 fighter pilots, wings for the F-35, and a system of towers, electronic sensors, radars, and cameras for use along the U.S.-Mexican border. The U.S. Army is currently evaluating whether to purchase Rafael's SPIKE Non-Line of Sight missile to be mounted on AH-64E Apache Helicopters.¹⁹

Memorandum No. 202, July 2020.

¹⁶ India is the largest buyer of Israeli defense equipment. See, Rina Bassist, "Israel, India Advance on Phalcon AWACS Megadeal," *Al Monitor*, September 3, 2020.

¹⁷ Per a 1987 Memorandum of Understanding between the United States and Israel as amended (Reciprocal Defense Procurement and Acquisition Policy Memorandum of Understanding), Israeli and U.S. defense contractors are able to compete for contracts in both countries on an equal basis. For the text of the MOU, see <https://www.acq.osd.mil/dpap/Docs/mou-israel.pdf>.

¹⁸ Michael Eisenstadt and David Pollock, "Asset Test 2021: How the U.S. Can Keep Benefiting from Its Alliance with Israel," *Transition 2021: Policy Notes for the Biden Administration*, The Washington Institute for Near East Policy, February 2021.

¹⁹ Jen Judson, "Rafael pitches latest Spike variant for US Army's long-range weapon for helos," *Defense News*, June 17, 2022.

Israeli Exports of Spyware

Revelations regarding the export of Israeli software have drawn attention to Israel's defense export oversight, which has been overseen by Israel's Defense Export Controls Agency (DECA) since 2006. In 2021, after investigative reports revealed the Israeli-owned cyber security firm NSO Group had sold mobile-phone software to foreign governments, which then used it to spy on other heads of state, dissidents, and human rights activists, the Israeli media looked more closely at DECA's export licensing process. According to one report, "The limitations on such sales are exceedingly few. Israel's current law on defense exports requires the Defense Ministry to make 'considerations regarding the end user or the end use,' but does not expressly forbid arms sales to human rights violators.... the Defense Ministry's Defense Export Controls Agency, which has a small staff and responsibility for overseeing thousands of export licenses, lacks the necessary knowledge about the countries purchasing Israeli firms' technology to assess how the products will be used."²⁰ Another report noted that since 2007, the Israeli Defense Ministry had approved all arms export licenses requiring government approval.²¹ The U.S. Commerce Department's Bureau of Industry and Security added NSO to its "Entity List" for engaging in activities that are contrary to the national security or foreign policy interests of the United States.²² In December 2021, Israel altered its export licensing policy for cybersecurity software, requiring purchasers to pledge they will not use Israeli equipment to commit "terrorist acts" or "serious crime," as defined by DECA.²³

The United States and Israel are in the process of gradually phasing out Israel's ability to use a portion of its U.S. military assistance for domestic purchases (also known as Off-Shore Procurement, see **Figure 2**); as a result, some Israeli companies have opened subsidiaries that are licensed to do business in the United States. Incorporating in the United States enables Israeli companies to both increase business with the U.S. military and, in some cases, conduct U.S. aid-financed military deals with the Israeli government. As more Israeli companies have obtained a U.S. presence, it has led to increased defense partnerships between U.S. and Israeli firms, whereby weapons development is done in Israel and production is completed in the United States.²⁴ Elbit Systems of America (Fort Worth, Texas), a wholly owned subsidiary of Israel's Elbit Systems, is one of the largest Israeli-owned firms operating in the United States. It acts as a purchasing agent for the Foreign Military Financing (FMF) and Foreign Military Sales (FMS) programs.²⁵

As long as these subsidiaries follow U.S. guidelines (each must be a U.S.-based supplier, manufacturer, reseller, or distributor incorporated or licensed to do business in the United States and registered with the Israeli Ministry of Defense Mission in New York),²⁶ they are eligible (pending U.S. government approval) to enter into FMF-financed Direct Commercial Sales (DCS)

²⁰ See, Judah Ari Gross, "NSO Group Affair is Latest in Israel's Long History of Arming Shady Regimes," *Times of Israel*, July 28, 2021.

²¹ Oded Yaron, "Israeli Governments Approved Every Single Arms Deal Brought to Them Since 2007," *Haaretz*, December 2, 2022.

²² Available online at <https://www.commerce.gov/news/press-releases/2021/11/commerce-adds-nso-group-and-other-foreign-companies-entity-list>.

²³ See, "Israel Issues Stricter Guidelines for use of its Cyber Tech Exports," *Reuters*, December 6, 2021.

²⁴ Ora Coren, "Israel's Arms Makers to Become more American under New Military-Aid Pact," *Ha'aretz*, updated April 10, 2018.

²⁵ Available online at <https://elbitsystems.com/major-subsidiaries/>.

²⁶ CRS conversation with U.S. State Department, Bureau of Political-Military Affairs (PM), January 6, 2022.

contracts²⁷ with the Israeli government.²⁸ Reoccurring language in annual Department of State, Foreign Operations, and Related Programs (SFOPS) appropriations bills,²⁹ as implemented by Department of Defense (DOD) guidance, permit Israel (along with Egypt, Jordan, Morocco, Tunisia, Yemen, Greece, Turkey, Portugal, and Pakistan) to use FMF to finance DCS contracts, in which the purchaser (Israel) enters into a contract directly with a vendor.³⁰

Qualitative Military Edge (QME)

U.S. military aid for Israel has been designed to maintain Israel’s “qualitative military edge” over neighboring militaries. The rationale for QME is that Israel must rely on better equipment and training to compensate for being much smaller in land area and population than most of its potential adversaries.

The Origins of QME

The concept of QME (independent of its application to Israel) dates back to the Cold War. In assessing the balance of power in Europe, U.S. war planners would often stress to lawmakers that, because Warsaw Pact countries had a numerical advantage over U.S. and allied forces stationed in Europe, the United States must maintain a “qualitative edge” in defense systems.³¹ The concept was subsequently applied to Israel in relation to its Arab adversaries. In 1981, then-U.S. Secretary of State Alexander Haig testified before Congress, saying, “A central aspect of US policy since the October 1973 war has been to ensure that Israel maintains a qualitative military edge.”³²

For decades, successive Administrations, in conjunction with Congress, have taken measures to maintain Israel’s QME in a number of ways. For example,

- U.S. arms sales policy has traditionally allowed Israel **first regional access** to U.S. defense technology. For example, Israel acquired the F-15 in 1976, six years

²⁷ Direct Commercial Contracts Division (DCC)/DCS allow a foreign entity to contract directly with a U.S.-based company in order to obtain needed supplies or services (subject to U.S. Government review and approval). This process takes the U.S. Government out of the “middleman” role that it plays in facilitating FMS transactions. See, CRS InFocus CRS In Focus IF11441, *Transfer of Defense Articles: Direct Commercial Sales (DCS)*, by Nathan J. Lucas and Michael J. Vassalotti.

²⁸ Defense Security Cooperation Agency, Guidelines for Foreign Military Financing of Direct Commercial Contracts, March 2017.

²⁹ See, for example, section headed “Foreign Military Financing Program” of the FY2023 Consolidated Appropriations Act (P.L.117-328).

³⁰ P.L. 101-167, the Foreign Operations, Export Financing, and Related Programs Appropriations Act, 1990, states that “Only those countries for which assistance was justified for the Foreign Military Sales Financing Program in the fiscal year 1989 congressional presentation for security assistance programs may utilize funds made available under this heading for procurement of defense articles, defense services or design and construction services that are not sold by the United States Government under the Arms Export Control Act.” The Defense Security Cooperation Agency’s Security Assistance Manual further states that “DSCA (Directorate for Security Assistance (DSA) Direct Commercial Contracts Division (DCC)) approves DCCs to be financed with FMF on a case-by-case basis.” See Chapter 9.7.3, Security Assistance Management Manual (SAMM) as Defense Security Cooperation Agency Manual 5105.38-M, DSCA Policy 12-20.

³¹ For example, see, Written Statement of General William O. Gribble, Jr., Hearings on Research, Development, Test, and Evaluation Program for Fiscal Year 1973, Before Subcommittee No. 1 of Committee on Armed Services, House of Representatives, Ninety-Second Congress, Second Session, February 2, 3, 7, 9, 22, 23, 24, March 6, 7, and 8, 1972.

³² Secretary of State Alexander Haig, Statement for the Record submitted in response to Question from Hon. Clarence Long, House Appropriations Subcommittee on Foreign Operations Appropriations, April 28, 1981.

before Saudi Arabia. It received the delivery of the F-16 fighter in 1980, three years before Egypt.³³

- In cases in which both Israel and an Arab state operate the same U.S. platform, Israel has first received either a **more advanced version** of the platform or the ability to **customize** the U.S. system.³⁴
- In cases in which Israel objected to a major defense article sale to an Arab military (e.g., the 1981 sale of Airborne Early Warning and Control System aircraft or “AWACS” to Saudi Arabia), Congress has, at times, advocated for and legislated **conditions on the usage and transfer** of such weapons prior to or after a sale.³⁵
- The United States has compensated Israel with “**offsetting**” weapons packages or military aid when selling other U.S. major defense articles to a Middle Eastern state (see **textbox below**).

Over time, Congress codified informal QME-related practices in ways that encouraged a more deliberate interagency process for each major U.S. arms sale to Middle Eastern governments other than Israel.³⁶ In the 110th Congress, Representative Howard Berman sponsored legislation (H.R. 5916, Section 201) to “carry out an empirical and qualitative assessment on an ongoing basis of the extent to which Israel possesses a qualitative military edge over military threats.” After becoming Chairman of the House Foreign Affairs Committee (HFAC), then-Chairman Berman was able to incorporate this language into the Naval Vessel Transfer Act of 2008 (P.L. 110-429). The relevant QME provisions of this law had three primary elements: (1) they defined QME;³⁷ (2) they required an assessment of Israel’s QME every four years; and (3) they amended the Arms Export Control Act (AECA, 22 U.S.C. §2776) to require a determination, for any export of a U.S. defense article to any country in the Middle East other than Israel, that such a sale would not adversely affect Israel’s QME.

³³ In 1977, P.L. 95-92 provided that “In accordance with the historic special relationship between the United States and Israel and previous agreements and continuing understandings, the Congress joins with the President in reaffirming that a policy of restraint in United States arms transfers, including arms sales ceilings, shall not impair Israel’s deterrent strength or undermine the military balance in the Middle East.”

³⁴ “The Double Edged Sword of the Qualitative Military Edge,” *Israel Policy Forum*, April 11, 2016.

³⁵ See Section 131, Certification Concerning AWACS sold to Saudi Arabia, P.L. 99-83, the International Security and Development Cooperation Act of 1985.

³⁶ Prior to 2008, during congressional review of possible U.S. arms sales to the Middle East, QME concerns only were addressed on an ad hoc basis, usually through consultations between the military and committee staff. Some congressional staff argued that assessments for specific arms sales tended to be overly subjective and asserted that codifying the requirement would rationalize the process, make it more objective, and incorporate it as a regular component of the U.S. arms sales review process to Middle Eastern governments. CRS conversation with Senate Foreign Relations Committee staff member, September 24, 2020.

³⁷ Section 201(d)(2) defines QME as “the ability to counter and defeat any credible conventional military threat from any individual state or possible coalition of states or from non-state actors, while sustaining minimal damage and casualties, through the use of superior military means, possessed in sufficient quantity, including weapons, command, control, communication, intelligence, surveillance, and reconnaissance capabilities that in their technical characteristics are superior in capability to those of such other individual or possible coalition of states or non-state actors.”

Preserving QME: Offsetting Weapons Packages for Israel

The following specific instances supplemented general U.S. efforts to strengthen Israel's QME:³⁸

- In 1992, after the United States announced a sale to Saudi Arabia of F-15 fighters, the George H.W. Bush Administration provided Israel with Apache and Blackhawk helicopters and pre-positioned U.S. defense equipment in Israel for Israeli use with U.S. approval.³⁹
- In 2007, after the George W. Bush Administration agreed to sell Saudi Arabia Joint Direct Attack Munitions (JDAMs), the Administration reportedly agreed to sell more advanced JDAMs to Israel.⁴⁰
- In 2010, the Obama Administration agreed to sell an additional 20 F-35 aircraft to Israel in response to a sale to Saudi Arabia that included F-15s.⁴¹
- In 2013, after the Obama Administration agreed to sell the UAE advanced F-16 fighters, then-Secretary of Defense Chuck Hagel announced that the United States would provide Israel with KC-135 refueling aircraft, anti-radiation missiles, advanced radar, and six V-22 Osprey tilt-rotor aircraft.⁴² At the time, the U.S. proposal marked the first time that the United States had offered to sell tilt-rotor Ospreys to another country. Israel would eventually cancel its planned purchase of the V-22 due to budgetary constraints.

Since the passage of the QME law and its amending of the AECA, the interagency process to assess Israel's QME has taken place behind closed doors with little fanfare. According to the Defense Security Cooperation Agency's (DSCA) Security Assistance Manual, QME determinations can be classified.⁴³ After a QME determination has been made regarding a specific proposed sale, DSCA includes a line in the applicable congressional notification reading, "The proposed sale will not alter the basic military balance in the region."

Lawmakers have amended or attempted to amend aspects of the 2008 law. The U.S.-Israel Strategic Partnership Act (P.L. 113-296) amended Section 36 of the AECA to require that the Administration explain, in cases of sales or exports of major U.S. defense equipment to other Middle Eastern states, "Israel's capacity to address the improved capabilities provided by such sale or export."

U.S. Bilateral Military Aid to Israel

Since 1999, U.S. assistance to Israel has been outlined in 10-year government-to-government Memoranda of Understanding (MOUs). MOUs are not legally binding agreements like treaties, and do not require Senate ratification. Additionally, Congress may accept or change year-to-year assistance levels for Israel or provide supplemental appropriations. Nevertheless, past MOUs have significantly influenced U.S. aid to Israel; Congress has appropriated foreign aid to Israel largely according to the terms of the MOU in place at the time. P.L. 116-283, the William M. (Mac) Thornberry National Defense Authorization Act (NDAA) for Fiscal Year 2021, contains Section 1273 of the United States Israel Security Assistance Authorization Act of 2020, which authorizes "not less than" \$3.3 billion in annual FMF to Israel through 2028 per the terms of the

³⁸ See, e.g., U.S. State Department, Remarks by Andrew J. Shapiro, Assistant Secretary, Bureau of Political-Military Affairs, November 4, 2011; "U.S.-Israel Strategic Cooperation: U.S. Provides Israel a Qualitative Military Advantage," *Jewish Virtual Library*.

³⁹ See, Israel Ministry of Foreign Affairs, White House Statement on US Military Assistance to Israel, September 26, 1992, VOLUME 13-14: 1992-1994.

⁴⁰ Dan Williams, "Israel to get 'Smarter' U.S.-made Bombs than Saudis," *Reuters*, January 13, 2020.

⁴¹ Eli Lake, "In Gates Book, Details of Israel's Hard Bargaining over Saudi Arms," *Daily Beast*, January 10, 2014.

⁴² "U.S. Near \$10 Billion Arms Deal with Israel, Saudi Arabia, UAE," *Reuters*, April 19, 2013.

⁴³ See <https://www.samm.dsca.mil/chapter/chapter-5>.

current MOU (see below). Appropriators have matched that authorization level each year since its passage.

Brief History of MOUs on U.S. Aid to Israel

The first 10-year MOU (FY1999-FY2008), agreed to under the Clinton Administration, was known as the “Glide Path Agreement” and represented a political commitment to provide Israel with at least \$26.7 billion in total economic and military aid (of which \$21.3 billion was military aid) during its duration.⁴⁴ This MOU provided the template for the gradual phase-out of all economic assistance to Israel.

In 2007, the George W. Bush Administration and the Israeli government agreed to a second MOU consisting of a \$30 billion military aid package for the 10-year period from FY2009 to FY2018. Under the terms of that agreement, Israel was explicitly permitted to continue spending up to 26.3% of U.S. assistance on Israeli-manufactured equipment (known as Off-Shore Procurement or OSP — discussed below). The agreement stated that “Both sides acknowledge that these funding levels assume continuation of adequate levels for U.S. foreign assistance overall, and are subject to the appropriation and availability of funds for these purposes.”⁴⁵

The Current 10-Year Security Assistance Memorandum of Understanding (MOU)

At a signing ceremony at the State Department on September 14, 2016, U.S. and Israeli government representatives signed another 10-year MOU on military aid covering FY2019 to FY2028. Under the terms of this third MOU, the United States pledges, subject to congressional appropriation, to provide \$38 billion in military aid (\$33 billion in FMF grants, plus \$5 billion in defense appropriations for missile defense programs) to Israel. According to the terms of the MOU, “Both the United States and Israel jointly commit to respect the FMF levels specified in this MOU, and not to seek changes to the FMF levels for the duration of this understanding.”⁴⁶

The terms of the FY2019-FY2028 MOU differ from previous agreements on issues such as,

- **Phasing out Off-Shore Procurement (OSP).**⁴⁷ OSP is to decrease slowly until FY2024, and then phase out more dramatically over the MOU’s last five years, ending entirely in FY2028 (see Figure 2). The MOU calls on Israel to provide the United States with “detailed programmatic information related to the use of all U.S. funding, including funds used for OSP.” In response to the planned phase-out of OSP, some Israeli defense contractors are merging with U.S. companies or opening U.S. subsidiaries to continue their eligibility for defense contracts financed through FMF (see, “U.S. Aid and Israel’s Advanced Military Technology”).⁴⁸
- **Missile Defense.** The Administration pledges to request \$500 million in annual combined funding for missile defense programs with joint U.S.-Israeli

⁴⁴ See, Joint Statement by President Clinton and Prime Minister Ehud Barak, July 19, 1999.

⁴⁵ United States-Israel Memorandum of Understanding, Signed by then U.S. Under Secretary of State R. Nicholas Burns and Israeli Ministry of Foreign Affairs Director General Aaron Abramovich, August 16, 2007.

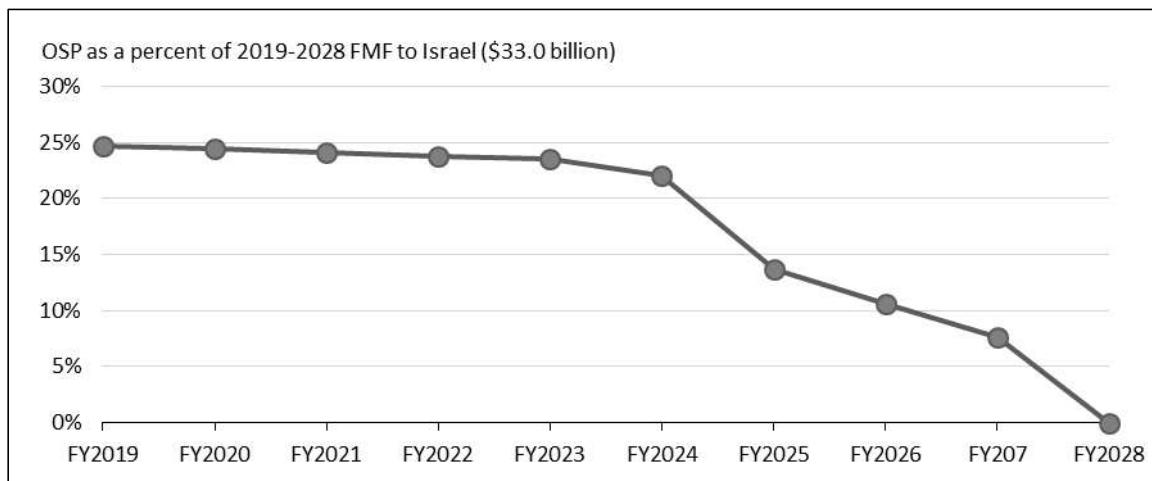
⁴⁶ Memorandum of Understanding between the United States and Israel, September 14, 2016.

⁴⁷ Section 42(c) (22 U.S.C. §2791(c)) of the AECA prohibits using funds made available under this Act for procurement outside the United States unless the President determines that such procurement does not have an adverse effect on the U.S. economy or the industrial mobilization base. Executive Order 13637 designated this authority to the Secretary of Defense and the issuance of an OSP waiver requires concurrence by the Departments of State and Commerce. See, U.S. Department of Defense, Defense Security Cooperation Agency, Security Assistance Manual, Chapter 9.

⁴⁸ “Israeli UAV Firm agrees deal for Unnamed US Company,” *Jane’s Defence Weekly*, July 18, 2017.

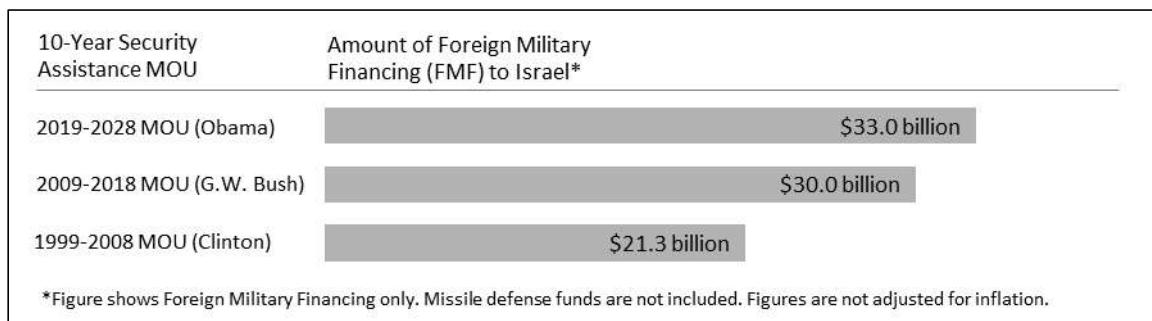
elements—such as Iron Dome, Arrow II and Arrow III, and David's Sling. Previous MOUs did not include missile defense funding, which has traditionally been appropriated via separate interactions between successive Administrations and Congresses. While the MOU commits both the United States and Israel to a \$500 million annual U.S. missile defense contribution, it also stipulates that under exceptional circumstances (e.g., major armed conflict involving Israel), both sides may agree on U.S. support above the \$500 million annual cap). In FY2022, Congress appropriated \$1 billion in additional missile defense funding for Israel (see, **Table 4**).

Figure 2. Phasing Out Off-Shore Procurement (OSP) Under the MOU



Source: CRS graphics.

Figure 3. U.S. Foreign Military Financing to Israel over Decades



Source: Created by CRS.

Foreign Military Financing (FMF) and Arms Sales

Israel is the largest recipient of FMF. Annual FMF grants to Israel represent approximately 16% of the overall Israeli defense budget.⁴⁹ Israel's defense expenditure as a percentage of its Gross Domestic Product (5.17% in 2021) is one of the highest in the world.⁵⁰

Cash Flow Financing

Section 23 of the AECA (22 U.S.C. §2763) authorizes the President to finance the “procurement of defense articles, defense services, and design and construction services by friendly foreign countries and international organizations, on such terms and conditions as he may determine consistent with the requirements of this section.” Successive Administrations have used this authority to permit Israel to utilize FMF funds to finance multiyear purchases in advance appropriations, rather than having to pay the full amount of such purchases up front (see **text box below**). Known as “cash flow financing,” this benefit enables Israel to negotiate major arms purchases with U.S. defense suppliers with payments scheduled over a longer time horizon.⁵¹

Early History of Cash Flow Financing to Israel

The United States initially began authorizing installment-style sales to Israel to help it rebuild its military capabilities after the 1973 war with Egypt and Syria. Congress appropriated \$2.2 billion for Israel in P.L. 93-199, the Emergency Security Assistance Act of 1973. Section 3 of that act stated that “Foreign military sales credits [loans or grants] extended to Israel out of such funds shall be provided on such terms and conditions as the President may determine and without regard to the provisions of the Foreign Military Sales Act as amended.” At the time, the Foreign Military Sales Act of 1968 (amended in 1971 and the precursor to the Arms Export Control Act of 1976), capped the annual amount of foreign military sales credit that could be extended to a recipient at no more than \$250 million per year. Under the authorities contained in P.L. 93-199, President Nixon, in two separate determinations (April and July 1974), allocated the \$2.2 billion to Israel as \$1.5 billion in grant military aid, the largest U.S. grant aid package ever for Israel at the time. The remaining \$700 million was designated as a military loan. According to the *New York Times*, the Ford Administration reached a new arms sales agreement with Israel a year and a half later, providing that, “the cost of the new military equipment would be met through the large amount of aid approved by the just-completed session of Congress as well as the aid that will be approved by future Congresses.”⁵²

Cash flow financing and its derivatives also have allowed Israel to use U.S. government-approved sources of external financing to support the procurement of major U.S. defense systems, such as combat aircraft. Beginning with its purchase of F-16D aircraft from Lockheed Martin over 20 years ago and continuing presently with ongoing procurement of the F-35, the United States has utilized what is known as the “Deferred Payments Program.”⁵³ This program allows Israel to

⁴⁹ The Israeli Ministry of Defense provides funding figures for its domestic defense budget but excludes some procurement spending and spending on civil defense. The estimate referenced above is based on figures published by Jane's, “Israel Defence Budget,” June 20, 2022. Jane's removes FMF from its Israeli defense budget calculations to reflect how much Israel independently spends on defense.

⁵⁰ In 2021, five other nations spent more on defense as a percentage of GDP: Saudi Arabia, Oman, Algeria, Kuwait and Azerbaijan. See Stockholm International Peace Research Institute (SIPRI), Military expenditure by country as percentage of gross domestic product, 2021, SIPRI Military Expenditure Database.

⁵¹ Cash flow financing is defined in Section 25(d) of the AECA and Section 503(a)(3) of the Foreign Assistance Act of 1961, as amended.

⁵² See, “U.S. Decides to Sell Some Arms to Israel That It Blocked in the Past,” *New York Times*, October 12, 1976.

⁵³ Under this arrangement, Lockheed Martin sells Citibank a legal claim on its defense contract with Israel. The U.S. Defense Department then repays Citibank using the available FMF allocation for Israel. The Israeli government uses its own national funds to pay interest on the Citibank loans. One organization in support of continued U.S. support for Israel has advocated for Congress to authorize the use of FMF to cover Israeli interest payments on weapons deals to

defer payments owed under its Letter of Offer and Acceptance (LOA) for F-35 aircraft and use future-year FMF appropriations to make payments pursuant to a pre-determined payment schedule. Upon deferral of a given payment by Israel, a private bank (in the case of the F-35, a small consortium led by Citibank) pays Lockheed Martin in full and Lockheed Martin assigns its right to be paid by the U.S. Government to the bank.⁵⁴ In 2021, Israel's "security cabinet" (formally known as the Ministerial Committee on Defense) approved plans to allocate over \$9 billion in future FMF appropriations to finance the purchases of various U.S. weapons systems, such as the Sikorsky CH-53K heavy lift helicopter and additional F-35 aircraft (see below). In 2021, various news reports indicated that the Israeli government was pursuing a delay of the payments coming due under the Deferred Payments Program to assist in financing these near-term foreign military sales acquisitions.⁵⁵

In Foreign Military Sales cases in which Israel and the United States seek to execute LOAs beyond the scope of the current MOU (either beyond FY2028 or above the \$33 billion pledged), the U.S. government has established a "Special Billing Arrangement" or SBA with Israel. The purpose of SBAs, according to DSCA, is to "improve cash management for eligible FMS partners."⁵⁶ Under an SBA, Israel may use national cash reserves for funding requirements associated with an FMS case (e.g., funds to cover termination liability) that exceeds the amount of funds listed in or duration of the current MOU.⁵⁷

Early Transfer and Interest Bearing Account

Since FY1991 (P.L. 101-513), Congress has mandated that Israel receive its FMF aid in a lump sum during the first month of the fiscal year.⁵⁸ P.L.117-328, the Consolidated Appropriations Act, 2023 (hereinafter referred to as "**the FY2023 Consolidated Appropriations Act**") states, "That of the funds appropriated under this heading, not less than \$3,300,000,000 shall be available for grants only for Israel which shall be disbursed within 30 days of enactment of this Act." Once disbursed, Israel's military aid is transferred to an interest bearing account with the U.S. Federal Reserve Bank.⁵⁹ Israel has used interest collected on its military aid to pay down, among other

creditors. See, Jonathan Ruhe, Charles B. Perkins, and Ari Cicurel, "Israel's Acceleration of U.S. Weapons Procurement: Analysis and Recommendations," The Jewish Institute for National Security of America (JINSA), February 2021. However, according to DSCA, it is unclear whether FMF is legally available for that purpose.

⁵⁴ CRS Correspondence with DSCA, January 2022.

⁵⁵ Avi Bar-Eli, "Analysis | 'Okay, but Never Again': How Israel Air Force Sealed \$9 Billion U.S. Arms Deal," *Ha'aretz*, February 9, 2021 and "Israel's Military Skirts Budget Restrictions for \$9 Billion Air Force Upgrade," *Al Monitor*, February 10, 2021.

⁵⁶ See Chapter 9.10.2, Security Assistance Management Manual (SAMM) as Defense Security Cooperation Agency Manual 5105.38-M, DSCA Policy 12-20.

⁵⁷ According to DSCA, "Since requirements and procedures are unique to each country, they are normally established in an agreement between the customer country, DSCA, and the appropriate banking institutions in the U.S. and the purchaser's country." See, Defense Security Cooperation University, Security Cooperation Management, Chapter 12, Edition 41, May 2021.

⁵⁸ On at least one occasion when government operations were funded by a continuing resolution, Congress has included provisions in the resolution preventing the early transfer of FMF to Israel until the final appropriations bill for that fiscal year was passed. See Section 109 of P.L. 113-46, the Continuing Appropriations Act, 2014.

⁵⁹ According to DSCA, "Some countries may establish an account with the federal reserve bank (FRB), New York, for their FMS [Foreign Military Sales] deposits. An agreement between the FMS purchaser's defense organization, the purchaser's central bank, FRB New York and DSCA identifies the terms, conditions, and mechanics of the account's operation. Countries receiving FMFP funds must maintain their interest bearing account in the FRB." See, Defense Institute of Security Assistance Management (DISAM), "The Management of Security Cooperation (Green Book)," 34th Edition, April 2015.

things, its bilateral debt (nonguaranteed) to U.S. government agencies, which, according to the U.S. Department of the Treasury, stood at \$7.9 million as of September 2021.⁶⁰ Israel cannot use accrued interest for defense procurement inside Israel.

Shorter Congressional Review Period

Per provisions in the AECA, Israel, along with North Atlantic Treaty Organization (NATO) member states, Japan, Australia, South Korea, and New Zealand (commonly referred to as NATO+5) have shorter congressional review periods (15 days instead of 30) and higher dollar notification thresholds than other countries for both government-to-government and commercially licensed arms sales.⁶¹

F-35 Joint Strike Fighter

Israel was the first declared international operator of the F-35 Joint Strike Fighter.⁶² It has purchased 50 F-35s in three separate contracts using FMF grants. As of January 2023, Israel had received 36 of 50 jets, which it has divided into three squadrons (the 116th ‘Lions of the South,’ the 140th ‘Golden Eagles,’ and the 117th Training Squadron) based at Nevatim Air Base in southern Israel.⁶³ From there and without any aerial refueling, Israel’s F-35s could strike targets in Syria, Iraq, Lebanon, Jordan, and most of Egypt, Turkey, and Saudi Arabia.⁶⁴ One open source has suggested that Israel may have extended the range of its F-35s in order to strike targets inside Iran without first requiring mid-air refueling.⁶⁵

To date, according to media accounts, Israel has used its F-35s in several military operations, including:

- Israel reportedly has used its F-35 aircraft to conduct aerial strikes inside Syria.⁶⁶

⁶⁰ Foreign Credit Reporting System (FCRS), Amounts Due the U.S. Government, United States Department of the Treasury, Office of Global Economics and Debt.

⁶¹ See CRS Report RL31675, *Arms Sales: Congressional Review Process*, by Paul K. Kerr.

⁶² In September 2008, DSCA notified Congress of a possible Foreign Military Sale of up to 75 F-35s to Israel in a deal with a possible total value of \$15.2 billion. See, Defense Security Cooperation Agency, Transmittal No. 08-83, Israel - F-35 Joint Strike Fighter Aircraft, September 29, 2008.

⁶³ Yaakov Lappin, “Israeli Air Force Favouring Additional F-35s,” *Jane’s Defence Weekly*, September 10, 2020.

⁶⁴ Gareth Jennings, “Israel Declares F-35 to Be Operational,” *Jane’s Defence Weekly*, December 6, 2017.

⁶⁵ Thomas Newdick, “Israel has Extended the Range of its F-35,” The War Zone, *The Drive.com*, June 9, 2022.

⁶⁶ “F-35 Stealth Fighter Sees First Combat, in Israeli Operation,” *BBC News*, May 22, 2018 and “Israel - Air Force,” *Jane’s World Air Forces*, July 5, 2019.

- In March 2021, Israeli F-35 aircraft reportedly intercepted two Iranian drones (carrying a cargo of pistols presumably intended for Palestinian militants) while the drones were outside of Israeli airspace.⁶⁷

The Department of Defense's F-35 program is an international cooperative program in which Israel (and Singapore) are considered "security cooperation participants" outside of the F-35 cooperative development partnership.⁶⁸ Israel is not eligible to assign staff to the F-35 Joint Program Office in Virginia and does not receive full F-35 technical briefings.⁶⁹ The U.S. government and Lockheed Martin retain exclusive access to the F-35's software code, which Israel is not permitted to alter.

Despite these limitations, Israel's involvement in the F-35 program is extensive, with Israeli companies making F-35 wing sets (IAI) and helmets (Elbit Systems). Israel received significant development access to the F-35 and the ability to customize its planes with Israeli-made C4 (command, control, communications, computers) systems, under the condition that the software coding be done by the United States. In 2018, the Navy awarded Lockheed Martin a \$148 million contract for "the procurement of Israel-unique weapons certification, modification kits, and electronic warfare analysis."⁷⁰ Software upgrades (called Block 3F+) added to the main computer of Israel's F-35s reportedly facilitate the "use of Israeli-designed electronic equipment and weaponry," thereby permitting Israel to "employ its own external jamming pod and also allow internal carriage of indigenous air-to-air missiles and guided munitions."⁷¹ In December 2021, the Defense Department awarded a \$49 million contract to Lockheed Martin to support work on "an F-35 variant 'tailored' for an undisclosed FMS customer," probably Israel.⁷²

Figure 4. U.S. and Israeli F-35s Fly in Formation

Joint Exercise Enduring Lightning III (October 2020)



Source: U.S. Air Force.

⁶⁷ Yaakov Lappin and Jeremy Binnie, "IDF details Iranian UAV incursions," *Jane's Defence Weekly*, March 9, 2022.

⁶⁸ See CRS Report RL30563, *F-35 Joint Strike Fighter (JSF) Program*, by Jeremiah Gertler.

⁶⁹ "Israel," *Jane's World Air Forces*, September 1, 2020.

⁷⁰ U.S. Department of Defense, U.S. Navy, Contracts For February 2, 2018.

⁷¹ Gareth Jennings, "Israel Stands-Up Second F-35 Unit," *Jane's Defence Weekly*, January 17, 2020.

⁷² Gareth Jennings, "Lockheed Martin to Design and Develop F-35 Variant 'Tailored' for Foreign Customer," *Jane's Defence Weekly*, December 29, 2021.

Figure 5. F-35 Helmet Mounted Display

Made by Israeli Manufacturer Elbit Systems

KC-46A Pegasus

To extend the range of its aerial attack capability and enhance personnel mobility, Israel has pursued procurement of Boeing's KC-46A "Pegasus" multirole tanker. The Pegasus can refuel all types of U.S. and allied military aircraft and can carry passengers, fuel, and equipment. The Israel Air Force originally procured its current fleet of tankers (converted Boeing 707s) in the 1970s. According to one account, the KC-46A can "refuel other aircraft while being simultaneously refueled by another KC-46, a capability the (Boeing 707 refueling plane) doesn't have. This theoretically stretches its range to infinity."⁷³

In March 2020, DSCA notified Congress of a planned sale to Israel of eight KC-46A Boeing "Pegasus" aircraft for an estimated \$2.4 billion.⁷⁴ Israel is the second foreign country approved by the United States to receive the KC-46A, after Japan.

In February 2021, Israel signed an LOA to buy two KC-46As and, in January 2022, it reached a second LOA for two additional tankers. As actual contract negotiations ensued between the Israeli government and Boeing, some lawmakers sought expedited delivery of the tankers to Israel. In January 2022, five House Members wrote a letter to President Biden seeking an accelerated timetable for the delivery of the KC-46A.⁷⁵ In April 2022, lawmakers again wrote to President Biden seeking expedited delivery.⁷⁶

In late August 2022, Boeing and Israel signed a contract for four KC-46A plus associated maintenance, logistics, and training for \$927 million. Then-Defense Minister Benny Gantz thanked the Department of Defense for approving the deal, which, according to him, included "the expedited implementation of U.S. FMF."⁷⁷ Israel may use the KC-46A to refuel its F-35 fighters, a key capability in projecting force toward Iran and elsewhere.⁷⁸



Source: Elbit Systems Ltd.

Note: The F-35 Helmet Mounted Display is a joint venture between Elbit Systems and Rockwell Collins.

⁷³ "Eye on Iran, Israel to buy four Boeing air force tankers for \$927 million," Reuters, September 1, 2022.

⁷⁴ Defense Security Cooperation Agency, Israel—KC-46A Aerial Refueling Aircraft, Transmittal No 20-12, March 3, 2020.

⁷⁵ Andrew Clevenger, "Biden Should Expedite Delivery of KC-46s to Israel, GOP Lawmakers Say," *CQ News*, January 7, 2022.

⁷⁶ See, https://www.cotton.senate.gov/imo/media/doc/israel_letter.pdf and <https://www.politico.com/f/?id=00000180-1e8b-d00d-a3c6-bfbbcef20000>.

⁷⁷ Seth Frantzman, "Israel, Boeing agree to \$927M deal for four KC-46A tankers," *Defense News*, September 1, 2022.

⁷⁸ Seth Frantzman, "Israel inks \$3 Billion deal for KC-46 Tankers, CH-53 helos," *Defense News*, January 4, 2022.

Delivery of the Pegasus tankers may occur at some point in 2026, though Israel’s government has sought to expedite this timetable.⁷⁹

CH-53K Heavy Lift Helicopters

Since 1969, Israel’s Air Force has used its Sikorsky Yasur helicopters (CH-53D) to transport personnel and equipment. In upgrading its fleet of transport helicopters, Israel chose the Sikorsky “King Stallion” CH-53K Heavy Lift helicopters over competing systems. In 2021, DSCA notified Congress of a planned sale to Israel of up to 18 CH-53Ks at an estimated cost of \$3.4 billion.⁸⁰

In late 2021, Israel signed an LOA with the United States to purchase 12 CH-53K Heavy Lift helicopters for \$2 billion (with an option to procure an additional six helicopters).⁸¹ In February 2022, multiple sources reported that Lockheed Martin’s Sikorsky Aircraft Corporation had agreed to a contract with Israel to produce the first four CH-53Ks for \$372 million.

Delivery is anticipated sometime between 2025 and 2026. According to one report, Israel’s air force may face a “capability gap” if it retires most of its current Yasur helicopters before it can take delivery of the new CH-53Ks, a process which may take time given Israel’s need to customize the platform.⁸²

Figure 7. The CH-53K Heavy Lift Helicopter for Israel

(an artist rendering)



Source: Lockheed Martin

Figure 6. The KC-46A Pegasus



Source: U.S. Air Force

Excess Defense Articles

The Excess Defense Articles (EDA) program provides an avenue for the United States to advance foreign policy objectives—assisting friendly and allied nations—while also reducing its inventory of outdated or excess equipment. This program, managed by DSCA, enables the United States to provide friendly countries with supplies in excess of U.S. requirements, at either reduced rates or no charge.⁸³

⁷⁹ Joseph Trevithick, “Israel’s Request to Speed Delivery Of KC-46 Tankers Critical for Striking Iran Denied - The War Zone,” *The Drive*, December 14, 2021.

⁸⁰ Defense Security Cooperation Agency, Israel – CH-53K Heavy Lift Helicopters with Support, Transmittal No 21-52, July 30, 2021.

⁸¹ U.S. Naval Air Systems Command, “Israel to purchase CH-53K King Stallion,” *NAVAIR News*, January 4, 2022.

⁸² Glenn Sands, “Israel wants its CH-53Ks as soon as possible,” *Verticalmag.com*, July 7, 2022.

⁸³ To access DSCA’s Excess Defense Articles database, see <http://www.dsca.mil/programs/eda>.

As a designated “major non-NATO ally,” Israel is eligible to receive EDA under Section 516(a) of the Foreign Assistance Act (FAA) and Section 23(a) of the AECA. According to DSCA, from 2010 to 2020, Israel received at least \$385 million in EDA deliveries (current value).⁸⁴

Origins of Israel's Status as a “Major Non-NATO Ally”

On November 4, 1986, President Reagan signed into law P.L. 99-661, the National Defense Authorization Act for FY1987. In Section 1105 of that act, Congress called for greater defense cooperation between the United States and countries that the Secretary of Defense could designate as a “major non-NATO ally” (MNNA). Such cooperation could entail U.S. funding for joint research and development and production of U.S. defense equipment. In February 1987, the United States granted Israel MNNA status along with several other countries (Egypt, Japan, South Korea, and Australia). According to press reports at the time, in the absence of a U.S.-Israeli mutual defense agreement, supporters of Israel had been advocating for Israel to receive “equal treatment” with regard to certain special military benefits (such as the ability to bid on U.S. defense contracts) that NATO allies received from the United States.⁸⁵ Nearly a decade later, Congress passed additional legislation that further solidified Israel’s MNNA status. In 1996, Section 147 of P.L. 104-164 amended the Foreign Assistance Act of 1961 by requiring the President to notify Congress 30 days before designating a country as a MNNA. According to the act, Israel, along with several other countries, “shall be deemed to have been so designated by the President as of the effective date of this section, and the President is not required to notify the Congress of such designation of those countries.”⁸⁶

Table 2. Selected Notified U.S. Foreign Military Sales to Israel

Amount/Description	Cong. Notice	Primary Contractor(s)	Estimated Cost
13 76mm naval guns and technical support	2017	DRS North America	\$440 million
240 Namer armored personal carrier power packs and associated equipment	2019	MTU America	\$238 million
KC-46A aerial refueling aircraft	2020	Boeing Corporation	\$2.4 billion
JP-8 aviation fuel, diesel fuel, and unleaded gasoline	2020	N/A	\$3 billion
18 CH-53K Heavy Lift Helicopters (with support equipment)	2021	Lockheed Martin (parent company of Sikorsky) and General Electric Company	\$3.4 billion

Sources: Defense Security Cooperation Agency, Stockholm International Peace Research Institute Arms Transfer Database, IHS Jane’s.

Note: All figures are approximate.

Defense Budget Appropriations for U.S.-Israeli Missile Defense Programs

Congress and successive Administrations have demonstrated strong support for joint U.S.-Israeli missile defense projects designed to thwart a diverse range of threats. Due to Iranian weapons proliferation and the rapid spread of drone technology throughout the Middle East, Israel faces a bevy of state and non-state actors in possession of sophisticated precision-guided missiles,

⁸⁴ Excess Defense Articles Database Tool, Defense Security Cooperation Agency.

⁸⁵ See, “Israel seeks to obtain the kind of Financial Aid that NATO Members get from U.S. Government,” *Wall Street Journal*, February 3, 1987.

⁸⁶ See, 22 U.S.C. §2321j.

unmanned aerial vehicles (UAVs), and guided and unguided rockets. While the near-term threats of short-range missiles and rockets launched by non-state actors such as Hamas and Hezbollah remain, the development of Iranian proxies in Syria, Iraq, and Yemen, as well as Iran's own advancement in precision guided munitions, have opened new fronts for Iran-backed groups to potentially threaten Israel's security.

In 2022 and 2023, Iran's ongoing transfer of UAVs to Russia (and possibly short-range ballistic missiles) appear to have further heightened U.S. and Israeli concern over Iran's capabilities. While Iranian UAVs suffer a high rate of interception, their low cost and ease of replacement have allowed Russia to use them in its invasion of Ukraine to swarm targets and overwhelm air defenses.⁸⁷ Ukraine has repeatedly sought Israeli cooperation in bolstering its air defenses against both Russian attacks and Iranian-made drones (**see below**).

Congress provides regular U.S. funding for Israeli and U.S.-Israeli missile defense programs in defense authorization and appropriations bills. Israel and the United States each contribute financially to several weapons systems and engage in co-development, co-production, and/or technology sharing in connection with them. Since 2001, Israel and the United States have conducted a joint biennial ballistic missile defense exercise, called Juniper Cobra,⁸⁸ to work on integrating their weapons, radars, and other systems.⁸⁹

The following section provides background on Israel's four-layered active defense network: Iron Dome (short range), David's Sling (low to mid-range), Arrow II (upper-atmospheric), and Arrow III (exo-atmospheric). In addition to these existing systems, Israel, the U.S. Missile Defense Agency, and various private defense contractors are working on next generation defense systems, such as Arrow IV⁹⁰ and various ground and air-based laser systems, including Iron Beam (**see below**).⁹¹

Iron Dome

Iron Dome is a short-range anti-rocket, anti-mortar, and anti-artillery system (intercept range of 2.5 to 43 miles) developed by Israel's Rafael Advanced Defense Systems and originally produced in Israel. Iron Dome's targeting system and radar are designed to fire its Tamir interceptors only at incoming projectiles that pose threats to the area being protected (generally, strategically important sites, including population centers); it is not configured to fire on rockets outside of that area. Israel can move Iron Dome batteries as threats change (there is a sea-variant of Iron Dome as well). Israel has at least ten Iron Dome batteries deployed throughout the country, each designed to defend a 60-square-mile populated area.⁹² Israel's Defense Ministry claims that Iron Dome successfully intercepted 97% of all targets it engaged during a summer 2022 confrontation in which Palestine Islamic Jihad (PIJ) fired rockets into Israel.⁹³

⁸⁷ See, CRS Insight IN12042, *Iran's Transfer of Weaponry to Russia for Use in Ukraine*, November 4, 2022.

⁸⁸ The IDF postponed the 2022 Juniper Cobra exercise. See, Anna Ahronheim, "IDF Delays Juniper Cobra Drill amid Russian, Iranian Tensions," *Jerusalem Post*, February 8, 2022.

⁸⁹ The United States and Israel also jointly conduct a military exercise known as Juniper Falcon, designed to enhance interoperability between both nations' militaries.

⁹⁰ Udi Shaham, "Israel, US developing Arrow-4," *Jerusalem Post*, February 19, 2021.

⁹¹ Anna Ahronheim, "Lockheed Martin, Rafael Join Forces to Build 'Ground-Based' Laser Weapon," *Jerusalem Post*, July 28, 2021.

⁹² Each battery has three to four launchers loaded with up to 20 Tamir interceptors per launcher for a total of 60-80 interceptors per battery. Every Iron Dome Battery also comes equipped with vehicles to reload launchers.

⁹³ "Israel says Iron Dome shoots down 97% of Gaza rockets," *Reuters*, August 7, 2022.

Co-production and U.S. Funding

To date, the United States has provided nearly **\$3 billion** to Israel for Iron Dome batteries, interceptors, co-production costs, and general maintenance (see **Table 4**). Because Iron Dome was developed by Israel alone, Israel initially retained proprietary technology rights to it. The United States and Israel have had a decades-long partnership in the development and co-production of other missile defense systems (such as the Arrow). As the United States began financially supporting Israel's development of Iron Dome in FY2011, U.S. interest in ultimately becoming a partner in its co-production grew. Congress then called for Iron Dome technology sharing and co-production with the United States.⁹⁴

In March 2014, the U.S. and Israeli governments signed a co-production agreement to enable the manufacture of components of the Iron Dome system in the United States, while also providing the U.S. Missile Defense Agency (MDA) with full access to what had been proprietary Iron Dome technology.⁹⁵ U.S.-based Raytheon is Rafael's U.S. partner in the co-production of Iron Dome.⁹⁶ In 2020, the two companies formed a joint venture incorporated in the United States known as "Raytheon Rafael Area Protection Systems (R2S)." Tamir interceptors (the U.S. version is called SkyHunter) are manufactured at Raytheon's missiles and defense facility in Tucson, Arizona and elsewhere and then assembled in Israel. Israel also maintains the ability to manufacture Tamir interceptors within Israel.

Figure 8. Iron Dome Launcher



Source: Raytheon.

⁹⁴ In conference report language accompanying P.L. 112-239, the National Defense Authorization Act for FY2013, conferees agreed: "The Department of Defense needs to obtain appropriate data rights to Iron Dome technology to ensure us the ability to use that data for U.S. defense purposes and to explore potential co-production opportunities. The conferees support this policy and expect the Department to keep the congressional defense committees informed of developments and progress on this issue."

⁹⁵ The co-production agreement is formally titled, "Agreement Between the Department of Defense of the United States of America and the Ministry of Defense of the State of Israel Concerning Iron Dome Defense System Procurement."

⁹⁶ The FY2014 Emergency Supplemental Appropriations Resolution, P.L. 113-145, exempted \$225 million in Iron Dome funding—requested by Israel on an expedited basis during the summer 2014 Israel-Gaza conflict—from the co-production requirements agreed upon in March 2014.

U.S. Army Procurement of Iron Dome

U.S. efforts to acquire Iron Dome have come in the context of lawmakers' expressing concern over a lack of capability to protect American service members deployed overseas from possible sophisticated cruise missile attacks.⁹⁷ Congress directed the Army to take interim steps to procure additional systems.⁹⁸ Section 112 of P.L. 115-232, The John S. McCain National Defense Authorization Act for Fiscal Year 2019, required the Secretary of Defense to certify whether there is a need for the U.S. Army to deploy an interim missile defense capability (fixed-site, cruise missile defense capability) and, if so, to deploy additional batteries. In response to this mandate, the U.S. Army procured two Iron Dome batteries from Rafael at a cost of \$373 million. The Army justified the purchase by referencing Iron Dome's high interception rate as well as the Tamir interceptor's low cost relative to existing U.S. missile defense systems.⁹⁹ After testing various systems, in September 2021, the U.S. Army selected Dynetics' Enduring Shield system, rather than Iron Dome, to fulfill its "Indirect Fire Protection Capability".¹⁰⁰ The Iron Dome batteries are now housed at Joint Base Lewis-McChord in Washington. Section 111 of P.L. 117-81, the National Defense Authorization Act for Fiscal Year 2022, amends the 2019 NDAA to eliminate a mandate for two additional U.S. Army purchases of Iron Dome. Currently, the U.S. Marine Corps is evaluating Iron Dome to fulfill its "Medium Range Intercept Capability (MRIC)." According to one report, the Marine Corps has successfully tested a MRIC prototype that "removes the Rafael-made Iron Dome launcher from its heavy base, mounts it on the back of a trailer to fire Tamir missiles, and integrates it with other service capabilities."¹⁰¹

Ukraine's Request for Israeli Missile Defense Systems

Since the start of Russia's war against Ukraine in February 2022, the Ukrainian government has sought foreign assistance, including from Israel, to repel Russian aggression. Ukraine has made a number of requests for various Israeli-made weapons systems, such as anti-tank Spike guided missiles and Iron Dome. In March 2022, Ukrainian President Volodymyr Zelensky addressed the Israeli Knesset by video, stating, "Everyone in Israel knows that your missile defense is the best.... And you can definitely help us protect our lives, the lives of Ukrainians, the lives of Ukrainian Jews."¹⁰²

Despite repeated Ukrainian entreaties, Israel has generally refrained from providing military support to Ukraine, citing a range of considerations (e.g., concern over losing its air superiority in Russian-supported Syria, concern over Russian capture of Israeli technology, concern over its lack of spare capacity of defense systems, and concern over Russian restrictions on Jewish emigration).¹⁰³ Israel has accepted tens of thousands of Ukrainian refugees (Jewish and non-Jewish) into Israel and provided humanitarian aid (generators and medical equipment) and non-lethal equipment (helmets, flak jackets) to the Ukrainian government. Israel also has pledged to provide the Ukrainian government with up to \$200 million in loan guarantees for healthcare and civilian infrastructure. Israel also has operated a field hospital near the Ukrainian-Polish border.

⁹⁷ Jen Judson, "Congress wants new plans from Army on its indirect fire protection suite development," *Defense News*, September 18, 2018.

⁹⁸ In 2018, some Members of Congress advocated for the selection of Iron Dome to protect U.S. troops deployed abroad against threats emanating from Russia and North Korea. See, "Bipartisan House Letter Requests Iron Dome Use for US Army," *Jewish Telegraphic Agency*, April 24, 2018.

⁹⁹ "US Army Buys Israel's Iron Dome for Tactical Missile Defense," *Jewish Policy Center*, January 22, 2019.

¹⁰⁰ Andrew Eversden, "Dynetics Beats Out Iron Dome for \$237M Army Missile Defense Contract," *Breaking Defense*, September 27, 2021.

¹⁰¹ Ashley Roque, "Marines greenlight mobile Iron Dome launcher development, seek 2025 prototype fielding," *Breaking Defense*, January 5, 2023.

¹⁰² Volodymyr Zelenskyy, Address to the Knesset of Israel on the Russian Invasion of Ukraine, March 20, 2022, Kyiv, Ukraine.

¹⁰³ Patrick Kingsley and Ronen Bergman, "Russia Shrinks Forces in Syria, a Factor in Israeli Strategy There," *New York Times*, October 19, 2022.

Once Russia turned to Iran for UAV supplies, Israel offered to help Ukraine develop an early-warning system for its civilians, and reportedly began sharing basic intelligence with Ukraine aimed at helping its forces counter drone attacks.¹⁰⁴ In November 2022, one Israeli news outlet reported that Israel had begun supplying “strategic materials” to a NATO member for use in Ukraine.¹⁰⁵ In January 2023, Ukrainian Ambassador to Israel Yevhen Korniychuk said that Israel was in the process of transferring missile and drone early-warning systems to Ukraine.¹⁰⁶ Also in January 2023, Prime Minister Benjamin Netanyahu, in an interview with CNN, remarked:

I have no desire to enter a new Russo-Israeli military confrontation. And neither would anyone. Neither would you. But, at the same time, we've given Ukraine a lot of humanitarian support. We've taken in Jewish and non-Jewish refugees in a very tiny country, Israel, disproportionately. And we've also offered other kinds of aid. I'm looking into other kinds of aid. But, realistically, Israel, in confronting Iran, is also confronting the main partner of Russia.¹⁰⁷

Analysis

If Israel were to export the entire Iron Dome system or certain system components to Ukraine, there would be several technical, legal, and diplomatic considerations for the United States. For example, because the Iron Dome is co-produced with the United States, Israel and the Department of Defense would need to jointly approve of Israel’s transfer of the system. There have been no official indications of whether the Biden Administration would grant such approval. When asked whether the United States would work with Israel to send defensive systems to Ukraine, the Defense Department has responded, “The United States believes that every nation that provides equipment and systems to Ukraine should do it according to their own dictates. These are sovereign decisions....”¹⁰⁸

Other policy considerations include whether Israel has immediate spare interceptor capacity or spare batteries to ship to Ukraine and, if so, whether the Israeli government would be willing to send its own soldiers to operate or provide training on such systems in Ukraine. The United States, which is providing Ukraine with Patriot missile defense systems, has facilitated the transfer of Ukrainian soldiers to the United States for training on the Patriot. In addition, while much international media and Ukrainian government appears to focus on Iron Dome due to its prominent reputation, Israeli companies also manufacture other, lesser-known systems for export, such as Rafael’s Spyder short and medium range mobile air defense system and IAI’s Barak 8 surface-to-air missile (SAM) system. According to one report:

Israeli sources told Breaking Defense that Ukraine has for months asked Israel to supply its army with systems that will counter Russian missile attacks, and appearance of Iranian-made drones have done nothing to limit the hunger for Israeli systems. The request was mainly for air defense systems Iron Dome and Spyder, both made by Rafael, and the Israel

¹⁰⁴ “Israel offers help with air-attack alerts, but Ukraine wants interceptors,” Reuters, October 19, 2022; “Israel giving intel on Russia’s Iranian drones to Ukraine – report,” *Jerusalem Post*, October 24, 2022.

¹⁰⁵ Yossi Melman, “Under U.S. Pressure, Israel Funded ‘Strategic Materials’ for Ukraine,” *Ha’aretz*, November 17, 2022.

¹⁰⁶ “Israel will transfer technologies related to smart missile and drone warning to Ukraine – ambassador,” *Frontnews* (Ukraine), January 13, 2023.

¹⁰⁷ CNN Transcripts, “CNN Exclusive: One-On-One With Israel’s Netanyahu Amid Surging Violence; Netanyahu On A Possible Peace Deal With The Palestinians; Netanyahu Dismisses Criticism Over Proposed Judicial Changes,” Aired 9- 10p ET, January 31, 2023.

¹⁰⁸ U.S. Department of Defense, News Briefing, April 27, 2022.

Aerospace Industries-produced Barak 8. For Iron Dome, a US approval is needed due to American funding that helped develop the system. However, during the summer visit of US President Joe Biden in Israel, Israel was asked to support Ukraine in more ways than it has done until today, so an export issue is not expected. The Spyder and Barak 8 are free for export, as the US has not funded either of them.¹⁰⁹

Some U.S. lawmakers have been critical of the perceived lack of Israeli support for Ukraine. In early 2023, Senator Lindsey Graham tweeted his displeasure over the new Israeli government's decision to speak less openly about Ukraine, stating "To stay quiet about Russia's criminal behavior will not age well."¹¹⁰ Several months earlier, Senator Chris Murphy told CNN that "Israel needs to get off the sidelines."¹¹¹

David's Sling

In August 2008, Israel and the United States officially signed a "project agreement" to co-develop the David's Sling system.¹¹² David's Sling (aka Magic Wand) is a short/medium-range system designed to counter long-range rockets and slower-flying cruise missiles fired at ranges from 25 to 186 miles, such as those possessed by Iran, Syria, and Hezbollah in Lebanon. David's Sling is designed to intercept missiles with ranges and trajectories for which Iron Dome and/or Arrow interceptors are not optimally configured. It has been developed jointly by Rafael Advanced Defense Systems and Raytheon.¹¹³ David's Sling uses Raytheon's Stunner missile for interception, and each launcher can hold up to 16 missiles. In April 2017, Israel declared David's Sling operational and, according to one analysis, "two David's Sling batteries are sufficient to cover the whole of Israel."¹¹⁴

¹⁰⁹ Arie Egozi, "As Iranian munitions kill in Ukraine, pressure builds for Israel to reassess its Russian balancing act," *Breaking Defense*, October 18, 2022.

¹¹⁰ Twitter, @LindseyGrahamSC, January 2, 2023. See, <https://twitter.com/LindseyGrahamSC/status/1610043932980690944>

¹¹¹ Congressional Quarterly Newsmaker Transcripts, Sen. Chris Murphy Interviewed on CNN, October 19, 2022.

¹¹² This joint agreement is a Research, Development, Test and Evaluation (RDT&E) Framework agreement between the United States and Israel. The joint program to implement the agreement is known as the Short Range Ballistic Missile Defense (SRBMD) David's Sling Weapon System (DSWS) Project. The Department of Defense/U.S.-Israeli Cooperative Program Office manages the SRBMD/DSWS program, which is equitably funded between the United States and Israel.

¹¹³ See Raytheon Missile and Defense, David's Sling System and SkyCeptor Missile at <https://www.raytheonmissilesanddefense.com/capabilities/products/davidssling>

¹¹⁴ "IDF officially declares David's Sling Operational," *Jane's Defence Weekly*, April 3, 2017.

Israel first used David's Sling in July 2018. At the time, Syrian regime forces were attempting to retake parts of southern Syria as part of the ongoing conflict there. During the fighting, Asad loyalists fired two SS-21 Tochka or 'Scarab' tactical ballistic missiles at rebel forces, but the missiles veered into Israeli territory. David's Sling fired two Stunner interceptors, but the final impact point of the Syrian missiles changed mid-flight, and Israel ordered one of the interceptors to self-destruct; the other most likely landed in Syrian territory.¹¹⁵ Chinese media claimed that Asad regime forces recovered the Stunner interceptor intact and handed it over to Russia; the Israeli government did not comment on this assertion.¹¹⁶

Since FY2006, the United States has contributed **over \$2.4 billion** to the development of David's Sling (see **Table 4**). In June 2018, the United States and Israel signed a co-production agreement for the joint manufacture of the Stunner interceptor. Some interceptor components are built in Tucson, Arizona, by Raytheon.

The Arrow and Arrow II

Under a 1986 agreement allowing Israel to participate in the Strategic Defense Initiative (SDI), the United States and Israel have co-developed different versions of the Arrow anti-ballistic missile, and, since 1988, have engaged in joint development.¹¹⁷ The Arrow is designed to counter short-range ballistic missiles. The United States has funded just under half of the annual costs of the development of the Arrow Weapon System, with Israel supplying the remainder. The total U.S. financial contribution (for all Arrow systems) has exceeded \$4.5 billion (see **Table 3**). The system became operational in 2000 in Israel and has been tested successfully.

The Arrow II program (officially referred to as the Arrow System Improvement Program or ASIP), a joint effort of Boeing and IAI, is designed to defeat longer-range ballistic missiles. One Arrow II battery is designed to protect large swaths of Israeli territory. In March 2017, media sources reported the first known use of the Arrow II, saying Arrow II successfully intercepted a

Figure 9. David's Sling Launches Stunner Interceptor



Source: Israel Ministry of Defense.

¹¹⁵ See, "Israel, US Complete Successful Advanced David's Sling Missile Tests," *Jerusalem Post*, March 20, 2019, and "David's Sling has Dubious Debut against Syrian Missiles, *Jane's Defence Weekly*, July 25, 2018.

¹¹⁶ Tyler Rogoway, "If an Israeli Stunner Missile Really Did Fall Into Russian Hands It Is a Huge Deal," *The Drive*, November 13, 2019.

¹¹⁷ Shortly after the start of the Strategic Defense Initiative (SDI) in 1985, the Reagan Administration sought allied political support through various cooperative technology agreements on ballistic missile defense (BMD). A memorandum of understanding was signed with Israel on May 6, 1986, to jointly develop an indigenous Israeli capability to defend against ballistic missiles. Subsequently, a number of additional agreements were signed, including, for example, an April 1989 Memorandum of Agreement (MOA) to develop an Israeli computer facility as part of the Arrow BMD program, a June 1991 agreement to develop a second generation Arrow BMD capability, and a September 2008 agreement to develop a short-range BMD system to defend against very short-range missiles and rockets. Israeli interest in BMD was strengthened by the missile war between Iran and Iraq in the later 1980s, and the experience of being attacked by Scud missiles from Iraq during Operation Desert Storm in 1991.

Syrian surface-to-air missile (SAM) that had been fired on an Israeli jet returning to Israel from an operation inside Syria.¹¹⁸

In August 2020, nearly 20 years after the first Arrow system became operational, Israel successfully tested the Arrow II system. According to one account of the test, Arrow II “successfully intercepted a Sparrow simulated long-range, surface-to-surface missile, which could one day be fired at Israel by Iran...”¹¹⁹

Table 3. U.S. Contributions to the Arrow Program (Arrow, Arrow II, and Arrow III)

current U.S. dollars in millions

Fiscal Year	Total	Fiscal Year	Total	Fiscal Year	Total
1990	52.000	2004	144.803	2018	392.300
1991	42.000	2005	155.290	2019	243.000
1992	54.400	2006	122.866	2020	214.000
1993	57.776	2007	117.494	2021	250.000
1994	56.424	2008	118.572	2022	235.000
1995	47.400	2009	104.342	2023	253.000
1996	59.352	2010	122.342		
1997	35.000	2011	125.393		
1998	98.874	2012	125.175		
1999	46.924	2013	115.500		
2000	81.650	2014	119.070		
2001	95.214	2015	130.908		
2002	131.700	2016	146.069		
2003	135.749	2017	272.224		
				Total	4,501.811

Source: U.S. Missile Defense Agency.

High Altitude Missile Defense System (Arrow III)

Citing a potential nuclear threat from Iran, Israel has sought a missile interceptor that operates at a higher altitude and greater range than the original Arrow systems. In October 2007, the United States and Israel agreed to establish a committee to evaluate Israel’s proposed “Arrow III,” an upper-tier system designed to intercept medium-range ballistic missiles outside the atmosphere. The Arrow III is a more advanced version—in terms of speed, range and altitude—of the current Arrow II interceptor. In 2008, Israel decided to begin development of the Arrow III and the United States agreed to co-fund its development despite an initial proposal by Lockheed Martin and the DOD urging Israel to purchase the Terminal High-Altitude Area Defense (THAAD) missile defense system instead.¹²⁰

The Arrow III, made (like the Arrow II) by IAI and Boeing, has been operational since January 2017. The United States and Israel signed an Arrow III co-production agreement in June 2019;

¹¹⁸ For more information, see U.S. Department of Defense, Missile Defense Agency, Arrow at https://www.mda.mil/news/gallery_internationalcoop_arrow.html.

¹¹⁹ Anna Ahronheim, “Israel Successfully Carries out Arrow 2 Interception. Test Simulated Shooting Down of Long-Range Missile, Including Possibly from Iran,” *Jerusalem Post*, August 14, 2020.

¹²⁰ In March 2019, the United States deployed a THAAD missile battery to Israel for a month of training with Israeli personnel.

their co-production of Arrow III components is ongoing.¹²¹ A U.S.-based subsidiary of IAI, Stark Aerospace Inc. based in Columbus, Mississippi, is producing canisters for the Arrow III system. Since co-development began in 2008, Congress has appropriated **\$1.4 billion for Arrow III** (see **Table 4**). In January 2022, Israel successfully tested Arrow III with reported breakthroughs in the system's algorithmic detection of incoming projectiles and calculation of interception launch trajectories.¹²²

Export of the Arrow III to Germany

Russia's 2022 invasion of Ukraine has prompted some NATO members to enhance their national missile defense. In 2022, German officials expressed interest in purchasing Arrow III for an estimated \$2.2 to \$3 billion with delivery of a system in 2025. Germany does not possess a missile defense system capable of interception in the exo-atmosphere.

Reports suggest that, because Arrow III is jointly produced by the United States and Israel, the Defense Department has granted Israel its preliminary approval to negotiate with the German government over a possible export deal.¹²³ Another unconfirmed report indicates that in exchange for formal U.S. approval of an export license, the United States is demanding that half of all Arrow III contract production for Germany take place in the United States.¹²⁴ As of March 2023, talks are ongoing.

¹²¹ In July 2010, the United States and Israel signed a bilateral agreement (The Upper-Tier Interceptor Project Agreement) to extend their cooperation in developing and producing the Arrow III, including an equitable U.S.-Israeli cost share.

¹²² Judah Ari Gross, "Israel Successfully Tests Arrow 3 Anti-Ballistic Missile System," *Times of Israel*, January 18, 2022.

¹²³ For example, see Anna Ahronheim, "Germany gets approval for Israel's Arrow 3 missile defense system," *Jerusalem Post*, April 5, 2022.

¹²⁴ Anna Ahronheim, "US demands production of Arrow 3 for Germany take place in America," *Jerusalem Post*, November 9, 2022.

Israel's High Energy Laser (Iron Beam) Interception System

In 2014, Rafael Advanced Defense Systems announced that the company was developing a mobile, ground-based high energy laser (HEL) interception system. After eight years of development, Israel publicly demonstrated the capabilities of Iron Beam in 2022. Iron Beam first tracks an incoming rocket, artillery, or mortar (RAM) or UAV, then fires two electrically sourced high energy lasers at the target, destroying it at a range of up to 2.7 miles away.¹²⁵ If successfully tested and operational, Iron Beam could significantly enhance Israel's national counter-RAM and counter-drone defenses. Each use of the Iron Beam would cost between two to four dollars, compared to tens of thousands of dollars to manufacture a conventional interceptor.¹²⁶ However, HEL interception systems are not necessarily replacements for Israel's current multi-layered defense system; they are complementary. It is difficult for laser systems to operate in inclement weather and their range is typically shorter than existing kinetic systems, like Iron Dome. In addition, if Israel faced a barrage of RAM or a swarm of drones, it would require a number of HEL batteries to protect its homeland.¹²⁷

In December 2022, Lockheed Martin and Rafael signed a teaming agreement to jointly develop and manufacture a HEL system based on "the assets that have been developed independently by RAFAEL and the Ministry of Defense's Directorate of Defense Research and Development (DDR&D) within the framework of the IRON BEAM project."¹²⁸ As of March 2023, the U.S. government has no official role in this private company partnership. During President Biden's summer 2022 visit to Israel, multiple sources reported that the Israeli government intended to seek U.S. assistance with Israel's HEL program.¹²⁹ Several weeks later, another report indicated that while no government-to-government funding agreement had been reached during the visit, "it was expected [that] the US government would pitch in to the systems' development in some fashion later on."¹³⁰ As noted below, the FY2023 James M. Inhofe National Defense Authorization Act expands the U.S.-Israel counter unmanned aerial systems program to include "directed energy capabilities."

**Table 4. Defense Budget Appropriations for U.S.-Israeli Missile Defense:
FY2006-FY2023**

current U.S. dollars in millions

Fiscal Year	Arrow II	Arrow III (High Altitude)	David's Sling (Short-Range)	Iron Dome	Total
FY2006	122.866	—	10.0	—	132.866
FY2007	117.494	—	20.4	—	137.894
FY2008	98.572	20.0	37.0	—	155.572
FY2009	74.342	30.0	72.895	—	177.237
FY2010	72.306	50.036	80.092	—	202.434
FY2011	66.427	58.966	84.722	205.000	415.115
FY2012	58.955	66.220	110.525	70.000 ^a	305.700
FY2013 After Sequestration	40.800	74.700	137.500	194.000	447.000

¹²⁵ Gareth Jennings, "Israel to deploy protective 'laser wall', likely Iron Beam," *Jane's Defence Weekly*, February 2, 2022.

¹²⁶ "Israel says laser missile shield to cost just \$2 per interception," Reuters, June 1, 2022.

¹²⁷ Yaakov Lappin, "Israeli PM announces 'laser wall' air defence plan," *Jane's Defence Weekly*, February 2, 2022.

¹²⁸ Lockheed Martin press release, "Lockheed Martin and Rafael Advanced Defense Systems to Collaborate on High-Energy Laser System," December 5, 2022.

¹²⁹ For example, Walla and Jerusalem Post Staff, "Israel to ask Biden for laser defense funding," *Jerusalem Post*, June 17, 2022.

¹³⁰ Arie Egozi, "Israel to spend \$150 million on laser defenses, after US hesitation," *Breaking Defense*, August 3, 2022.

Fiscal Year	Arrow II	Arrow III (High Altitude)	David's Sling (Short-Range)	Iron Dome	Total
FY2014	44.363	74.707	149.712	460.309 (includes supp)	729.091
FY2015	56.201	74.707	137.934	350.972	619.814
FY2016	56.519	89.550	286.526	55.000	487.595
FY2017	67.331	204.893	266.511	62.000	600.735
FY2018	82.300	310.000	221.500	92.000	705.800
FY2019	163.000	80.000	187.000	70.000	500.000
FY2020	159.000	55.000	191.000	95.000	500.000
FY2021	173.000	77.000	177.000	73.000	500.000
FY2022	173.000	62.000	157.000	1,108.000 ^b	1,500.000
FY2023	173.000	80.000	167.000	80.000	500.000
Total	1,799.476	1,407.779	2,494.317	2,915.281	8,616.853

Notes:

- a. These funds were not appropriated by Congress but reprogrammed by the Obama Administration from other Department of Defense accounts.
- b. P.L.117-103, the FY2022 Consolidated Appropriations Act provided \$108 million in Iron Dome appropriations from the Defense Department's Procurement, Defense-Wide and Research, Development, Test and Evaluation Defense-Wide accounts. Section 8142 of the Act also provided \$1 billion in supplemental aid for Iron Dome for fiscal years 2022-2024.

Emergency U.S. Stockpile in Israel

In the early 1980s, Israeli leaders sought to expand what they called their “strategic collaboration” with the U.S. military by inviting the United States to stockpile arms and equipment at Israeli bases for American use in wartime.¹³¹ Beginning in 1984, the United States began to stockpile military equipment in Israel, but only “single-use” armaments that could not be used by the Israel Defense Forces (IDF).¹³² In 1989, the George H. W. Bush Administration altered the terms of the stockpile to provide Israel access to it in emergency situations.¹³³ At the time, the United States was attempting to sell Saudi Arabia M1A1 tanks, and U.S. officials were seeking Israel’s acquiescence to the deal.

Section 514 of the FAA of 1961 (22 U.S.C. §2321h) allows U.S. defense articles stored in war reserve stocks to be transferred to a foreign government through FMS or through grant military assistance, such as FMF. Congress limits the value of assets transferred into War Reserves Stock Allies (WRSA) stockpiles located in foreign countries in any fiscal year through authorizing legislation (see below). The United States retains title to the WRSA stocks, and title must be

¹³¹ “U.S. - Israel Strategic Link: Both Sides Take Stock,” *New York Times*, October 2, 1981.

¹³² “U.S. Tells Israel it Plans to Sell Saudis 300 Tanks,” *New York Times*, September 29, 1989.

¹³³ In October 1989, the United States and Israel agreed to pre-position \$100 million worth of dual-use defense equipment in Israel.

transferred before the foreign country may use them. The FY2021 Consolidated Appropriations Act extended the authorization of WRSA-Israel (WRSA-I) through FY2023.¹³⁴

Until 2021, the United States European Command (EUCOM) managed the WRSA-I program.¹³⁵ Since then, U.S. Central Command (CENTCOM) has managed the program, through which the United States stores missiles, armored vehicles, and artillery ammunition in Israel.¹³⁶ According to one Israeli officer in 2010, “Officially, all of this equipment belongs to the US military.... If however, there is a conflict, the IDF [Israel Defense Forces] can ask for permission to use some of the equipment.”¹³⁷ According to one expert, “WRSA-I is a strategic boon to Israel. The process is streamlined: No 60-day congressional notification is required, and there’s no waiting on delivery.”¹³⁸ In February 2019, as part of the bilateral military exercise Juniper Falcon 2019, officers from the 405th Army Field Support Brigade simulated a transfer of munitions from the WRSA-I to Israeli Defense Forces control (see Figure 10).

Since 1989, Israel has requested access to the stockpile on at least two occasions, including the following:

- During the summer 2006 war between Israel and Hezbollah, Israel requested that the United States expedite the delivery of precision-guided munitions to Israel. The George W. Bush Administration did not use the emergency authority codified in the AECA, but rather allowed Israel to access the WRSA-I stockpile.
- In July 2014, during Israeli military operations against Hamas in the Gaza Strip, the Defense Department permitted Israel to draw from the stockpile, paid with

Figure 10. Army Officers Inspect WRSA-I



Source: 405th Army Field Support Brigade exercises War Reserve Stocks for Allies transfer. (Defense Visual Information Distribution Service, February 28, 2019.)

¹³⁴ The 2021 NDAA, P.L. 116-283, reauthorized WRSA-I through FY2025. However, the House Office of Legislative Counsel ruled that because the FY2021 NDAA had tried to reauthorize WRSA-I for years that were already addressed in law by the FY2021 Omnibus (the Omnibus passed 5 days before the NDAA), the FY2021 NDAA’s reauthorizing amendment on WRSA-I “could not be executed.” See, <https://www.govinfo.gov/content/pkg/COMPS-11978/pdf/COMPS-11978.pdf>.

¹³⁵ In January 2021, President Trump directed that Israel be transferred from the area of responsibility (AOR) of EUCOM to that of U.S. Central Command (CENTCOM). CENTCOM formalized Israel’s move in September 2021.

¹³⁶ At present, the United States and Israel have a bilateral agreement that governs the storage, maintenance, in-country transit, and other WRSA-related costs. The government of Israel, using both its national funds and FMF, pays for the construction, maintenance and refurbishment costs of WRSA ammunition storage facilities. It also pays for the packaging, crating, handling and transportation of armaments to and from the stockpile. In any future expedited procedure, reserve stocks managed by CENTCOM could be transferred to Israel; then, U.S. officials would create an-after-the-fact Foreign Military Sale to account for the transferred equipment.

¹³⁷ “US may give Israel Iraq Ammo,” *Jerusalem Post*, February 11, 2010.

¹³⁸ “Best Friends Don’t Have to Ask,” *Politico Magazine*, August 14, 2014.

FMF, to replenish 120-mm tank rounds and 40-mm illumination rounds fired from grenade launchers.¹³⁹

In 2022 and 2023, the United States reportedly withdrew 300,000 155-millimeter artillery shells from WRSA-I (and additional materiel from the U.S. stockpile in South Korea) to send to Ukraine.¹⁴⁰ According to multiple reports, Israeli officials acceded to the Pentagon's request in order to avoid confrontation with the United States and because, according to one Israeli official, "it's their ammunition and they don't really need our permission to take it."¹⁴¹

At times, Congress has passed legislation authorizing the U.S. military to increase the value of materiel stored in Israel. According to DSCA, "It should be understood that no new procurements are involved in establishing and maintaining these stockpiles. Rather, the defense articles used to establish a stockpile and the annual authorized additions represent defense articles that are already within the stocks of the U.S. armed forces. The stockpile authorizing legislation simply identifies a level of value for which a stockpile may be established or increased."¹⁴²

Stockpiling Precision-Guided Munitions for Israel

Since 2014, Israel has requested that the U.S. military increase its stockpile of precision-guided munitions (PGMs) stored in Israel for possible Israeli emergency use against state and non-state actors (Hezbollah, Hamas, and other terrorist groups). Section 1273 of P.L. 115-232, the John S. McCain National Defense Authorization Act for Fiscal Year 2019, authorized the President to conduct a joint assessment of the quantity and type of PGMs necessary for Israel in the event of a prolonged war.

Section 1275 of P.L. 116-283, the 2021 NDAA, amended Section 514 of the FAA (for a three-year period only) to enable the President to transfer PGMs to Israel without regard to annual limits on their value once they were stored in Israel provided that such a transfer, among other things, does not harm the U.S. supply of PGMs and the combat readiness of the United States. This provision requires the President to certify to Congress that any transfer meets these statutory conditions. It also requires another assessment of the quantity and type of PGMs necessary for Israel in the event of a prolonged war.

For the years 2024 through 2030, Israeli defense budget planners reportedly are prioritizing the replenishment of the country's PGM stocks, with plans to make substantial purchases from the United States.¹⁴³

If the U.S. military has contributed the maximum amount legally permitted in each applicable fiscal year, then the non-inflation-adjusted value of materiel stored in Israel would currently stand at **\$4 billion**. The following legislation authorized increases in value to the stockpile:

- FY1990: P.L. 101-167, the Foreign Operations, Export Financing, and Related Programs Appropriations Act, 1990, provided \$165 million for all stockpile programs and expanded their locations to include Korea, Thailand, NATO members, and countries which were then major non-NATO allies (Australia, Japan, Korea, Israel, and Egypt). Although the act did not specify funds for Israel, of the \$165 million appropriated, \$10 million was for Thailand, \$55

¹³⁹ "U.S. Defends Supplying Israel Ammunition during Gaza Conflict," *Reuters*, July 31, 2014.

¹⁴⁰ Eric Schmitt, Adam Entous, Ronen Bergman, John Ismay, and Thomas Gibbons-Neff, "Pentagon Sends U.S. Arms Stored in Israel to Ukraine," *New York Times*, January 17, 2023.

¹⁴¹ Barak Ravid, "U.S. sends weapons stored in Israel to Ukraine," *Axios*, January 18, 2023.

¹⁴² Defense Institute of Security Assistance Management (DISAM), *DISAM's Online Greenbook*, Chapter 2, Security Legislation and Policy.

¹⁴³ Anna Ahronheim, "IDF lacks ammunition and spare parts in inventory - comptroller report," *Jerusalem Post*, March 9, 2022.

million was for South Korea, and \$100 million was intended as an initial authorization for Israel.¹⁴⁴

- FY1991: P.L. 101-513, the Foreign Operations, Export Financing, and Related Programs Appropriations Act for FY1991, authorized additions to defense articles in Israel “not less than” \$300 million in value for FY1991.
- FY1993: P.L. 102-391, the Foreign Operations, Export Financing, and Related Programs Appropriations Act for FY1993, authorized additions to defense articles in Israel “not less than” \$200 million in value for FY1993.
- FY1994: P.L. 103-87, the Foreign Operations, Export Financing, and Related Programs Appropriations Act for FY1994, authorized additions to defense articles in Israel up to \$200 million in value for FY1994.
- FY1995: P.L. 103-306, the Foreign Operations, Export Financing, and Related Programs Appropriations Act for FY1995, authorized a total addition to defense articles in Israel of \$200 million for FYs 1994 and 1995.
- FY2007-FY2008: Section 13(a)(2)(A)(i) of the Department of State Authorities Act of 2006 (P.L. 109-472) amended Section 514 of the FAA, as amended (P.L. 87-195; 22 U.S.C. §2321h) to authorize additions to defense articles in Israel of up to \$200 million in value for each of FY2007 and FY2008.¹⁴⁵
- FY2011-FY2012: P.L. 111-266, the Security Cooperation Act of 2010, authorized additions to defense articles in Israel up to \$200 million in value for each of FY2011 and FY2012.
- FY2014-FY2015: P.L. 113-296, the United States-Israel Strategic Partnership Act of 2014, authorized additions to defense articles in Israel up to \$200 million in value for each of FY2014 and FY2015.
- FY2016-FY2017: Section 7034(k)(11)(B) of P.L. 114-113, the FY2016 Consolidated Appropriations Act, authorized additions to defense articles in Israel up to \$200 million in value for each of FY2016 and FY2017.
- FY2018-FY2019: Section 7034(l)(7) of P.L. 115-141, the FY2018 Consolidated Appropriations Act, authorized additions to defense articles in Israel up to \$200 million in value for each of FY2018 and FY2019.
- FY2019-FY2020: Section 7048(b)(4)(B) of P.L. 116-6, the FY2019 Consolidated Appropriations Act, authorized additions to defense articles in Israel up to \$200 million in value for each of FY2019 and FY2020.¹⁴⁶
- FY2021-FY2023: Section 7035(b)(3) of P.L. 116-260, the FY2021 Consolidated Appropriations Act, authorized additions to defense articles in Israel up to \$200 million in value for each of FY2021, FY2022, and FY2023.

¹⁴⁴ Dr. Louis J. Samelson, “Military Assistance Legislation for Fiscal Year 1990,” *The DISAM Journal*, Winter, 1989/1990.

¹⁴⁵ This increase for each fiscal year is based on legislative language contained in Section 12002 of P.L. 108-287, the Department of Defense Appropriations Act, 2005.

¹⁴⁶ P.L. 116-94, the FY2020 Consolidated Appropriations Act also authorized additions to defense articles in Israel up to \$200 million in value for each of FY2020 and FY2021.

Defense Budget Appropriations for Anti-Tunnel Defense

In 2016, the Israeli and U.S. governments began collaborating on a system to detect underground smuggling tunnels and to counter cross-border tunnels used (most prominently by Hamas in the summer 2014 conflict) to infiltrate Israel. Reportedly, this technology uses acoustic or seismic sensors and software to detect digging.¹⁴⁷ This technology may be based on discovery techniques used in the oil and natural gas sector.¹⁴⁸

Section 1279 of P.L. 114-92, the FY2016 National Defense Authorization Act, authorized the establishment of a U.S.-Israeli anti-tunnel cooperation program.¹⁴⁹ This authorization allowed funds from the research, development, test, and evaluation defense-wide account to be used (in combination with Israeli funds) to establish anti-tunnel capabilities that “detect, map, and neutralize” underground tunnels that threaten the United States or Israel. The authorization requires the Secretary of Defense to report to Congress on, among other things, the sharing of research and development costs between the United States and Israel.

Over the years, the Israel Defense Forces have become more adept at detecting tunnels. In 2021, Israel completed an anti-tunnel barrier along the entirety of the 40-mile Israel-Gaza border. The barrier is an underground concrete wall equipped with sensors. Israeli anti-tunnel technology reportedly has detected Hamas tunnels at depths of up to 230 feet belowground.¹⁵⁰

Table 5. U.S.-Israeli Anti-Tunnel Cooperation

current U.S. dollars in millions

Fiscal Year	Appropriation
FY2016	40.0
FY2017	42.5
FY2018	47.5
FY2019	47.5
FY2020	-
FY2021	47.5
FY2022	47.5
FY2023	47.5
Total	320.0

Source: Joint Explanatory Statements accompanying Consolidated Appropriations Acts for FY2016-2023. See, – “Combatting Terrorism Technology Support” in Defense Explanatory Statement.

Defense Budget Appropriations for Countering Unmanned Aerial Systems

As UAV technology has proliferated across the Middle East, Israel has sought U.S. assistance in countering various systems used by state and non-state actors. In an effort to counter unmanned drones, states are researching various methods to detect incoming unmanned aircraft (using radio

¹⁴⁷ “Israel’s Underground War—Technology and Specialist Troops deployed in face of Subterranean Threat,” *Wall Street Journal*, March 2, 2016.

¹⁴⁸ “Israeli official bets advances in anti-tunnel technology will secure Gaza border,” *Washington Post*, March 6, 2018.

¹⁴⁹ Section 1279 of P.L. 116-92, the FY2020 National Defense Authorization Act, extended the authority of the anti-tunnel cooperation program through December 31, 2024.

¹⁵⁰ “230 feet down: Elite IDF unit reveals deepest Hamas tunnel ever found,” *Times of Israel*, April 2, 2022.

or optical sensors) and then either disabling, destroying, or seizing them by jamming their communications, intercepting their flight paths, or hacking their electronic systems.¹⁵¹ Several Israeli companies have counter-drone solutions in development, including: Drone Dome (Rafael), ReDrone (Elbit Systems), and Drone Guard (IAI). According to one unnamed executive at IAI, “Drone defense is an expensive business as countries have a large number of facilities to protect....It’s a crazy arms race because the technological possibilities for drone use continue to increase.”¹⁵²

Congress first authorized a cooperative U.S.-Israeli Counter Unmanned Aerial Systems (C-UAS) program by expanding the scope of the anti-tunnel cooperation program for FY2019.¹⁵³ In the FY2020 NDAA (P.L. 116-92), Congress created a separate authority (Section 1278), which authorized the Secretary of Defense to “carry out research, development, test, and evaluation activities, on a joint basis with Israel, to establish capabilities for countering unmanned aerial systems that threaten the United States or Israel.” Section 1278 required a matching contribution from the government of Israel and capped the annual U.S. contribution at \$25 million. Congress authorized the program through FY2024.

Section 1277 of P.L. 117-263, the James M. Inhofe National Defense Authorization Act for Fiscal Year 2023, modifies the authorization for the C-UAS program to now include “directed energy capabilities.”¹⁵⁴ It also raises the cap on annual U.S. contributions to the program from \$25 to \$40 million. It extends the program’s authorization through calendar year 2026.

Aid Restrictions and Possible Violations

U.S. aid and arms sales to Israel, like those to other foreign recipients, are subject to U.S. law. Some U.S. citizens and interest groups periodically call upon Congress to ensure that U.S. military assistance to Israel complies with applicable U.S. laws and policies and with international humanitarian law.

Table 6. U.S.-Israeli Anti-Drone Cooperation

current U.S. dollars in millions

Fiscal Year	Appropriation
FY2020	13.0
FY2021	25.0
FY2022	25.0
FY2023	25.0
Total	88.0

Source: Joint Explanatory Statements accompanying Consolidated Appropriations Acts 2020-2023. See “Combatting Terrorism Technology Support” in Defense Explanatory Statement.

¹⁵¹ Ilan Ben Zion, “As Attack Drones Multiply, Israeli Firms Develop Defenses,” *Associated Press*, September 26, 2019.

¹⁵² “Why Drones Are Becoming Iran’s Weapons of Choice,” *The Economist*, November 10, 2021.

¹⁵³ See Section 1272 of P.L. 115-232, the John S. McCain National Defense Authorization Act for Fiscal Year 2019.

¹⁵⁴ Section 1280 of P.L. 116-283, the 2021 NDAA, stated that the Defense Department may establish a program to carry out “research, development, test, and evaluation activities, on a joint basis with Israel, to promote directed energy capabilities of mutual benefit to both the United States and Israel....”

Arms Sales and Use of U.S.-Supplied Equipment¹⁵⁵

The 1952 Mutual Defense Assistance Agreement and subsequent arms agreements between Israel and the United States limit Israel's use of U.S. military equipment to defensive purposes.¹⁵⁶ The AECA (22 U.S.C. §2754) authorizes the sale of U.S. defense articles and services for specific purposes, including "legitimate self-defense."¹⁵⁷ The AECA (22 U.S.C. §2753) states that recipients may not use such articles "for purposes other than those for which [they have been] furnished" without prior presidential consent. The AECA also states in 22 U.S.C. §2753 that the consent of the President shall not be required for the transfer by a foreign country or international organization of defense articles sold by the United States, if the recipient is the government of a member country of NATO, the Government of Australia, the Government of Japan, the Government of the Republic of Korea, the Government of Israel, or the Government of New Zealand. The act stipulates that sale agreements entered into after November 29, 1999 must grant the U.S. government the right to verify "credible reports" that articles have been used for unauthorized purposes. The FAA of 1961, as amended, also contains general provisions on the use of U.S.-supplied military equipment.¹⁵⁸

Section 502B of the Foreign Assistance Act

Section 502B(a)(2) of the FAA (22 U.S.C. §2304(a)(2)) stipulates that, absent the exercise of certain presidential waivers due to extraordinary circumstances, "no security assistance may be provided to any country the government of which engages in a consistent pattern of gross violations of internationally recognized human rights."¹⁵⁹ For the purposes of Section 502B, "security assistance" is defined broadly to include sales of defense articles or services, extensions of credits, and guaranties of loans under the AECA, licenses for exports to foreign government military or security forces, and certain categories of assistance authorized under the FAA. The term "gross violations of internationally recognized human rights" is defined to include 1) "torture or cruel, inhuman, or degrading treatment or punishment"; 2) "prolonged detention without charges and trial"; 3) forced disappearance; and 4) "other flagrant denial of the right to life, liberty, or the security of person." Pursuant to this provision, the executive branch may make a determination that a foreign government has engaged in "a consistent pattern of gross violations of internationally recognized human rights" and is therefore ineligible for security assistance. As a general matter, the executive branch appears to have rarely restricted assistance pursuant to this provision. There is no statutory requirement for the executive branch to notify Congress when it chooses to unilaterally invoke 502B.

¹⁵⁵ See, CRS In Focus IF11197, *U.S. Arms Sales and Human Rights: Legislative Basis and Frequently Asked Questions*, by Paul K. Kerr and Liana W. Rosen.

¹⁵⁶ U.S. State Department, *Treaties in Force*, Agreement relating to mutual defense assistance, Entered into force July 23, 1952; TIAS 2675.

¹⁵⁷ Pursuant to the AECA, when Israel, like other foreign nations, purchases U.S. defense articles and services, it must sign a Letter of Offer and Acceptance (LOA) with the United States government. The LOA lists the items and/or services, estimated costs, and the terms and conditions of sale. Unless otherwise specified, the standard terms and conditions for Israel are consistent with the general terms for all U.S. arms sales abroad. For a sample LOA, see Defense Security Cooperation Agency, Security Assistance Management Manual, available at <https://www.samm.dsca.mil/figure/figure-c5f4>

¹⁵⁸ For example, see (among other sections), Section 502B, Human Rights (22 U.S.C. §2304), Section 505, Conditions of Eligibility (22 U.S.C. §2314), and Section 511, Considerations in Furnishing Military Assistance (22 U.S.C. §2321d).

¹⁵⁹ op.cit., CRS In Focus (IF11197).

Pursuant to Section 502B(c), Congress also may, through a resolution of the House or Senate or by request of the Senate Foreign Relations Committee (SFRC) or House Foreign Affairs Committee (HFAC), require a report within 30 days from the Secretary of State concerning human rights in a specific country, including an assessment of whether extraordinary circumstances exist that necessitate a continuation of security assistance. After receiving such report, Congress, by joint resolution, may act to terminate, restrict, or continue security assistance to such country.

End-Use Monitoring

It is the statutory responsibility of the Departments of State and Defense, pursuant to the AECA, to conduct end-use monitoring (EUM) to ensure that recipients of U.S. defense articles use such items solely for their intended purposes. The AECA also provides authority to the President (through a presidential determination) and Congress (joint resolution) to prohibit the sale or delivery of U.S.-origin defense articles to a recipient country if it has used such articles “for a purpose not authorized” by the AECA or the FAA.¹⁶⁰

Questions over the misuse of U.S.-supplied equipment to Israel have arisen in several instances in past decades, including over the sale of tear gas to Israel during the late 1980s,¹⁶¹ the sale of Caterpillar D-9 bulldozers to Israel allegedly used in the destruction of Palestinian homes,¹⁶² and Israel’s 2006 use of U.S.-supplied cluster munitions in Lebanon.¹⁶³ In 2020 and 2021, some lawmakers wrote a series of letters to the State Department expressing concern that Israel may have been using U.S.-origin construction equipment to demolish the homes of Palestinians that Israel has accused of committing terrorism.¹⁶⁴ In House report language accompanying H.R.8282, the Department of State, Foreign Operations, and Related Programs Appropriations Act, 2023, appropriators urged “the Secretary of State to address in bilateral consultations with Israel the importance of ensuring that MOU-supported equipment is not used in any way that undermines the prospects of a negotiated two-state solution.”¹⁶⁵

Human Rights Vetting (Leahy Law)¹⁶⁶

Section 620M of the FAA of 1961 (codified as 22 U.S.C. §2378d), as amended, prohibits the furnishing of assistance authorized by the FAA and the AECA to any foreign security force unit where there is credible information that the unit has committed a gross violation of human rights. The State Department and U.S. embassies overseas implement Leahy vetting to determine which foreign security individuals and units are eligible to receive U.S. assistance or training. In 2022, Congress amended 22 U.S.C. §2378d to address cases in which the specific unit(s) that will ultimately receive assistance cannot be identified prior to the transfer of assistance (as may be the

¹⁶⁰ See CRS In Focus IF11533, *Modifying or Ending Sales of U.S.-Origin Defense Articles*, by Paul K. Kerr and Liana W. Rosen, and CRS In Focus IF10392, *Foreign Military Sales Congressional Review Process*, by Paul K. Kerr.

¹⁶¹ See Government Accountability Office, *Israel: Use of U.S.-Manufactured Tear Gas in the Occupied Territories*, NSIAD-89-128, April 13, 1989.

¹⁶² CORRIE v. CATERPILLAR INC, United States Court of Appeals, Ninth Circuit, filed March 15, 2005.

¹⁶³ See, U.S. State Department, “U.S. Cluster Munitions Policy,” Stephen D. Mull, Acting Assistant Secretary for Political-Military Affairs, On-the-Record Briefing, May 21, 2008.

¹⁶⁴ Posted on Twitter by Congresswoman Rashida Tlaib, March 12, 2021, 2:14pm.

¹⁶⁵ H.Rept. 117-401, State, Foreign Operations, and Related Programs Appropriations Bill, 2023.

¹⁶⁶ For background, see CRS InFocus IF10575, Global Human Rights: Security Forces Vetting (“Leahy Laws”), Updated August 5, 2022.

case for some equipment). For such cases, the Secretary of State is to regularly provide the recipient government a list of units that are prohibited from receiving assistance and, effective December 31, 2022, such assistance “shall only be made available subject to a written agreement that the recipient government will comply with such prohibition.” The United States and Israel maintain such an agreement.

In May 2022, prominent Al Jazeera journalist Shireen Abu Akleh (a U.S. citizen) was killed by a gunshot in an area of Jenin where Israeli security forces were trading fire with Palestinians. Her death triggered an international outcry, as did images of Israeli police disrupting her funeral in East Jerusalem. In condemning Abu Akleh's killing and an injury suffered by one of her colleagues, the State Department spokesperson called for an immediate and thorough investigation.¹⁶⁷ In July 2022, the State Department issued a statement that said that the U.S. Security Coordinator (USSC) for Israel and the Palestinian Authority (PA) oversaw an independent process, and in summarizing Israeli and PA investigations concluded that Israeli gunfire likely killed Abu Akleh, but “found no reason to believe that this was intentional.”¹⁶⁸

After conducting an internal investigation, the IDF said in September 2022 that there was a “high possibility” that Abu Akleh was accidentally hit by IDF gunfire¹⁶⁹—eliciting additional public criticism from PA officials and Abu Akleh family members who assert that the shooting was not accidental.¹⁷⁰ In November 2022, media reports said that the FBI had opened an investigation into Abu Akleh's death.¹⁷¹

Members have reacted in different ways to calls for investigating the death of Abu Akleh and possibly applying the Leahy law. In December 2022, eight Senators wrote a letter to the U.S. Department of Justice demanding that U.S. government investigations into the IDF be closed immediately.¹⁷² During the 117th Congress, Senator Leahy remarked in a floor statement that “Whether her killing was intentional, reckless, or a tragic mistake, there must be accountability. And if it was intentional, and if no one is held accountable, then the Leahy Law must be applied.”¹⁷³ The explanatory statement accompanying the Senate-introduced 2023 Department of State, Foreign Operations, and Related Programs Appropriations Act (S. 4662) would have required a report from the Secretary of State on steps taken to facilitate an independent, credible, and transparent investigation into Abu Akleh's death, including whether 620M of the Foreign Assistance Act of 1961 applies.¹⁷⁴ This reporting requirement was not included in the enacted version of the bill (P.L.117-328).

In fall 2022, *Ha'aretz* reported that staff at the U.S. Embassy in Jerusalem were preparing an internal report on the IDF's ultra-Orthodox Netzah Yehuda battalion to determine whether some

¹⁶⁷ U.S. State Department, Press Briefing, May 11, 2022.

¹⁶⁸ U.S. State Department press statement, “On the Killing of Shireen Abu Akleh,” July 4, 2022.

¹⁶⁹ Hiba Yazbek and Patrick Kingsley, “Israel Says Reporter Was Probably Shot By One of Its Forces,” *New York Times*, September 6, 2022.

¹⁷⁰ Khaled Abu Toameh, “Palestinians reject IDF probe into Shireen Abu Akleh killing, vow to bring case to ICC,” *Jerusalem Post*, September 5, 2022.

¹⁷¹ Barak Ravid, “FBI opens investigation into killing of Palestinian American Shireen Abu Akleh,” *Axios*, November 14, 2022.

¹⁷² Senator James Lankford, Press Release, Lankford, Colleagues Warn FBI Against Politically-Charged Investigation of Israeli Defense Forces, December 15, 2022.

¹⁷³ Congressional Record, Senate Speeches and Inserts, Page S4635, Shireen Abu Akleh, September 15, 2022.

¹⁷⁴ See, Senate Appropriations Committee, available online at: <https://www.appropriations.senate.gov/imo/media/doc/SFOPSFY23RPT.pdf>

of its soldiers committed violations while serving in the West Bank.¹⁷⁵ As of January 2023, the IDF reportedly had conducted its own investigation of the unit and had dismissed or reassigned several commanders while transferring the entire battalion from the West Bank to the Golan Heights.¹⁷⁶

Use of U.S. Funds within Israel's Pre-June 1967 Borders

In some instances, U.S. assistance to Israel may be used only in areas subject to the administration of Israel prior to June 1967 (see “**Loan Guarantees**”). For example, U.S. State Department-provided Migration and Refugee Assistance (MRA, see “**Migration and Refugee Assistance**”), per agreement between the State Department and United Israel Appeal, may only be used for absorption centers, *ulpanim* (intensive Hebrew-language schools, many of which are located at immigrant absorption centers with particular focus on immigrants to Israel), or youth *aliyah* (relocation to Israel) institutions located within Israel’s pre-June 1967 area of control.¹⁷⁷

Until recently, no program funded by the endowments of U.S.-Israeli binational foundations (see “**U.S.-Israeli Scientific & Business Cooperation**”) could be “conducted in geographic areas which came under the administration of the Government of Israel after June 5, 1967...”¹⁷⁸ In October 2020, the Trump Administration announced that it had removed geographic restrictions from the founding agreements establishing the three main U.S.-Israeli binational foundations (BIRD, BARD, BSF), thereby permitting universities in the West Bank to apply for grant funding.¹⁷⁹ According to an October 2020 press statement released by the U.S. Embassy in Israel:

Established in the 1970s, the BIRD, BARD, and BSF Agreements for each of the three Foundations have not permitted support for projects conducted in areas that came under the administration of the Government of Israel after June 5, 1967. These geographic restrictions are no longer consistent with U.S. policy following (i) the Administration’s opposition to the provisions of United Nations Security Council Resolution 2334, (ii) the Administration’s recognition of Jerusalem as Israel’s capital and moving the U.S. Embassy from Tel Aviv to Jerusalem, (iii) the Administration’s recognition of Israel’s sovereignty over the Golan Heights, and (iv) the Administration’s announcement that the U.S. will no longer consider that the establishment of civilian settlements in the West Bank is per se inconsistent with international law.... Updating the Agreements further strengthens the special bilateral relationship between the United States and Israel and continues efforts to generate significant mutual scientific and economic benefits.¹⁸⁰

In the 117th Congress, Section 5 of H.R.5344, the Two-State Solution Act, would have, among other things, restricted the United States government from providing “support for projects

¹⁷⁵ Amos Harel, “U.S. Examining Allegations Against Israel’s Orthodox West Bank Battalion,” *Ha’aretz*, September 6, 2022.

¹⁷⁶ Amos Harel, “Violent ultra-Orthodox Battalion Moves to Golan Heights,” *Ha’aretz*, January 2, 2023.

¹⁷⁷ This stipulation is found in grant agreements between the U.S. State Department’s Bureau of Population, Refugees, and Migration (PRM) and United Israel Appeal (clause 8. F. 2—Use in Territories Subject to the Administration of the State of Israel Prior to June 1967).

¹⁷⁸ See “Regulations” document at <http://www.bsf.org.il/BSFPublic/DefaultPage1.aspx?PageId=221&innerTextID=221>.

¹⁷⁹ Noa Landau, Hagar Shezaf, and Shira Kadari-Ovadia, “Netanyahu, Ambassador Friedman Ink Deal Expanding Scientific Cooperation to Settlements,” *Ha’aretz*, October 28, 2020.

¹⁸⁰ U.S. State Department, U.S., Israel Expand Reach of Binational Foundations and Establish New Scientific and Technological Cooperation Agreement, U.S. Embassy Jerusalem, Press Release, October 28, 2020.

conducted in geographic areas which came under the administration of the Government of Israel after June 5, 1967.” The bill was not considered.

Israeli Arms Transfers to Third Parties

Per Section 3(a) of the AECA (22 U.S.C. §2753) and Section 505(e) of the FAA (22 U.S.C. §2314), the U.S. government must review and approve any transfer of U.S.-origin equipment from a recipient to a third party that was not previously authorized in the original acquisition.¹⁸¹ Third Party Transfer (or TPT) is the retransfer of title, physical possession or control of defense articles from the authorized recipient to any person or organization not an employee, officer or agent of that recipient country.¹⁸²

As previously mentioned, Israel is a major global manufacturer of armaments. It also possesses significant quantities of major U.S.-origin defense equipment stemming from its decades-old security partnership with the United States. At times, third parties have sought to procure U.S. equipment held by Israel, and U.S.-Israel differences over approval of retransfer has at times caused friction in the bilateral relationship. For example, in 2017, Croatia solicited bids for the procurement of fighter aircraft and, a year later, chose to purchase 12 used F-16 Barak fighters from Israel in a deal worth an estimated \$500 million, conditioned on U.S. TPT approval. In December 2018, the Trump Administration notified Congress that it had approved the sale, but only if all Israeli modifications were removed beforehand. Reportedly, Croatia did not want the F-16s returned to their original condition, and canceled the deal after high-level negotiations between Israeli and U.S. officials did not resolve the issue.¹⁸³

Israel and China

Amidst ongoing global U.S.-Chinese competition in various fields, Israel’s defense and technology trade with China has at times come under U.S. scrutiny.¹⁸⁴ Since the middle of the last decade, Israeli defense exports to China have nearly ceased. Two planned Israeli sales to China drew significant opposition both from successive Administrations and from Congress (PHALCON airborne radar systems in 2000 and upgrade of Chinese Harpy Killer drone aircraft in 2004/2005).¹⁸⁵ Apparently as a result of U.S. pressure on Israel to cease its long-standing and sometimes clandestine defense relationship with China, Israel created its own arms export control agency, known as the Defense Export Control Agency (DECA – see **textbox “Israeli Exports of Spyware”**). The United States and Israel signed a 2005 bilateral agreement, known as the “Declaration of Understanding on Technology Exports,” whereby both countries pledged to

¹⁸¹ See, U.S. State Department, “Third Party Transfer Process and Documentation,” Bureau of Political-Military Affairs, December 17, 2018.

¹⁸² See, Defense Institute of Security Cooperation Studies, “The Management of Security Cooperation (Green Book),” Edition 39, January 2019.

¹⁸³ “Croatia cancels F-16 Deal with Israel due to U.S. Objections,” *Axios*, January 10, 2019.

¹⁸⁴ See, “The Evolving Israel-China Relationship,” *RAND Corporation*, 2019.

¹⁸⁵ Representative Callahan of Alabama, then Chairman of the Foreign Operations Subcommittee of the House Appropriations Committee, told a hearing on April 6, 2000, that he would block \$250 million in FY2001 military assistance to Israel unless Israel cancelled the PHALCON sale to China. Representative Callahan offered an amendment during a June 20 subcommittee markup to withhold \$250 million from the \$2.88 billion in total economic and military assistance proposed for Israel for FY2001, but the amendment failed by a vote of nine to six. See, “Israel-China Radar Deal Opposed,” *Washington Post*, April 7, 2000 and “U.S. Congressman: We’ll Block Israeli Aid Unless China Deal Cancelled,” *Jerusalem Post*, April 7, 2000.

ensure defense export transparency, with the United States pledging not to ban Israel's defense deals on commercial grounds to ensure Israeli competitiveness globally.¹⁸⁶

Though official Israeli-Chinese defense ties have essentially ended,¹⁸⁷ China is now Israel's second largest single-state trading partner (after the United States). There is concern that China will use Israeli technology transfer in the commercial sphere to compete with the United States and potentially threaten its national security in various fields, such as cybersecurity, artificial intelligence, and robotics.¹⁸⁸ Partly due to U.S. concerns regarding China's involvement in Israel's economy, Israel created an advisory panel on foreign investment in Israel in late 2019.¹⁸⁹ However, this panel reportedly does not have the authority to review investments in sectors such as high-tech that accounted for most of China's investments in Israel in the previous decade.¹⁹⁰

Successive Administrations and Congress have urged Israel to do more to limit Chinese investment. Section 1289 of P.L. 116-92, the National Defense Authorization Act for FY2020, expressed a sense of the Senate that the United States government should "urge the Government of Israel to consider the security implications of foreign investment in Israel." According to one Israeli analysis, President Donald Trump reportedly warned Prime Minister Netanyahu in March 2019 that U.S. security assistance for and cooperation with Israel could be limited if Chinese companies establish a 5G communications network in Israel, in line with similar warnings that the Administration had communicated to other U.S. allies and partners.¹⁹¹ In spring 2020, after the United States again raised concern over Chinese investment in major Israeli projects, the subsidiary of a Hong Kong-based company lost a bid to build Israel's largest desalination plant. Shortly before Israel announced the bid decision, then-Secretary of State Michael Pompeo visited Israel and publicly stated, "We do not want the Chinese Communist Party to have access to Israeli infrastructure, Israeli communication systems, all of the things that put Israeli citizens at risk and in turn put the capacity for America to work alongside Israel on important projects at risk as well."¹⁹²

The Biden Administration also has continued to warn regional partners about Chinese investment in critical infrastructure. According to one unnamed U.S. Embassy in Israel spokesperson, "We would like to see Israel's investment screening system strengthened and expanded, especially in the field of high tech.... We have been candid with our Israeli friends over risks to our shared national security interests."¹⁹³ In 2022, after repeated high level U.S. engagement with Israel on

¹⁸⁶ "Israel, U.S. Draft Agreement for Openness, Equality in Arms Deals," *Ha'aretz*, June 27, 2005.

¹⁸⁷ In late 2021, three Israeli companies and 10 suspects were indicted on charges of exporting cruise missiles to China without a permit. According to one report, "Israel is home to some 1,600 licensed arms exporters, which employ 150,000 to 200,000 people. In addition, there is a large supply chain of subcontractors who supply software, hardware, raw materials, and other goods necessary for arms production. DECA is supposed to watch over this massive system, guided by strict rules governing Israel's arms export industry. The body, which operates with nearly no transparency, is supposed to vet deals to ensure that arms do not go to enemy countries, endanger Israel in any way, include classified technology, or stand to harm Israel's international standing." See, "10 Israelis set to be Indicted for Illegally Exporting Missiles to China," *Times of Israel*, December 20, 2021.

¹⁸⁸ "China Tech Push in Israel Stirs Security Fears," *Wall Street Journal*, February 12, 2019.

¹⁸⁹ Arie Egozi, "Israelis Create Foreign Investment Overseer; China Targeted," *Breaking Defense*, November 13, 2019.

¹⁹⁰ Shira Efron et al., *Chinese Investment in Israeli Technology and Infrastructure: Security Implications for Israel and the United States*, RAND Corporation, 2020, pp. 24-25.

¹⁹¹ Hiddai Segev, Doron Ella, and Assaf Orion, "My Way or the Huawei? The United States-China Race for 5G Dominance," *Institute for National Security Studies*, Insight No. 1193, July 15, 2019.

¹⁹² Shirley Zhao and Ivan Livingston, "Li Ka-Shing Hong Kong Group Loses Israel Deal amid U.S. Push," *Bloomberg*, May 26, 2020.

¹⁹³ Sarah Zheng and Coco Liu, "The US is Thwarting China's Love Affair with Israeli Tech," *Bloomberg*, July 12,

China, Israel reportedly agreed to “update Washington about any major deals with Beijing, especially in infrastructure and technology” and said it “would reconsider any such deals at America’s request.”¹⁹⁴ In early 2022, Israel chose other foreign companies over Chinese bidders for the next phase of Tel Aviv’s light rail construction. During President Biden’s visit to Israel in summer 2022, the United States and Israel launched the “U.S.-Israel Strategic High-Level Dialogue on Technology,” which, among other things, will focus on managing “risks to our respective technology ecosystems, including in research security, export controls, and investment screening.”¹⁹⁵

In summer 2022 testimony before the Senate Foreign Relations Committee, Assistant Secretary of State for Near Eastern Affairs Barbara Leaf noted:

We have been frank with our Israeli friends about our concerns, and the value of rigorous investment screening mechanisms to ensure that technology, strategic infrastructure, and other critical assets are not compromised by external funding. Israel’s adoption of such a mechanism has been a critical first step, and one we would like to help them improve upon. We also hope to work together on other issues like monitoring research institutions and expanding export controls to protect Israel’s valuable technological contributions from being exploited by PRC companies.¹⁹⁶

2022.

¹⁹⁴ Lahav Harkov, “Israel Agrees to Update US about China Trade to Avoid Tension,” *Jerusalem Post*, January 3, 2022.

¹⁹⁵ The White House, Fact Sheet: U.S.-Israel Strategic High-Level Dialogue on Technology, September 30, 2022.

¹⁹⁶ Senate Foreign Relations Committee, Near East, South Asia, Central Asia and Counterterrorism Subcommittee, Hearing entitled, “China’s Role in the Middle East,” Testimony of Barbara Leaf, Assistant Secretary of State for Near Eastern Affairs, U.S. State Department, August 4, 2022.

Other Ongoing Assistance and Cooperative Programs

Migration and Refugee Assistance

Since 1973, Israel has received a total of approximately **\$1.69 billion** in grants from the State Department's Migration and Refugee Assistance account (MRA) to assist in the resettlement of migrants to Israel.¹⁹⁷ Funds are paid to the United Israel Appeal, a private philanthropic organization in the United States, which in turn transfers the funds to the Jewish Agency for Israel.¹⁹⁸ Between 1973 and 1991, the United States provided about \$460 million for resettling Jewish refugees in Israel. From 1992 to 1999, after the collapse of the Soviet Union and the resettlement of hundreds of thousands of Jewish immigrants in Israel, MRA grants to Israel increased to almost \$80 million per year (\$630 million). Since then, annual grants have decreased based at least in part on the declining number of Jews leaving the former Soviet Union and other areas for Israel (see **Table 7**). MRA assistance largely supports Jews who have migrated from Ethiopia.

Congress has changed the directive language since the first refugee resettlement funds were appropriated in 1973. At first, the congressional language said the funds were for "resettlement in Israel of refugees from the Union of Soviet Socialist Republics and from Communist countries in Eastern Europe." But starting in 1985, the language was simplified to "refugees resettling in Israel" to ensure that Ethiopian Jews would be covered by the funding. Technically, the legislative language designates funds for refugee resettlement, but in Israel little differentiation is made between Jewish "refugees" and other Jewish immigrants, and the funds are used to support the absorption of all Jewish immigrants.

Table 7. Migration and Refugee Assistance Funding Levels for Israel

current U.S. dollars in millions	
Fiscal Year	Total
FY2000-FY2012	\$519.3
FY2013	\$15.0
FY2014	\$15.0
FY2015	\$10.0
FY2016	\$10.0
FY2017	\$7.5
FY2018	\$7.5
FY2019	\$5.0
FY2020	\$5.0
FY2021	\$5.0
FY2022	\$5.0
FY2023	\$5.0
Total	\$609.3

Source: U.S. State Department.

¹⁹⁷ The MRA account is authorized by 22 U.S.C. § 2601. Funding for the account comes from appropriations in the foreign operations appropriations bill.

¹⁹⁸ The Jewish Agency for Israel's website is available at <http://www.jafi.org.il/>.

Loan Guarantees

Overview

Since 1972, the United States has extended loan guarantees to Israel to assist with housing shortages, Israel's absorption of new immigrants from the former Soviet Union and Ethiopia, and its economic recovery following the 2000-2003 recession, which was probably caused in part by the Israeli-Palestinian conflict known as the second intifada. Loan guarantees are a form of indirect U.S. assistance to Israel; they enable Israel to borrow from commercial sources at lower rates. Congress directs that subsidies be set aside in a U.S. Treasury account in case of a possible Israeli default. These subsidies, which are a percentage of the total loan (based in part on the credit rating of the borrowing country), have come from the U.S. or Israeli government.¹⁹⁹ Israel has never defaulted on a U.S.-backed loan guarantee.

Loan Guarantees for Economic Recovery

In 2003, then-Prime Minister Ariel Sharon requested an additional \$8 billion in loan guarantees to help the Israeli government stimulate Israel's then-ailing economy. The loan guarantee request accompanied a request for an additional \$4 billion in military grants to help Israel prepare for possible attacks during an anticipated U.S. war with Iraq. P.L. 108-11, the FY2003 Emergency Wartime Supplemental Appropriations Act, authorized \$9 billion in loan guarantees over three years for Israel's economic recovery and \$1 billion in military grants. P.L. 108-11 stated that the proceeds from the loan guarantees could be used only within Israel's pre-June 5, 1967, area of control; that the annual loan guarantees could be reduced by an amount equal to the amount Israel spends on settlements outside of Israel's pre-June 1967 area of control; that Israel would pay all fees and subsidies; and that the President would consider Israel's economic reforms when determining terms and conditions for the loan guarantees.²⁰⁰

On November 26, 2003, the Department of State announced that the \$3 billion in loan guarantees for FY2003 were reduced by \$289.5 million because Israel continued building settlements in the occupied territories and constructing of a security barrier separating key Israeli and Palestinian population centers.²⁰¹ In FY2005, the U.S. government reduced the amount available for Israel to borrow by an additional \$795.8 million. Since then, Israel has not borrowed any funds.

According to the U.S. Department of the Treasury, Israel is legally obligated to use the proceeds of guaranteed loans for refinancing its government debt and also has agreed that proceeds shall not be used for military purposes or to support activities in areas outside its pre-June 5, 1967, areas of control. However, U.S. officials in 2009 noted that because Israel's national budget is

¹⁹⁹ Office of Management and Budget, Credit Supplement, Budget of the U.S. Government, Fiscal Year 2023.

²⁰⁰ According to P.L. 108-11, “[L]oan guarantees may be issued under this section only to support activities in the geographic areas which were subject to the administration of the Government of Israel before June 5, 1967: *Provided further*, That the amount of guarantees that may be issued shall be reduced by an amount equal to the amount extended or estimated to have been extended by the Government of Israel during the period from March 1, 2003, to the date of issue of the guarantee, for activities which the President determines are inconsistent with the objectives and understandings reached between the United States and the Government of Israel regarding the implementation of the loan guarantee program: *Provided further*, That the President shall submit a report to Congress no later than September 30 of each fiscal year during the pendency of the program specifying the amount calculated under the preceding proviso and that will be deducted from the amount of guarantees authorized to be issued in the next fiscal year.”

²⁰¹ U.S. State Department, “Boucher Cites Concerns over Settlement Building and Security Fence Route,” State Department Press Releases And Documents, November 26, 2003.

fungible, proceeds from the issuance of U.S.-guaranteed debt that are used to refinance Israeli government debt free up domestic Israeli funds for other uses.²⁰²

As of 2023, Israel had issued \$4.1 billion in U.S.-backed bonds.²⁰³ After deducting the amounts mentioned above, Israel might still be authorized to issue up to \$3.814 billion in U.S.-backed bonds. However, if the Israeli government sought to issue new U.S.-backed bonds, it is unclear whether the loan guarantees available to Israel might be subject to reduction based on Israel's estimated cumulative subsequent expenditures for settlements in the West Bank. The original loan guarantee program authorization for Israel was through FY2005. Since then, Congress has extended the program five times.²⁰⁴ The program is currently authorized through the end of FY2023.

In general, Israel may view U.S. loan guarantees as an option of last resort, which its treasury could use if unguaranteed local and international bond issuances become too expensive.

According to one Israeli official in 2012, “We consider the loan guarantees as preparation for a rainy day.... This is a safety net for war, natural disaster and economic crisis, which allows Israel to maintain economic stability in unstable surroundings.”²⁰⁵ Israeli officials may believe that although they have not used the loan guarantees in the last 18 years, maintaining the program boosts the country’s fiscal standing among international creditors in capital markets.

American Schools and Hospitals Abroad Program (ASHA)²⁰⁶

Through Foreign Operations appropriations bills, Congress has funded the ASHA program as part of the overall Development Assistance (DA) appropriation to the United States Agency for International Development (USAID). According to USAID, ASHA is designed to strengthen self-sustaining schools, libraries, and medical centers that best demonstrate American ideals and practices abroad. ASHA has been providing support to institutions in the Middle East since 1957, and a number of universities and hospitals in Israel have been recipients of ASHA grants.

Institutions based in Israel combined receive \$2-\$4 million annually in ASHA grants. In FY2021, (the most recent year for which data are available), ASHA grant recipients in Israel/West Bank included American Committee for Shaare Zedek Hospital in Jerusalem, Trustees of the Feinberg Graduate School, and the Nazareth Project, Inc. According to USAID, institutions based in Israel have received the most program funding in the Middle East region.²⁰⁷

U.S.-Israeli Scientific & Business Cooperation

In the early 1970s, Israeli academics and business professionals began looking for ways to expand investment in Israel’s nascent technology sector. The sector, which would later become

²⁰² CRS correspondence with the U.S. Department of the Treasury’s Office of International Affairs, October 2009.

²⁰³ This includes \$1.6 billion in FY2003; \$1.75 billion in FY2004; and \$750 million in FY2005.

²⁰⁴ P.L. 116-6, the FY2019 Consolidated Appropriations Act, extended the program until September 30, 2023, allowing unused amounts to be carried over into FY2024.

²⁰⁵ “U.S. to Grant Three-year Extension of Loan Guarantees to Israel,” *Ha’aretz*, January 24, 2012.

²⁰⁶ According to USAID, recipients of ASHA grants on behalf of overseas institutions must be private U.S. organizations, headquartered in the United States, and tax-exempt. The U.S. organization also must serve as the founder and/or sponsor of the overseas institution. Schools must be for secondary or higher education and hospital centers must conduct medical education and research outside the United States. Grants are made to U.S. sponsors for the exclusive benefit of institutions abroad. See <https://www.usaid.gov/work-usaid/business-funding/grant-programs/american-schools-and-hospitals-abroad>.

²⁰⁷ CRS correspondence with USAID ASHA, October 2018.

the driving force in the country's economy, was in need of private capital for research and development. The United States and Israel launched several programs to stimulate Israeli industrial and scientific research, and Congress has on several occasions authorized and appropriated funds for this purpose to the following organizations:²⁰⁸

- **The BIRD Foundation** (Israel-U.S. Binational Research & Development Foundation).²⁰⁹ BIRD, which was established in 1977, provides matchmaking services between Israeli and American companies in research and development with the goal of expanding cooperation between U.S. and Israeli private high-tech industries. The mission of the Foundation is "to stimulate, promote and support joint (nondefense) industrial R&D of mutual benefit to..." the two countries.²¹⁰ Projects are supported in the areas of homeland security, communications, electronics, electro-optics, software, life sciences, and renewable and alternative energy, among others.²¹¹ According to the Foundation, \$381 million in grants have been awarded to 1,033 projects. Awards typically range from \$700,000 to \$900,000 and vary based on total project budget and other considerations. The recipients must provide at least 50% of the total project budget.
- **The BSF Foundation** (U.S.-Israel Binational Science Foundation).²¹² BSF, which was started in 1972, promotes cooperation in scientific and technological research. Since 2012, BSF has partnered with the National Science Foundation (NSF) to jointly fund collaborative U.S.-Israeli scientific research. In August 2019, Israel's Council of Research announced that it would provide \$56 million over a five-year period to expand the BSF-NSF program.
- **The BARD Foundation** (Binational Agriculture and Research and Development Fund). BARD was created in 1978²¹³ and supports U.S.-Israeli cooperation in agricultural research.²¹⁴ As of 2020, it had disbursed \$315 million in grants

²⁰⁸ With the exception of funding for specific fields of research (for example, see "U.S.-Israeli Energy Cooperation" section), Congress has not appropriated funding directly to the binational foundations for operational expenses since the mid-1980s. The foundations have been able to sustain grant making with interest earned from their respective endowments and fees (repayments) collected from companies who successfully profited after receiving research support from the foundations. Since its founding, BIRD has received \$115 million in fees from 477 companies.

²⁰⁹ See <https://www.birdf.com/>. Congress helped establish BIRD's endowment with appropriations of \$30 million and \$15 million in 1977 (P.L. 95-26) and 1985 (P.L. 98-473), respectively. These grants were matched by the Israeli government for a total endowment of \$90 million.

²¹⁰ Eitan Ydilevich, "Building U.S.-Israel Economic Partnerships, The BIRD Model," Washington, D.C., June 10, 2010, p. 2.

²¹¹ BIRD Foundation, "What is BIRD?" available at <https://www.birdf.com/what-is-bird/>.

²¹² See, <https://www.bsf.org.il/>. In 1972 and 1984, the United States and Israel contributed a total of \$100 million (\$50 million each) for BSF's endowment. The U.S. share (\$50 million) first came in 1972 in the form of a \$30 million accelerated Israeli repayment of earlier food aid debt to the United States. A second tranche followed in 1984 with \$20 million congressional appropriation (P.L. 98-473). According to the treaty establishing the Foundation, the Foundation shall use the interest, as well as any funds derived from its activities, for the operations of the Foundation.

²¹³ Congress originally authorized BARD in Section 1458(e) of the National Agricultural Research, Extension, and Teaching Policy Act of 1977 (7 U.S.C. §3291(e)).

²¹⁴ See <http://www.bard-isus.com/>. Congress helped establish BARD's endowment with appropriations of \$40 million and \$15 million in 1979 (P.L. 95-481) and 1985 (P.L. 98-473), respectively. These grants were matched by the State of Israel for a total endowment of \$110 million. Congress had provided funds for BARD in annual Agriculture Appropriations legislation at approximately \$500,000 to \$1 million a year. For FY2023, Congress appropriated \$2 million for BARD to expand programming for food and nutrition, technology acceleration, and artificial intelligence. See, House Report Language (House Report 117-392 accompanying H.R.8239, the Agriculture, Rural Development,

(typically three-year, \$310,000 grants) for over 1,330 projects.²¹⁵ In the 115th Congress, P.L. 115-334 amended the original 1977 authorization of binational agricultural cooperation by adding that BARD should promote research in “drip irrigation, pesticides, aquaculture, livestock, poultry, disease control, and farm equipment.” In 2018, BARD signed a cooperative agreement with the National Institute of Food and Agriculture. Congress has encouraged cooperation between those two entities.²¹⁶

- In 1995, the United States and Israel established the **U.S.-Israel Science and Technology Foundation (USISTF)** to fund and administer projects mandated by the U.S.-Israel Science and Technology Commission (USISTC),²¹⁷ a bilateral entity jointly established by the United States Department of Commerce and the Israel Ministry of Industry, Trade, and Labor in 1994 to foster scientific, technological, and economic cooperation between the two countries.

Since 2007, Congress has repeatedly authorized and appropriated funds for the creation of new U.S.-Israeli cooperative programs in various fields. Most of these new programs fall under the administrative purview of the BIRD Foundation. They include the following:

U.S.-Israeli Energy Cooperation (BIRD Energy)

BIRD Energy is a cooperative program between the U.S. Department of Energy and the Israeli Ministry of Energy designed to further research in renewable energy and energy efficiency. It is nominally part of the BIRD Foundation. Congress authorized the creation of the program in Section 917 of P.L. 110-140, the Renewable Fuels, Consumer Protection, and Energy Efficiency Act of 2007.²¹⁸ Although the law did not appropriate any funds for joint research and development, it did establish a grant program to support research, development, and commercialization of renewable energy or energy efficiency. The law also authorized the Secretary of Energy to provide funds for the grant program as needed. Congress authorized the program for seven years from the time of enactment, which was on December 19, 2007. Then, in December 2014, President Obama signed into law P.L. 113-296, the United States-Israel Strategic Partnership Act of 2014, which reauthorized the U.S.-Israeli Energy Cooperation program for an additional 10 years until September 30, 2024.

Food and Drug Administration, and Related Agencies Appropriations Bill, 2023).

²¹⁵ Shoshanna Solomon, “20 Agriculture Projects of US-Israel Fund Added \$3 Billion to Economies,” *Times of Israel*, November 16, 2020.

²¹⁶ See, the Explanatory Statement for Agriculture, Rural Development, Food and Drug Administration, and Related Agencies Appropriations Bill, 2021, accompanying the FY2021 Consolidated Appropriations Act.

²¹⁷ See, <http://usistf.org/>. The U.S.-Israel Science and Technology Commission (USISTC) was established in 1993 to facilitate cooperative ventures between high tech industries in the two countries. The goal of the program is to “to maximize the contribution of technology to economic growth.” While the collaborative work may be somewhat similar to that supported by the BIRD Foundation, “the Science and Technology Commission assists in the commercialization of new technologies with longer lead times to market. These projects involve higher risk and require substantial capital commitments.” The ventures are funded and administered by the U.S.-Israel Science and Technology Foundation. The U.S. and Israeli governments each committed \$15 million to the effort over three years for a total of \$30 million.

²¹⁸ Congress first considered authorizing a program to expand U.S.-Israeli scientific cooperation in the field of renewable energy in legislation entitled, The United States-Israel Energy Cooperation Act (H.R. 1838—110th Congress).

Through FY2023, Congress and the Administration have provided a total of **\$27.7 million** for BIRD Energy.²¹⁹ As of 2023, total combined U.S. and Israeli investment in BIRD Energy for 54 signed projects stood at \$45.7 million.

U.S.-Israel Center of Excellence in Energy, Engineering and Water Technology (Energy Center)

In 2018, the U.S. Department of Energy and the Israeli Energy Ministry agreed to establish a new program known as the U.S.-Israel Center of Excellence in Energy, Engineering and Water Technology (“the Energy Center”). To date, Congress has appropriated²²⁰ **\$24 million** for the center, and the Israeli government and private sector partners have matched those funds.²²¹ Potential research areas identified by the Energy Center include energy cybersecurity in critical infrastructure, energy storage, and production and utilization of natural gas. According to the Center, the total expected government funding for the Energy Center is \$40 million for 5 years.²²²

BIRD Homeland Security (BIRD HLS)

The BIRD Foundation also manages the BIRD Homeland Security Program, a cooperative undertaking between the U.S. Department of Homeland Security (DHS) and the Israel Ministry of Public Security (MOPS) to further joint research of advanced technologies for Homeland Security.²²³ Currently, DHS’s Science and Technology Directorate (S&T) is working together with Israeli counterparts to develop technologies for first responders.²²⁴ To date, Congress has provided a total of **\$15 million** in funding for BIRD HLS.²²⁵ Other examples of bilateral homeland security projects include search and rescue systems, wearable indoor positioning systems, and an artificial intelligence-based analytics video security solution used to protect public facilities.

²¹⁹ Congress specifies funds for BIRD Energy in conference report language accompanying energy and water appropriations legislation. For FY2023, see Division D of the Joint Explanatory Statement accompanying the FY2023 Consolidated Appropriations Act.

²²⁰ For FY2023, see Division D of the Explanatory Statement accompanying the FY2023 Consolidated Appropriations Act.

²²¹ The U.S.-Israel Strategic Partnership Act (P.L. 113-296) authorized the President to promote cooperative programs with Israel in the fields of energy, water, agriculture, and alternative fuel technologies. P.L. 114-322, the WIIN Act (Water Infrastructure Improvements for the Nation Act), called on the White House Office of Science and Technology Policy to develop a coordinated strategic plan that, among other things, strengthened “research and development cooperation with international partners, such as the State of Israel, in the area of desalination technology.”

²²² BIRD Foundation, Annual Report, 2020.

²²³ The U.S.-Israel Strategic Partnership Act (P.L. 113-296) authorized the Secretary of Homeland Security, acting through the Director of the Homeland Security Advanced Research Projects Agency and with the concurrence of the Secretary of State, to enter into cooperative research pilot programs with Israel to enhance Israel’s capabilities in border, maritime, and aviation security, explosives detection, and emergency services. In 2016, Congress passed P.L. 114-304, the United States-Israel Advanced Research Partnership Act of 2016, a law that permanently authorized the expansion of BIRD HLS to include cybersecurity technologies.

²²⁴ U.S. Department of Homeland Security, “Snapshot: Israel & U.S.: A Unique Partnership in Science, Technology and Business,” January 23, 2018.

²²⁵ See Division F of the Joint Explanatory Statement accompanying the FY2023 Consolidated Appropriations Act. Report language for Division F, FY2023 Department of Homeland Security Appropriations, states that “Unless otherwise specifically noted in this Joint Explanatory Statement, directives set forth in House Report 117-396 carry the same weight as those included in the JES.” In House Report 117-396, appropriators provided \$2 million for the BIRD Homeland Security Program.

BIRD Cyber

Israel is one of the global leaders in cybersecurity technology. According to one report, nearly 40% of private global investment in cybersecurity now takes place in Israel.²²⁶ Section 1551 of P.L.117-81, the National Defense Authorization Act for Fiscal Year 2022, required the Department of Homeland Security to establish a grant program to support U.S.-Israeli cooperation in cybersecurity research and commercialization of cybersecurity technology. The act authorized not less than \$6 million a year for such activities from FY2022 through FY2026. The BIRD Cyber program is a collaboration between the foundation, DHS, Israel's National Cyber Directorate, and private industry and academia. BIRD Cyber has identified various sectors of concentration, such as, among other things, secure architecture for protecting operational processes; and risk assessment solutions for airports.²²⁷ In FY2023, Congress appropriated **\$6 million** for BIRD Cyber.²²⁸

Other Congressionally Authorized Cooperative Endeavors

The following is a list of other congressionally authorized cooperative endeavors between the United States and Israel, which could lead to the establishment of grant programs managed by both governments.

- **Health/COVID-19 Cooperation** – Section 1280A of P.L.116-283, the 2021 NDAA, authorized \$4 million a year (FY2021-FY2023) for bilateral cooperation between the U.S. Department of Health and Human Services and the Government of Israel to focus on health technologies to address the challenge of the Coronavirus Disease 2019 (COVID-19) pandemic. U.S.-Israeli health cooperation is longstanding. Since 1978, medical and health researchers from the U.S. Army and Israel Defense Forces have held the biennial Shores conference to share information on military operational medicine, infectious disease, and combat care.²²⁹ To date, Congress has appropriated **\$9.08 million** for this cooperative health program.²³⁰
- **U.S.-Israel Cooperation in International Development** - In 1985, Congress first authorized (by amending Section 106 of the FAA) and appropriated foreign assistance funds to “finance cooperative projects among the United States, Israel, and developing countries.”²³¹ Based on this congressional mandate, USAID launched two programs in partnership with Israel: the Cooperative Development Program (CDP - training and technical assistance projects run by Israel in the developing world) and the Cooperative Development Research Program (CDR - scientific research on problems of developing countries).²³² For nearly two

²²⁶ op.cit., Bloomberg, July 12, 2022.

²²⁷ Yonah Jeremy Bob, “US- Israel joint cybersecurity investment announced,” *Jerusalem Post*, July 4, 2022.

²²⁸ See Division F of the FY2023 Consolidated Appropriations Act.

²²⁹ U.S. Army, U.S. and Israeli Collaboration at 20th Shores Meeting Promotes Advancement of CBRN Medical Countermeasure Development, December 8, 2022.

²³⁰ See Division H of the FY2023 Consolidated Appropriations Act.

²³¹ See Section 307 of P.L. 99-83, the International Security and Development Cooperation Act of 1985 and P.L. 98-473, the FY1985 Continuing Appropriations Act. This original legislative concept for U.S.-Israeli cooperation in international development came from the 98th Congress and was based on H.R.5424, “A bill to provide for joint United States-Israeli development assistance projects.”

²³² USAID partnered with Mashav, Israel's Agency for International Development Cooperation in the Ministry of

decades, Israel used cash aid grants (either from the ESF or DA accounts) to train their development personnel in Israel and in foreign nations. USAID phased out the CDP program after FY2003.²³³ Section 1278 of P.L.116-283, the 2021 NDAA, further amended Section 106 of the FAA of 1961 (22 U.S.C. §2151d) to authorize \$2 million a year (FY2021-FY2023) to finance cooperative projects among “the United States, Israel, and developing countries that identify and support local solutions to address sustainability challenges relating to water resources, agriculture, and energy storage.” To date, Congress has appropriated **\$4 million** for this program.²³⁴

Foreign Affairs.

²³³ See Subcommittee on Foreign Operations, Export Financing, Related Programs, House Committee on Appropriations, Hearings on Foreign Operations, Export Financing, and Related Program, FY2004.

²³⁴ Report language for Division K of the FY2023 Consolidated Appropriations Act states that “In implementing this agreement, Federal departments, agencies, commissions, and other entities are directed to comply with the directives, reporting requirements, and instructions contained in the H. Rept. 117-401 (House report) accompanying H.R. 8282 (House bill) as though stated in this explanatory statement, unless specifically directed to the contrary.” In House Report 117-401, appropriators provided \$2 million for the U.S. Agency for International Development-Israel international development cooperation program to respond to challenges relating to water scarcity, agriculture, and energy storage.

Appendix A. Bilateral Aid to Israel

Table A-1 shows cumulative U.S. aid to Israel for FY1946 through FY2020 in current dollars.

Table A-1. U.S. Bilateral Aid to Israel

current U.S. dollars in millions (current non-inflation-adjusted)

Fiscal Year	Economic	Military	Total
1946-2016	34,267.2	91,628.1	125,895.3
2017	50.1	3,178.0	3,228.1
2018	10.8	3,100.1	3,110.9
2019	8.5	3,300.0	3,308.5
2020	10.9	3,300.0	3,310.9
Total	34,347.5	104,506.2	138,853.7

Source: U.S. Agency for International Development (USAID), *U.S. Overseas Loans and Grants: Obligations and Loan Authorizations, July 1, 1945–September 30, 2020*.

Appendix B. Israel and FY2023 Legislation

The following tables (**Table 1** and **Table 2**) delineate all U.S. foreign aid authorized and appropriated by Congress for Israel for fiscal year (FY) 2023. They include U.S. foreign military aid and funding for joint missile defense pledged to Israel as part of the ongoing 10-year, \$38 billion Memorandum of Understanding (MOU) on military aid, covering FY2019 to FY2028. Under the terms of the MOU, successive administrations have requested from Congress **\$3.3 billion** in Foreign Military Financing (FMF) per year for Israel and **\$500 million** in joint missile defense programs (**\$3.8 billion total**). MOU-related authorizations (missile defense only²³⁵) and appropriations totaling \$3.8 billion are in *italics* within each cell. Items relating to U.S. funding for joint defense and nondefense cooperative programs, but that fall outside the MOU, are not in *italics*.

Overall, Congress specifically authorized \$520 million for joint U.S.-Israel defense programs in the FY2023 NDAA. Per the terms of the MOU, Congress appropriated \$3.8 billion for Israel in the FY2023 Consolidated Appropriations Act, and added \$98.58 million in funding for other cooperative defense and nondefense programs.

Table B-1. Authorized Aid for Israel in P.L. 117-263, the James M. Inhofe National Defense Authorization Act (NDAA) for Fiscal Year 2023

Section Title	Description	Authorization Amount
Section 1277 - Modification and extension of United States-Israel cooperation to counter unmanned aerial systems	Modifies the authorization for the U.S.-Israeli Counter Unmanned Aerial Systems (C-UAS) program to include “directed energy capabilities.” Raises the cap on annual U.S. contributions to the program from \$25 to \$40 million. Extends the program’s authorization through calendar year 2026.	n/a
Section 1659 - Iron Dome short-range rocket defense system and Israeli cooperative missile defense program co-development and co-production	Authorizes “not more than” \$80 million for Israel to procure components for the Iron Dome Short-Range Rocket Defense System through co-production in the United States. Prior to the initial obligation of funds, the Under Secretary of Defense for Acquisition and Sustainment must make various certifications that, among other things, the United States and Israel are adhering to bilateral agreements on Iron Dome.	\$80 million
	Authorizes “not more than” \$40 million for Israel to procure components for the David’s Sling Weapon System through co-production in the United States. The Under Secretary of Defense for Acquisition and Sustainment must certify that Israel has demonstrated successful completion of various knowledge points in its co-production agreement with the United States.	\$40 million
	Authorizes “not more than” \$80 million for Israel to procure components for the Arrow 3 Upper Tier Interceptor Program through co-production in the United States. The Under Secretary of Defense for Acquisition and Sustainment must certify that, among other things, Israel has demonstrated successful completion of various knowledge points in its co-production agreement with the United States.	\$80 million

²³⁵ Congress authorized FY2023 FMF for Israel in P.L. 116-283, the William M. (Mac) Thornberry National Defense Authorization Act for Fiscal Year 2021.

Section Title	Description	Authorization Amount
Section 4201 - Research, Development, Test, and Evaluation	Authorizes funds from the Combating Terrorism Technology Support account for U.S.-Israeli C-UAS cooperation, specifically for Joint Laser development (\$15 million). The authorization also includes cooperation on developing Vertical Take-off and Landing (VTOL) loitering munitions (\$5 million).	\$20 million
	<i>Authorizes \$300 of the remaining \$500 million in MOU-pledged joint missile defense programs for U.S.-Israeli cooperation.</i>	<i>\$300 million</i>
Section 5599D - Sense Of Congress Regarding Israel	Among other things, states that "It is essential to the strategic interest of the United States to continue to offer security assistance and related support to Israel; and such assistance and support is especially vital as Israel confronts a number of potential challenges at the present time, including continuing threats from Iran."	n/a

Source: Congress.gov.

Note: *Italics* indicates amounts in line with the US-Israel MOU on assistance.

Table B-2. Appropriated Aid to Israel in P.L. 117-328, the Consolidated Appropriations Act, 2023

Bill Text, House Report Language, or Joint Explanatory Statement (JES)	Section Title	Description	Appropriations Amount
Bill Text	Division C - Department of Defense Appropriations Act, 2023, Section 8073	Provides \$500 million for U.S.-Israeli cooperative missile defense programs, including: \$80 million for the Iron Dome, \$167 million for David's Sling, \$80 million for Arrow III, and \$173 million for the Arrow System Improvement Program.	\$500 million
Bill Text	Division K - Department of State, Foreign Operations, and Related Programs Appropriations Act, 2023, Migration and Refugee Assistance	Provides \$5 million in grants from the State Department's Migration and Refugee Assistance account (MRA) to assist in the resettlement of migrants to Israel.	\$5 million
Bill Text	Division K - Department of State, Foreign Operations, and Related Programs Appropriations Act, 2023, Special Provisions, Section 7034 (k)(6)	Extends the authorization of loan guarantees to Israel through FY2028.	n/a
Bill Text	Division K - Department of State, Foreign Operations, and Related Programs Appropriations Act, 2023,	Provides "not less than" \$3.3 billion in FMF grants for Israel. These funds must be disbursed within 30 days after the bill's enactment.	\$3.3 billion

Bill Text, House Report Language, or Joint Explanatory Statement (JES)	Section Title	Description	Appropriations Amount
	Middle East and North Africa, Section 7041(d)	Of the \$3.3 billion, \$775.3 million is for use in Israel, also known as off-shore procurement (OSP).	
JES	Division C - Department of Defense Appropriations Act, 2023, Research, Development, Test and Evaluation, Defense-Wide	Provides \$72.5 million for multiple U.S.-Israeli cooperative defense programs, including anti-tunneling (\$47.5 million) and C-UAS (\$25 million).	\$72.5 million
House Report Language (House Report 117-392 accompanying H.R.8239, the Agriculture, Rural Development, Food and Drug Administration, and Related Agencies Appropriations Bill, 2023)	Committee Provisions	Report language for Division A, FY2023 Agricultural Appropriations, states that "Unless otherwise noted, the language set forth in House Report 117-392 carries the same weight as language included in this joint explanatory statement and should be complied with unless specifically addressed to the contrary in this joint explanatory statement."	\$2 million
		In House Report 117-392, appropriators provided a \$1 million increase to the U.S.-Israeli Binational Agricultural Research and Development (BARD) Foundation to support BARD's "historical grant-making functions and expand programming for food and nutrition, technology acceleration, and artificial intelligence." This increase raised the annual U.S. contribution to BARD to \$2 million.	
JES	Division D - Energy and Water Development and Related Agencies Appropriations Act, 2023	Provides \$2 million for the Israel Binational Industrial Research and Development (BIRD) Foundation and \$4 million to continue the U.S. Israel Center of Excellence in Energy Engineering and Water Technology.	\$6 million

Bill Text, House Report Language, or Joint Explanatory Statement (JES)	Section Title	Description	Appropriations Amount
JES	Division F - Department of Homeland Security Appropriations Act, 2023	Provides \$6 million for U.S.-Israel Cybersecurity Cooperation grant program.	\$6 million
JES	Division H - Departments of Labor, Health and Human Services, and Education, and Related Agencies Appropriations Act, 2023	Provides \$3.08 million for a bilateral cooperative program with Israel for the development of health technologies (to fight COVID-19).	\$3.08 million
House Report Language (House Report 117-401 accompanying H.R.8282, the Department of State, Foreign Operations, and Related Programs Appropriations Bill, 2023)	Middle East and North Africa	Report language for Division K, FY2023 Department of State, Foreign Operations, and Related Programs Appropriations, states that "In implementing this agreement, Federal departments, agencies, commissions, and other entities are directed to comply with the directives, reporting requirements, and instructions contained in the H. Rept. 117-401 (House report) accompanying H.R. 8282 (House bill) as though stated in this explanatory statement, unless specifically directed to the contrary."	\$2 million
House Report Language (House Report 117-396, accompanying H.R.8257, the Department of Homeland Security Appropriations Bill, 2023)	Research, Development, and Innovation	In House Report 117-401, appropriators provided \$2 million for the U.S. Agency for International Development-Israel international development cooperation program to respond to challenges relating to water scarcity, agriculture, and energy storage.	\$2 million
		Report language for Division F, FY2023 Department of Homeland Security Appropriations, states that "Unless otherwise specifically noted in this JES [Joint Explanatory Statement],	

Bill Text, House Report Language, or Joint Explanatory Statement (JES)	Section Title	Description	Appropriations Amount
		directives set forth in House Report 117-396 carry the same weight as those included in the JES.” In House Report 117-396, appropriators provided \$2 million for the BIRD Homeland Security (BIRD HLS) Program.	

Sources: Congress.gov, Senate Appropriations Committee.

Note: *Italics* indicates amounts in line with the US-Israel MOU on assistance.

Appendix C. Common Acronyms and Abbreviations used in this Report

AECA	Arms Export Control Act
DOD	Department of Defense
DSCA	Defense Security Cooperation Agency
ESF	Economic Support Fund
FAA	Foreign Assistance Act
FMF	Foreign Military Financing
FMS	Foreign Military Sale
HFAC	House Foreign Affairs Committee
IDF	Israel Defense Forces
LOA	Letter of Offer and Acceptance
MOU	Memorandum of Understanding
MRA	Migration and Refugee Assistance
NDAA	National Defense Authorization Act
OSP	Off-Shore Procurement
QME	Qualitative Military Edge
SFOPS	Department of State, Foreign Operations, and Related Programs
SFRC	Senate Foreign Relations Committee
UAE	United Arab Emirates
USAID	U.S. Agency for International Development
WRSA	War Reserves Stock Allies

Author Information

Jeremy M. Sharp
Specialist in Middle Eastern Affairs

Disclaimer

This document was prepared by the Congressional Research Service (CRS). CRS serves as nonpartisan shared staff to congressional committees and Members of Congress. It operates solely at the behest of and under the direction of Congress. Information in a CRS Report should not be relied upon for purposes other than public understanding of information that has been provided by CRS to Members of Congress in connection with CRS's institutional role. CRS Reports, as a work of the United States Government, are not subject to copyright protection in the United States. Any CRS Report may be reproduced and distributed in its entirety without permission from CRS. However, as a CRS Report may include copyrighted images or material from a third party, you may need to obtain the permission of the copyright holder if you wish to copy or otherwise use copyrighted material.