Though Israeli officials have never confirmed or denied the existence of the country’s nuclear weapons and have stated that Israel will not be the first country to introduce nuclear weapons in the Middle East, experts estimate that it possesses 80-90 nuclear warheads and enough fissile material for 200 total warheads. Israel has deliberately maintained a highly ambiguous nuclear posture and nuclear doctrine and has been secretive about its capabilities, but it is believed to have developed a nuclear triad for delivering its nuclear weapons. Some reports have claimed that Israel maintains offensive biological and chemical weapons activities. Israel is not a party to the NPT and never signed or ratified the Biological Weapons Convention and signed but never ratified the Chemical Weapons Convention. Israeli officials have been vocal critics of the nuclear deal with Iran, known as the Joint Comprehensive Plan of Action (JCPOA), and have made public threats to attack Iranian nuclear facilities. Israel has taken military action in the past against what it considered were proliferation threats in Iraq and Syria.

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Export Control Regimes, Nonproliferation Initiatives, and Safeguards

Group | Status
--- | ---
**Australia Group** | Not a member
**Missile Technology Control Regime** | Not a member but Israel has committed to maintaining export controls consistent with the regime
**Nuclear Suppliers Group** | Not a member
**Wassenaar Arrangement** | Not a member, but Israel has a domestic law that adopts all Wassenaar controls.
**International Atomic Energy Agency (IAEA) Additional Protocol** | Israel has not negotiated such an agreement.
**Global Initiative to Combat Nuclear Terrorism** | Participant
**Hague Code of Conduct against Ballistic Missile Proliferation** | Not a participant
**Proliferation Security Initiative** | Participant
**UN Security Council Resolutions 1540 and 1673** | Israel has filed the requested reports on its activities to fulfill the resolutions and volunteered to provide assistance to other states.

Nuclear Weapons Programs, Policies, and Practices

The Nuclear Arsenal, an Overview

Israel has never officially acknowledged that it possesses nuclear weapons and is not party to the nuclear Nonproliferation Treaty. In 2011, Prime Minister Benjamin Netanyahu reiterated the official Israeli stance that Israel will not “be the first to introduce nuclear weapons into the Middle East.” Experts estimate that Israel has a nuclear arsenal of about 80-90 warheads, as of June 2019, with enough additional material for up to 200 nuclear weapons. Israel is believed to have developed a nuclear triad for delivering its nuclear warheads.
Delivery Systems

Ballistic Missiles

- Israel is believed to field an arsenal of nuclear-capable Jericho-II and Jericho-III missiles. The Jericho series is based on French technology and are likely road-and rail-mobile.
- Israel is estimated to have anywhere from 25-100 Jericho missiles but most sources estimate that it possesses about 50.
- The short-range Jericho-I was first deployed in the early 1970s and has a range of 500 km but was retired from service in the 1990s.
- The 1,500 km medium-range Jericho-II followed in the 1980s.
- The Jericho-III is believed to have entered service in 2011. It was first tested in 2008 and again in 2011. Its range is estimated to be in between 4,800-6,500 km, which would classify it as an intercontinental ballistic missile (ICBM).

Submarines and Submarine-Launched Cruise Missile (SLCM)

- There is uncertainty about Israel’s ability to launch nuclear weapons from sea-based platforms. Nonetheless, it is widely assumed that Israel possesses the capability.
- Israel’s sea-based nuclear forces are based on five Dolphin-class submarines constructed by and acquired from Germany for the Israeli Navy beginning in 2000. A sixth submarine has been purchased and is expected to be delivered in 2018.
- Israel is believed to have retrofitted the Dolphin-class vessels with an indigenously developed, dual-capable, submarine-launched cruise missile (SLCM) system with an estimated range of 1,500 km, although the Israeli government has denied its existence.
  - The British paper the Sunday Times reported the test of a nuclear version of this missile off the coast of Sri Lanka in June 2000.
  - In June 2002, former State Department and Pentagon officials confirmed that the U.S. Navy observed Israeli missile tests in the Indian Ocean in 2000 and that the Dolphin-class has been fitted with nuclear-capable cruise missiles of a new design.
- There have been rumors that Israel’s SLCM in question is a modified version of the U.S.-supplied Harpoon anti-ship cruise missile or the Israeli Popeye Turbo air-launched missile.

Strategic Bombers

- Very little is known about Israel’s air-based nuclear forces. It is estimated that Israel maintains 30 nuclear gravity bombs to be delivered by aircraft.
- The Israeli military possesses 205 F-16 Falcons and 25 F-15 Eagle aircrafts, some of which are believed to be equipped for nuclear weapon delivery.

Fissile Material

- Very little is known about Israel’s fissile materials production or stockpiles. The Israel Atomic Energy Commission (IAEC) is responsible for overseeing the country’s nuclear activities.

Plutonium

- According to the 2015 Global Fissile Material Report, Israel may still produce plutonium for weapons via its 50-year-old Dimona (Negev Nuclear Research Center) plutonium production reactor constructed by France. The Dimona facility may also be used solely for producing tritium and the associated lithium-6 at this point.
- As of January 2017, Israel is estimated to possess 860 kg of weapons-grade plutonium.
**Highly Enriched Uranium (HEU)**

- As of 2017, Israel's stockpile of HEU is estimated at approximately 300 kg; this stockpile may have been transferred from the United States in the 1960s, although that is not publically acknowledged by either government.

**Proliferation Record**

- Although a major exporter of conventional arms and military equipment, Israel is not known to have deliberately or significantly contributed to the spread of biological, chemical, or nuclear weapons to other states, although the extent of Israel’s involvement in South Africa’s previously secret, now abandoned, nuclear weapons program is uncertain.
- Under U.S. President Dwight Eisenhower’s “Atoms for Peace” program, Israel received nuclear training and technology potentially utilized in its nuclear weapons program.
- In 1994, the United States placed sanctions on Nahum Manbar, an Israeli businessman accused of supplying Iran with chemicals for its chemical weapons program.
- The Israel Institute for Biological Research (IIBR) has regularly published defensive chemical weapon research openly, along with other Israeli institutions such as the Hebrew University of Jerusalem, Tel Aviv University, and the Weizmann Institute of Science.
- In June 1981, the Israeli Air Force bombed and destroyed an Iraqi nuclear reactor that it perceived as a threat. Similarly, in September 2007, the Israeli Air Force conducted an airstrike on a Syrian reactor after it failed to declare and provide design information to the International Atomic Energy Agency (IAEA). The Israeli Defense Forces confirmed the attack in March 2018.
- Israel has also made public threats to attack nuclear facilities in Iran to prevent the Iranians from acquiring nuclear weapons.
- Israel is not party to the Nuclear Nonproliferation Treaty (NPT).

**Nuclear Doctrine**

Israel has long maintained a policy of ambiguity about its nuclear arsenal. Israeli officials never confirmed or denied the existence of nuclear weapons. Therefore, Israel has not made any statements about its willingness to use nuclear weapons. Israel maintains, however, that it will not be the first country to introduce nuclear weapons to the Middle East. Israel generally abstains from voting on an annual UN General Assembly resolution that would establish international arrangements to assure non-nuclear-weapon states that the use or threat of use of nuclear weapons would not be used against them, including recently in resolution 72/75 in 2017.

**Testing:**

Israel has never conducted an official nuclear weapons test. Israel may have jointly conducted a nuclear test with South Africa in 1979, but some experts argue that the observed phenomenon was not caused by a nuclear explosion. Israel has signed but not yet ratified the Comprehensive Test Ban Treaty (CTBT) and Israeli officials have made several statements indicating the country’s support for the treaty and ongoing efforts to ratify.

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**Biological Weapons**

- The Israeli government operates an extensive and sophisticated biodefense program.
- It has not made public pronouncements on its biological weapons policy nor signed the Biological Weapons Convention (BWC), which is widely interpreted as an indication that Israel has some offensive capabilities.
- Israel has taken steps to strengthen its export control regulations on dual-use.
biotechnologies.

Chemical Weapons

- Israel has signed, but not ratified, the Chemical Weapons Convention (CWC).
- Although the status of its formerly extensive offensive weapons program and stockpile is unknown, Israel is active in defensive research and believed to maintain advanced scientific-technical chemical weapons research and development infrastructure.
- Russian intelligence claimed in 1993 that “Israel has a store of chemical weapons of its own manufacture...[and] is capable of producing toxic substances of all types, including nerve-paralyzing, blister-producing and temporarily incapacitating substances and so forth.”
- In 1999, publications by the IIBR, funded by the Israel Ministry of Defense (MOD), revealed an "extensive effort to identify practical methods of synthesis for nerve gases (such as tabun, sarin, and VX) and other organophosphorous and fluorine compounds" according to the Nuclear Threat Initiative.
- According to a 2008 report by the Center for Strategic & International Studies, Israel may have stockpiles of weaponized nerve gas, but there is no firm evidence supporting this claim.
- Israel has strengthened its export control regulations on dual-use chemicals since 2004, aligning them with Australia group standards.

Other Arms Control and Nonproliferation Activities

Conference on Disarmament (CD)
Israel participates in the CD. Prior to the nuclear deal with Iran, Israel opposed negotiations on a fissile material cut-off treaty (FMCT), out of concern that it would not be an adequate safeguard against Iran’s development of nuclear weapons. At the 2012 CD, Israel did not mention the FMCT, but urged the members to focus on other issues, rather than the “four core issues” (nuclear disarmament, a fissile material cut-off treaty, prevention of an arms race in outer space, and negative security assurances) that continue to be in a stalemate.

Middle East Weapons of Mass Destruction Free Zone (WMDFZ)
Establishment of a WMDFZ in the Middle East was an integral part of the decision to indefinitely extend the NPT in 1995. At the 2010 NPT Review Conference, state parties agreed to hold a conference toward establishing such a zone by 2012. This meeting was postponed, however, over lack of agreement on the agenda. Following the failed effort in 2012, Israel participated in a series of consultations with Finnish coordinator Jaakko Laajava and the Arab Group. This effort halted after the 2015 NPT Review Conference failed to produce a final document to extend Laajava’s mandate. Israel’s ambiguity surrounding its nuclear capabilities and its refusal to sign the NPT has been cited as an obstacle to achieving these ends.

In 2015, Israel stated at the IAEA General Conference that the “decades-long quest for a WMD free Middle East requires a realistic evaluation... Israel, however, remains committed to its long-held vision of a more secure and peaceful Middle East.” Adding that “direct engagement, based on confidence building and trust, is essential to make progress towards the fulfillment of this vision.”

The WMDFZ in the Middle East related to discussions on a nuclear weapon free zone in the Middle East. In 1974, the United Nations General Assembly (UNGA) approved a resolution endorsing the goal of establishing a nuclear weapons free zone (NWFZ) in the Middle East following a proposal by Iran. In 1980, Israel joined the international consensus allowing the UNGA to pass a resolution supporting the goal of NWFZ without a vote although Israel maintained reservations.

Nuclear Security Summits
Israel participated in all four Nuclear Security Summits.
Joint Comprehensive Plan of Action (JCPOA)
As a key regional power and long-time adversary of Iran, Israel took an avid interest in the negotiation of the July 2015 JCPOA, which limits and rolls back Iran’s nuclear program. The deal was fiercely opposed by the Israeli government which viewed it as a “historic surrender” and a threat to its national security. After the brokering of the agreement, Netanyahu said that “Israel is not bound by this deal with Iran because Iran continues to seek our destruction. We will always defend ourselves.”

Responding to President’s Trump May 8, 2018 decision to withdraw from the JCPOA, Netanyahu said that “Israel fully supports President Trump’s bold decision today to reject the disastrous nuclear deal with the terrorist regime in Tehran.”

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