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Preventing proliferation of nuclear weapons in the Middle East

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Introduction

International concern for the proliferation of nuclear weapons has continued to mount. As regional violence mounts and the region appears increasingly volatile, particular attention is being paid to the potential for the proliferation of nuclear weapons in the Middle East. International efforts largely focus on the creation of a Middle Eastern Nuclear Weapons Free Zone (NWFZ), although heightened media attention is often paid to Iran, Israel, and Iraq. Although Israel is the only Middle Eastern country presumed to have an operational nuclear arsenal, Syria and Iran are both considered immediate proliferation concerns, according to independent observers like the Arms Control Association.

Background

Nuclear proliferation in the Middle East has been fairly contained, largely due to large-scale regional conflict and international efforts to prevent proliferation making the acquisition and research required to develop operational nuclear arsenals extremely difficult. States such as China and Russia are notorious for aiding developing nuclear programs in the Middle East, although the Pakistani A.Q. Kahn network is also highly responsible for the expansion of Iran's nuclear program.

Israel: Israel is believed to have roughly 80 to 200 nuclear weapons, having first developed the capability in 1967-68. Its

nuclear arsenal is believed to be delivered by tactical aircraft—especially American supplied F-15 fighters—or by Jericho ballistic missiles. Israel developed its nuclear capability using a French-supplier reactor at Dimona, in its southern desert. The Dimona complex appears to be mothballed and it not currently making more nuclear weapons.

Israel is not a signatory of the 1968 Nuclear Nonproliferation Treaty (NPT) and does not permit inspections by the Vienna-based International Atomic Energy Agency (IAEA). Israel showed interest in developing a nuclear program soon after its creation in 1948. It began secretly constructing its first nuclear reactor and reprocessing plant with the help of the French and British in Dimona in the 1950s. Israel is believed to have officially developed its first nuclear weapon in the 1960s. There have been no confirmed tests of Israeli nuclear weapons; however, on 22 September 1979, Israel may have participated in a nuclear test in the southern Indian Ocean, known as the Vela Incident, named for the American satellite that detected an anonymous flash.

Figure 1. Dimona, the site of Israel's nuclear reactor and reprocessing plant

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Iran: Unlike Israel, Iran does not currently have nuclear weapons. In the 1990s and early-2000s, though, it developed the infrastructure required to create fissile materials, the bomb fuel needed to construct nuclear weapons. Currently Iran is engaged in negotiations (the P-6 process) to voluntarily halt its nuclear weapons program in exchange for security guarantees and access to civilian nuclear energy technology. A major issue regarding Iran is its nuclear break-out capability, its ability to build nuclear weapons within years or months of a decision.

The possibility of Iranian nuclear weaponization has led Israeli leaders and Americans to consider preemptive war to slow down this capability. A major debate is how long an attack would slow Iran, and whether it would lead Iranian leaders to increase their commitment to eventually go nuclear. Others say Iran can retaliate against an attack by various non-nuclear means, such as stopping the flow of oil through the Strait of Hormuz or launching massive terrorist and missile attacks.

Iran's nuclear program began during the Cold War campaign known as Atoms for Peace. Under the program, the United States provided Iran with facilities for basic nuclear research in return for Iran signing the NPT in 1968. Ayatollah Ruhollah Khomeini placed little emphasis on Iran's nuclear ambitions; however, following his

death, President Ali Akbar Hashemi Rafsanjani and Supreme Leader Ali Hosseini Khamenei sought to revitalize and expand both Iran's overt civilian nuclear program and its covert nuclear development in the 1990s. During this time, Iran again turned to Russia and China for nuclear assistance. The first nuclear centrifuges arrived in Iran in 1988 as part of the A.Q. Kahn network. Following support from the A.Q. Kahn network, by the year 2000, Iran was able to begin constructing pilot- and industrial-scale enrichment facilities at Natanz. In 2002, the National Council of Resistance of Iran officially declared the Natanz project. Since then, international pressure on the country has been steady.

More recently, in 2003, the IAEA reported the Iran had likely begun research into the weaponization of nuclear weapons, although estimates vary widely as to when Iran will be capable of developing one. In June 2010, the Stuxnet computer worm targeted Iranian uranium enrichment facilities at Natanz. Allegedly an Israeli cyber-attack on Iran, Stuxnet caused centrifuges at the Natanz plant to spin rapidly and out of control, effectively destroying them. Experts believe the United States and Israel colluded to infect nuclear facilities in Iran in one of the costliest malware development projects on record.

Inspections by the Vienna-based IAEA (International Atomic Energy Agency) continue. Iran permits inspections of most of its nuclear facilities, but not all. The country is currently believed to possess six missiles that are potentially capable of delivering a nuclear weapon, although the country has not yet developed a nuclear bomb. Iran maintains that it is pursuing nuclear research for purely peaceful means. Iran has developed the technology to enrich uranium, has designed warheads, and has developed delivery systems. The world

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looked favorably towards the election of President Hasan Rouhani, who has called for the resumption of serious negotiations with the P5+1 on Iran's nuclear programs. Although the talks seem to be stagnating and are often extended, there is significant international optimism that Iran's acquisition of nuclear weapons can be prevented.

Figure 2. Former Iranian President Mahmoud Ahmadinejad touring the nuclear Iranian centrifuge facility, Natanz, 2007

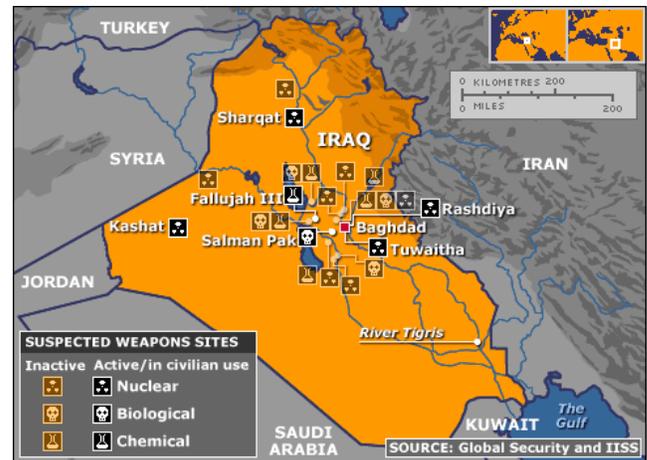


Iraq: The Iraqi nuclear program began in 1959 with the building of a nuclear power plant. In the 1970s, Iraqi President Saddam Hussein began a covert nuclear weapons program, although the country was never successful in building a nuclear bomb. The state's main focus was developing its chemical and biological arsenal. In 1981, Israel bombed the Osiraq reactor, believed to have been capable of creating weapons-

grade material. This delivered a severe setback to Iraqi nuclear ambitions. U.N. Security Council Resolution 686 and 687 forbade Iraq from developing, producing, or using chemical, biological, and nuclear weapons. In January of 2003, U.N. weapons inspectors concluded that there was no evidence that Iraq had an active nuclear program or that it possessed nuclear weapons. Allegations of WMD—biological weapons-- led to the American-led invasion of Iraq in 2003. After the invasion, no evidence was found of an active Iraqi nuclear or biological weapons program.

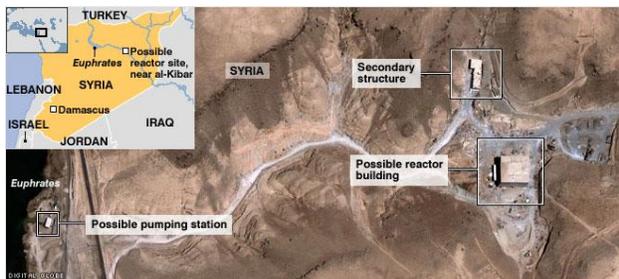
Libya: Long suspected of working on nuclear weapons, in 2003 Libya gave up its program to produce nuclear weapons material by reprocessing fissile U238. The change was a reaction to long-standing American diplomatic efforts, and decision by then-dictator Moumar Qaddafi, and the discovery of a shipment of nuclear enrichment centrifuges from Pakistan in 2003. All nuclear related infrastructure was removed in subsequent months. There is no evidence Libya showed new interest in nuclear weapons options since

Figure 3. Suspected WMD Sites in Iraq, subsequently found inactive



Syria: Syria has ratified the NPT, although it does maintain a civil nuclear program. On September 6, 2007, Israeli forces launched a unilateral attack, known as Operation Orchard, on an alleged nuclear reactor construction site within Syria's Deir ez-Zor region. In 2008, Syria allowed IAEA inspectors to visit the destroyed site to take samples, the results of which confirmed the presence of man-made uranium consistent with the present of a nuclear reactor. In 2011, the IAEA released a report claiming that the destroyed site was a nuclear reactor, and reported the incident to the UN Security Council as non-compliance with the NPT.

Figure 4. Syrian reactor destroyed in 2007 by Israel



Other Middle Eastern States:

Following the collapse of the Soviet Union, Kazakhstan did inherit a small nuclear arsenal; however, following the inception of the NPT, it returned its stockpile to Russia and joined the treaty as a non-nuclear weapons state. Some have pointed to Kazakhstan as a model for denuclearization. Although Libya has signed the NPT and is subject to IAEA inspections, it began a secret nuclear weapons development program using material provided by the A.Q. Kahn network. In December 2003, following secret negotiations with the United States and the

United Kingdom, Libya announced it would eliminate all of its WMD development programs and allowed IAEA inspectors in to the country for verification. All materials related to the development of nuclear weapons and other WMDs were destroyed or removed by the United States. Although Libya's noncompliance with the NPT was reported to the Security Council, no action resulted.

Current Situation

Virtually all countries in the Middle East are signatories of the 1968 Nuclear Nonproliferation Treaty (NPT), the main international barrier to nuclear proliferation. The major exception is Israel. Iran is a signatory, but is suspected of developing nuclear weapons capabilities. There is a fear that should Iran test nuclear weapons, other countries in the region will develop comparable capabilities. Likely candidates for follow-on proliferation include: Algeria, Egypt, Saudi Arabia and Turkey.

Table 1. Status of the NPT in Middle Eastern States

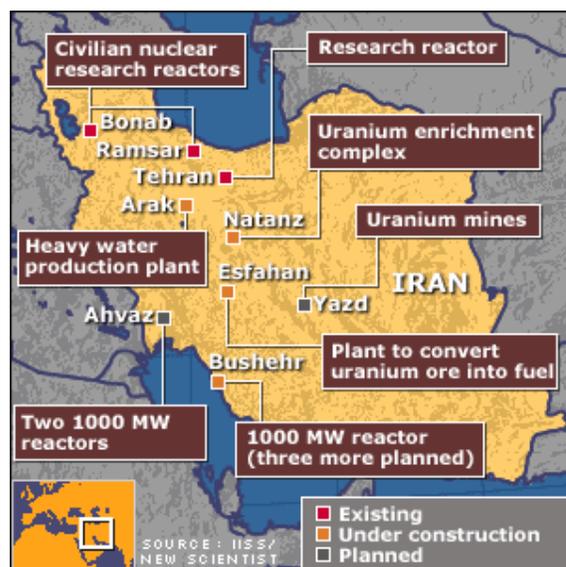
Country Name	Member of NPT	Date Signed	Method ^a
Afghanistan	Yes	July 1, 1968	Ratified
Bahrain	Yes	November 3, 1988	Acceded
Cyprus	Yes	July 1, 1968	Ratified

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Egypt	Yes	July 1, 1968	Ratified
Iran	Yes	July 1, 1968	Ratified
Iraq	Yes	July 1, 1968	Ratified
Israel	No	---	---
Jordan	Yes	February 11, 1970	
Kazakhstan	Yes	Spring 1994	Acceded
Kuwait	Yes	August 1968	Ratified
Kyrgyzstan	Yes	July 5, 1994	Acceded
Lebanon	Yes	July 1, 1968	Ratified
Libya	Yes	July 1968	Ratified
Oman	Yes	January 23, 1997	Acceded
Palestine	No	---	---
Qatar	Yes	Spring 1989	Acceded
Saudi Arabia	Yes	October 3, 1988	Acceded
Syria	Yes	July 1, 1968	Ratified
Tajikistan	Yes	January 17, 1995	Acceded
Turkey	Yes	January 28, 1969	Ratified
Turkmenistan	Yes	September 29, 1994	Acceded
United Arab Emirates	Yes	September 26, 1995	Acceded
Uzbekistan	Yes	May 7, 1992	Acceded
Yemen	Yes	September 23, 1968	Ratified

^a Ratification and ascension have the same legal effect as ratification. Usually occurs after the treaty has entered into effect.

Figure 5. Nuclear R&D Sites in Iran



IV. Role of the United Nations

Nuclear Weapons Free Zones: The United Nations has defined “Nuclear Weapons Free Zones” as a multilateral agreement which bans the use of, development of, and deployment of nuclear weapons in a given area which includes oversight mechanisms. There are currently nine nuclear-free zones: the Antarctic, outer space, Latin America/the Caribbean, the seabed, the South Pacific, the ASEAN nations, Mongolia, Central Asia, and Africa.

- *Resolution A/RES/67/28:* Established a nuclear-weapon-free zone in the Middle East in 2012.
- *Resolution A/67/412:* In December of 2012, the Disarmament and International Security First Committee of the UN General Assembly noted the risk for nuclear proliferation in the Middle East and calls on Israel to join the NPT.

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- *Security Council Resolution 1540*: Unanimously adopted in April 2004, this resolution recognizes the threat of non-state proliferation and calls upon U.N. Member States to develop and enforce all appropriate measures against the proliferation of all WMD, including nuclear weapons. It also requires that all states use domestic legislation to criminalize non-state actor involvement in WMD proliferation. Finally, it formed the ad-hoc 1540 committee charged with implementing the resolution. The initial mandate was extended for two years first by SC Resolution 1673 and then SC Resolution 1810, and finally for ten years by Resolution 1977.
- *Security Council Resolution 1887*: Unanimously adopted in September 2009, this resolution calls upon all member countries to adhere to the NPT, to cooperate with the IAEA, and to establish domestic measures to reduce nuclear weapons stockpiles.

VI. Relevant International Treaties and Policies

Nuclear Non-proliferation Treaty: This treaty was opened for signature on 1 July 1968 and entered in to force in March 1970. It recognizes five “nuclear-weapons states”: The United States, The Russian Federation, United Kingdom, France, and China. The NPT is the most widely ratified arms limitation agreement in history. However, there are five countries who are non-party to the treaty who are either believed to possess nuclear weapons or have publically professed their possession of such technology: Israel, DPRK, India, and Pakistan. There are ten tenants of the NPT.

However, there are five articles most pertinent to today’s issues with DPRK:

- Article I: Nuclear Weapons States agree not to disperse nuclear weapons to non-Nuclear Weapons States.
- Article II: All non-Nuclear Weapons States agree not to receive or manufacture nuclear devices.
- Article III: All non-Nuclear Weapons states must work in conjunction with the IAEA to implement safeguards against the acquisition of nuclear weapons.
- Article IV: Signatories have a right to civilian nuclear technology. All exchanges of nuclear technology for peaceful means may continue.
- Article X: Signatories must give three months’ notice prior to withdrawing from the treaty.

Comprehensive Nuclear Test Ban Treaty (CTBT) was completed in 1995 and passed by the UN General Assembly in 1996. Since its passage, 159 states have ratified the CTBT and 24 have signed but not ratified. Of the recognized nuclear weapons states, most have signed, including Britain, China, France and Russia. Unfortunately, in order for the treaty to enter in to force, it needs 44 ratifying states including all of the Nuclear Weapons States outlined by the NPT. Eight of the required states have signed the treaty but have failed to ratify it including the US, China, Egypt, Iran, and Israel. India, North Korea, and Pakistan have not signed the treaty. The United States has signed the treaty, although the Senate refuses to ratify

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it. The Treaty requires party states to refrain from partaking in any nuclear test explosions nor permit these types on explosions on that country's sovereign territory. It also requires each party to refrain from causing, encouraging, or participating in the carrying out of any test explosion.

No First Use: No first use is the policy of only using nuclear weapons in a defensive manner. It is the professed policy of India and Pakistan. Only China and India have made clear no-first use pledges. The Russian Federation accepted NFU until 2000, when policy was made conditional. The United Kingdom has not explicitly backed NFU, but pledged to only use nuclear weapons in retaliation. The United States refuses to make a non-first use pledge.

Middle East Nuclear Weapons Free Zone (NWFZ) is the preferred option of most countries in the region, especially the members of the League of Arab States. Led by Egypt, they maintain that regional security against nuclear weapons can only be assured if all states in the region forgo the possibility. For Israel—the only nuclear weapons state in the region--this would mean giving up its suspected nuclear weapons. Israel's cooperation would require security guarantees from Arab countries in the region and outside powers, which few have been willing to give.

New START Treaty: This was signed in 2010 between the United States and the Russian Federation. It is an arms reduction treaty which entered in to effectiveness in 2011 and extends until 2021 unless extended. The treaty requires each party to reduce its deployed strategic nuclear weapons to no more than 1,550 each. It also instituted a new inspection and verification

system to replace the former oversight mechanism. While relatively comprehensive, the treaty does not limit operationally inactive stockpiles of nuclear warheads or tactical nuclear weapons.

Country Positions

- *China* opposes the spread of nuclear weapons, but also respects the sovereign rights of all countries to self-defense, as agreed under the UN Charter. Since the early 1990s China has become more engaged in non-proliferation, participating in international efforts to stop the spread of nuclear-weapons related technologies, especially to non-state actors (terrorists). China above all stresses the need for balanced international responses, including guarantees to the security of non-nuclear countries.
- *European Union* is a leading proponent of the establishment of an NWFZ in the Middle East. The European Union largely takes a backseat to the United States when it comes to efforts at preventing proliferation; however, in 2012, Finland agreed to host a conference between Middle Eastern states on establishing a NWFZ, although the meeting never occurred.
- *Iran:* Iran maintains that its nuclear program exists for purely peaceful purposes; however, it frequently resists IAEA inspections or highly regulates them. Publically, Iran states that it is in favor a nuclear weapons free Middle East. Intense sanctions against Iran have thus far failed to

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deter it from pursuing its nuclear initiative.

- *League of Arab States*: Arab countries are strongly critical of international tolerance of Israel's nuclear program and the refusal of some nuclear-weapons states to press Israel to abandon its WMD. Egypt is the leader of the Arab League on this use. Egypt has long spearheaded the concept of a Nuclear Weapons Free Zone in the Middle East. In 2013, it unanimously agreed to support an Egyptian proposal to move toward an NWFZ in the region. It is unclear how fully each individual member supports the proposal.
- *The Nonaligned Movement (NAM)*, with 120 members is the UN's most powerful vote bloc. Its members generally support a Middle East Nuclear Weapons Free Zone. The NAM also demands negative security assurances for all non-nuclear weapons states (pledges by nuclear powers not to attack or use their forces to intimidate).
- *United States*: The United States remains firmly against the proliferation of nuclear weapons to any state, and is currently involved in high-level talks with the Iranian government concerning its nuclear program. But the United States refuses to permit the UN to press Israel on nuclear issues. The United States has led the charge for international non-proliferation and has led or participated in the removal of many Middle Eastern states' nuclear programs, most notably Libya's in 2003. But the United

States is not as committed to a NWFZ in the Middle East, which it criticize as a way to press Israel.



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United Nations Resources

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 - a. Overview of the NPT:
<http://www.un.org/disarmament/WMD/Nuclear/NPT.shtml>
 - b. Disarmament Treaties:
<http://disarmament.un.org/treaties/>
 - c. Nuclear Weapons Free Zone in the Middle East:
http://www.un.org/ga/search/view_doc.asp?symbol=A/RES/67/28

2. UN General Assembly Resolutions on Disarmament:
<https://gafc-vote.un.org/>
3. 1540 Committee:
<http://www.un.org/en/sc/1540/>

Other Useful Sources

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