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Issue Brief

The Israel–Iran War and the Nuclear Factor

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Summary

The Brief highlights key events that preceded the Israel–Iran 12-Day War and discusses the conflict's implications. It also points out the structural deficiencies of the NPT and the IAEA and notes that before the next round of attacks and counterattacks, the best way forward is a negotiated deal between Iran and the West that is acceptable to all sides.

Introduction

The Israel–Iran war, dubbed by US President Donald Trump as the 12-Day War, ended on 24 June 2025, with Iran claiming to have taught the "Zionist regime" a "historic lesson" that it will never forget. Israeli Prime Minister Benjamin Netanyahu declared "a historic victory" that would "abide for generations". Israel's Operation Rising Lion targeted Iran's nuclear and ballistic missile sites, as well as its military and scientific leadership. The attacks damaged infrastructure at uranium enrichment sites in Natanz, a conversion facility at Isfahan, and a non-operational nuclear reactor in Arak.

Israeli attacks also caused damage to radars, surface-to-surface and surface-to-air missiles, missile storage facilities, rocket launchers, launchers for the unmanned aerial vehicles (UAVs), military hardware, including helicopters and fighter jets, among others. The entire top rung of the military leadership was killed, along with nine nuclear scientists.[1] In response, Iran launched Operation True Promise III,[2] which included hundreds of ballistic missiles and drones towards Israel, targeting Israel's energy infrastructure and military centres, among others.

The United States (US) joined Israel and launched Operation Midnight Hammer on 22 June 2025, in which 125 US fighters, including B-2 bombers, targeted three nuclear facilities—Fordow, Natanz and Isfahan. Fordow is believed to have advanced IR-6 centrifuges buried deep under the mountains, around 260–300 feet. To penetrate this site, the US used the 14,000 kg GBU-57 Massive Ordnance Penetrators (MOPs) or bunker busters, which can pierce 60 feet of concrete or 200 feet of earth before exploding. The US used 14 GBU-57s, along with two dozen Tomahawk cruise missiles fired from Ohio-class submarines in West Asian waters, to damage Iranian nuclear sites. In response, Iran attacked the Al Udeid U.S. military base in Qatar, under Operation Harbinger of Conquest.

Iran's nuclear arsenal has always been perceived as an existential threat by Israel, while Iran has always considered Israel an illegitimate entity which does not have the right to exist.[3] Although this is the first time in history that Israel has launched physical attacks on Iran, in the past, Israel has attempted to sabotage the Iranian nuclear programme through covert means, such as damaging centrifuges with Stuxnet malware or carrying out small explosions at the Iranian nuclear facilities. Several Iranian nuclear scientists have also been killed in sophisticated attacks over the years.

[1] **"Operation Rising Lion"**, IDF Press Release, 13 June 2025.

[2] **"IRGC Issues Statement After Hitting Israel"**, *Mehr News Agency*, 13 June 2025.

[3] **"The Zionist Regime is Illegitimate and Will Not Survive"**, Official Website of Imam Khamenei, 15 June 2018.

Israel's strikes on Iran under Operation Rising Lion should be considered as a continuation of the Begin Doctrine, the pre-emptive strike policy introduced by Israeli Prime Minister Menachem Begin in 1981. The doctrine rejects regional adversaries' options to pursue weapons of mass destruction, especially nuclear weapons. In 1981 and 2007, the Israeli air force destroyed an Iraqi nuclear research reactor, Osirak, and a Syrian al-Kubar atomic facility on the banks of the Euphrates, respectively, on the suspicion that both countries were pursuing clandestine nuclear weapons programmes. However, it is to be noted that in both cases, the reactors were not operational.

This brief details the incidents preceding the War, including Iran–US atomic negotiations and the reports by International Atomic Energy Agency (IAEA). It assesses damage done to the Iranian nuclear infrastructure and the status of highly enriched uranium on Iranian soil and highlights the structural deficiencies of the Non-Proliferation Treaty (NPT).

Brief Overview of Iran's Nuclear Programme

Iran began its nuclear programme in 1957 by signing a civil nuclear cooperation agreement with the US under the Atoms for Peace programme. The country became one of the original signatories of the NPT in 1968 and entered into the Safeguards Agreement with the IAEA in 1974. The 1979 Iranian revolution and the Iran–Iraq war in the ensuing years halted the nuclear work for some time. In the late 1990s and early 2000s, Iranians started activities having "a possible military dimension to their nuclear programme" under a plan called the AMAD plan.[4] However, Iran's supposed clandestine nuclear activities, in violation of the Safeguards Agreement, came to light in 2003 and 2009.

In 2002, a uranium enrichment facility at Natanz and a heavy water reactor under construction at Arak were disclosed. Similarly, in 2009, the IAEA discovered a covert nuclear enrichment plant at Fordow, near Qom, which had been under construction for many years, without the Agency's knowledge. In response, the IAEA passed a censure resolution against Tehran,[5] and international sanctions were imposed. By 2013, Iran had produced 372.5 kg of uranium enriched up to 20 per cent and 9,704 kg enriched up to 5 per cent.[6]

[4] **"Final Assessment on Past and Present Outstanding Issues Regarding Iran's Nuclear Programme"**, International Atomic Energy Agency (IAEA), 2 December 2015.

[5] Mark Heinrich, **"IAEA Votes to Censure Iran Over Nuclear Cover-up"**, *Reuters*, 28 November 2009.

[6] **"Implementation of the NPT Safeguards Agreement and Relevant Provisions of Security Council Resolutions in the Islamic Republic of Iran"**, IAEA, 28 August 2013.

The 2015 Joint Comprehensive Plan of Action (JCPOA) between Iran and the P5+1 countries restricted Tehran's access to centrifuges and enriched uranium, along with restrictions that barred Iran from enriching uranium beyond 3.67 per cent. In return, the West committed to suspending the sanctions against Iran. However, US President Donald Trump decided to quit the JCPOA in 2018, reimposing sanctions on Iran and leading Tehran to abandon the JCPOA limits. President Joe Biden failed to return to the treaty from 2021 to 2024.

Meanwhile, in December 2020, the Iranian parliament passed a law "to produce and store at least 120 kilograms of enriched uranium with a 20 per cent purity level every year for peaceful purposes".[7] A metallic uranium factory in Isfahan was inaugurated, and Iran also started using advanced centrifuges.[8] In the following years, Iran had a stockpile of enriched uranium up to 60 per cent and advanced centrifuges that can enrich uranium to 90 per cent. In 2023, the IAEA found traces of 83 per cent pure uranium at the Fordow facility, raising suspicions.[9]

It must be noted that Iran continued to comply with the IAEA's Comprehensive Safeguards Agreement even after 2020, allowing for routine monitoring and verification of declared nuclear sites. However, in February 2021, Tehran quit the Additional Protocol, which gives the IAEA extra inspection rights. Further, it removed the Agency's surveillance equipment in June 2022.[10]

Incidents Preceding the 12-Day War

IAEA Reports

A report of the Director General (DG) of the IAEA to the Board of Governors dated 31 May 2025 claimed Iran had stopped implementing its "nuclear-related commitments under the JCPOA"[11], including the Additional Protocol, which had "seriously affected the Agency's JCPOA-related verification and monitoring activities".[12] The Agency had lost "continuity of knowledge about the centrifuges" and other nuclear infrastructure.[13] As of 17 May 2025, Iran had accumulated "408.6 kg of uranium

[7] **"Iranian Parliament Bill on Nuclear Program: Full Text in English"**, National Iranian American Council, 3 December 2020.

[8] Ibid.

[9] **"Verification and Monitoring in the Islamic Republic of Iran in light of United Nations Security Council Resolution 2231 (2015)"**, IAEA, 31 May 2023.

[10] **"Verification and Monitoring in the Islamic Republic of Iran in light of United Nations Security Council Resolution 2231 (2015)"**, IAEA, 4 September 2023.

[11] **"Verification and Monitoring in the Islamic Republic of Iran in light of United Nations Security Council Resolution 2231 (2015)"**, IAEA, 31 May 2025.

[12] Ibid.

[13] Ibid.

enriched up to 60% U-235" and "274.5 kg of uranium enriched up to 20% U-235", out of a total enriched uranium stockpile of 8,413.3 kg.[14]

An IAEA resolution titled "NPT Safeguards Agreement with the Islamic Republic of Iran", passed by a vote of 19 for, three against, and 11 abstentions on 12 June 2025, reiterated some of these observations. The resolution claimed that Tehran had failed to demonstrate that "its nuclear material was not being diverted for further enrichment for military use".[15] Further, "Iran did not declare nuclear material and nuclear-related activities at three undeclared locations" within the country.[16] The resolution noted that nuclear material remained unaccounted for.[17] Moreover, the IAEA maintains that Iran is not providing "technically credible explanations regarding undeclared nuclear material…"[18] Therefore, "the Agency would not be in a position to assure that Iran's nuclear programme is exclusively peaceful".[19]

Iran fiercely criticised this report, calling it "highly politicised and biased".[20] The joint statement by the Ministry of Foreign Affairs and the Atomic Energy Organisation of the Islamic Republic of Iran asserted that

> Iran had always adhered to its safeguards commitments, and to date, none of the IAEA's reports had indicated any non-compliance or diversion in Iran's nuclear materials and activities.[21]

In response to the report, Iran declared the launch of a new enrichment facility in a secure location. It replaced first-generation centrifuges at the Fordow facility with sixth-generation centrifuges.[22]

US–Iran Nuclear Negotiations

In April 2025, the US and Iran started a new phase of negotiations on Iran's nuclear programme in Oman and Italy. By 23 May 2025, the two sides had completed five rounds of talks with no definitive conclusion. The US presented a plan to Iran, proposing a consortium of regional countries manage the uranium enrichment

[14] Ibid.

[15] **"Atomic Watchdog Says Iran Not Complying with Nuclear Safeguards"**, *United Nations News*, 12 June 2025.

[16] **"NPT Safeguards Agreement with the Islamic Republic of Iran"**, IAEA, 12 June 2025.

[17] Ibid.

[18] Ibid.

[19] Ibid.

[20] **"Joint Statement by the Ministry of Foreign Affairs and the Atomic Energy Organization of the Islamic Republic of Iran"**, Ministry of Foreign Affairs, Islamic Republic of Iran, 12 June 2025.

[21] Ibid.

[22] Ibid.

facility.[23] This consortium would provide nuclear fuel not only to the Iranian nuclear reactor but also to the nuclear reactors of other countries in West Asia. Once Iran starts receiving enriched uranium for its nuclear reactors from this consortium, it would stop enriching uranium within the country. Thus, it would ensure the supply of enriched uranium to Iran and negate the possibility of Iran enriching uranium near weapons grade.

However, Iran did not agree to this proposal as it would not like to give up its right to enrich uranium under the NPT and would like to continue enriching uranium on its soil. Therefore, Iran decided to present a counter-proposal to the US, which would be "reasonable, logical, and balanced".[24] The Iranian foreign ministry declared the sixth round of negotiations to be held on 15 June 2025, in Muscat, but Israel attacked Iran before that.[25]

Attack Aftermath

Damage Evaluation

Satellite imagery indicated that Iran's nuclear facilities were severely damaged by the Israeli and American attacks on 13 and 22 June 2025, respectively.[26] The satellites could pick up craters in the mountains created by the bomb impacts and the damaged overground buildings. However, the images could not confirm the damage to the underground nuclear infrastructure. There was a massive gap in the damage evaluation by different players, ranging from 'complete obliteration of the Iranian nuclear programme' on one end to 'recoverable structural destruction of the nuclear facilities' on the other.

President Trump, US Defense Secretary Pete Hegseth, and the Director of National Intelligence (DNI) Tulsi Gabbard claimed that the US "obliterated" Iran's ability to create nuclear weapons.[27] The Central Intelligence Agency Director John Ratcliffe claimed Iran's nuclear programme had been severely damaged. In contrast, Chief Pentagon Spokesman Sean Parnell claimed the US "degraded their [Iran's] program by one to two years".[28] A leaked report by the Defence Intelligence Agency, the

[23] Farnaz Fassihi, David E. Sanger and Jonathan Swan, **"U.S. Proposes Interim Step in Iran Nuclear Talks Allowing Some Enrichment"**, *The New York Times*, 3 June 2025.

[24] **"Iran to Present Counter-proposal to US, Trump Says Talks to Resume"**, *Reuters*, 10 June 2025.

[25] **"Iran US Planning to Set Sunday for Next Round of Indirect Nuclear Talks"**, Ministry of Foreign Affairs, Islamic Republic of Iran, 10 June 2025.

[26] Jonathan Landay, **"Satellite Images Indicate Severe Damage to Fordow, But Doubts Remain"**, *Reuters*, 22 June 2025.

[27] **"Iran's Nuclear Facilities Have Been Obliterated — and Suggestions Otherwise are Fake News"**, The White House, US, 25 June 2025.

[28] **"Chief Pentagon Spokesman Sean Parnell Holds Press Briefing"**, U.S. Department of Defense, 2 July 2025.

Pentagon's intelligence arm, claimed that the strike did not destroy the core components, including the centrifuges, of the Iranian nuclear facilities.[29]

European intelligence claimed "extensive damage" but not complete structural destruction and assessed that the Highly Enriched Uranium (HEU) remained largely intact.[30] The Israeli assessment contended that the attack on Iranian nuclear infrastructure "set back Iran's ability to develop nuclear weapons by many years".[31] Iran's Foreign Minister Abbas Araghchi conceded that "the facilities had been seriously and heavily damaged",[32] but maintained that "the technology and know-how is still there".[33]

The IAEA presented a detailed assessment of the possible damage to the Iranian nuclear facilities at Natanz, Isfahan and Fordow. It said that considerable infrastructure at the three nuclear facilities was damaged, including fuel enrichment plants, electricity infrastructure, a chemical laboratory, a uranium conversion plant, a uranium metal processing facility and access roads.[34] It also said that the attacks by the US on the three nuclear facilities "might cause radioactive and chemical contamination within the facilities that were hit".[35] However, there were no reports of increased radiation levels off-site. In an interview with *CBS News*, the IAEA DG Rafael Mariano Grossi observed that though "a severe level of damage" was done to the Iranian nuclear infrastructure, "in a matter of months" the Iranians can have "a few cascades of centrifuges spinning and producing enriched uranium".[36]

The Status of HEU

Commercial satellite imagery firm Maxar Technologies showed a long queue of trucks outside the entrance of the Fordow nuclear facility on 19 and 20 June 2025.[37] Thus, several analysts believe that Iran, most probably, must have moved out the stockpile of HEU before the US targeted the Fordow facility. Mohammad Eslami, the head of the Atomic Energy Organization of Iran (AEOI), also claimed that "Iran had another enrichment site in a secure and invulnerable location that could house

[29] Natasha Bertrand, Katie Bo Lillis and Zachary Cohen, **"Early US Intel Assessment Suggests Strikes on Iran Did Not Destroy Nuclear Sites, Sources Say"**, *CNN*, 25 June 2025.

[30] Henry Foy and Andrew England, **"Early Intelligence Suggests Iran's Uranium Largely Intact, European Officials Say"**, *Financial Times*, 26 June 2025.

[31] **"Statement by the Prime Minister's Office on behalf of the Israel Atomic Energy Commission"**, Israel Prime Minister's Office, 25 June 2025.

[32] **"Fordow Nuclear Site 'Seriously Damaged', Declares Araghchi"**, *Tehran Times*, 2 July 2025.

[33] Ibid.

[34] **"Update on Developments in Iran"**, IAEA, 19 June 2025.

[35] **"Update on Developments in Iran (4)"**, IAEA, 22 June 2025.

[36] **"Rafael Mariano Grossi, IAEA Director General, on 'Face the Nation with Margaret Brennan'"**, *CBS News*, 29 June 2025.

[37] **"Update on Developments in Iran (4)"**, no. 35.

centrifuges".[38] Grossi's official statement corroborating these claims states that Iranian Foreign Minister Abbas Araghchi sent a letter to the IAEA on 13 June 2025, warning that Iran would "adopt special measures to protect our nuclear equipment and materials".[39] Grossi replied in the affirmative with a caveat that "any transfer of nuclear material from a safeguarded facility to another location in Iran must be declared to the Agency as required under Iran's Safeguard Agreement".[40]

Israel–Iran War and the IAEA/NPT

A non-NPT member, Israel, and a declared Nuclear Weapons State, the US, attacking the nuclear facilities under the safeguards of the IAEA of an NPT-member state, Iran, has negatively dented the credibility of the IAEA. Although, indeed, the IAEA doesn't have any enforcing powers and at most, it can refer non-compliance to the United Nations Security Council, the optics of the IAEA helplessly watching the attacks take place on an NPT-member state has sent out a message that putting the nuclear sites under the IAEA safeguards does not guarantee its safety during kinetic attacks. The future IAEA guidelines must integrate safeguards, safety and security properly.

However, the actors in this war and the interpretation of the NPT should be held responsible for what transpired between the states involved in the war. Article IV of the NPT gives all member states the "inalienable right" to develop research, production, and use of nuclear energy for peaceful purposes without discrimination. It does not prohibit the uranium enrichment process or establish a limit on the percentage to which uranium can be enriched. Thus, Article IV has a broad scope of interpretation of the right to nuclear energy. Iran enriched the uranium up to 60 per cent, which is technically permissible, according to the NPT. The Iranian parliament has passed a bill that requires prior permission from the Supreme National Security Council—Iran's top security body—for the IAEA inspections. So far, Iran has decided to work with the IAEA, and not quit the NPT.

Conclusion

The Israeli attacks may have slowed down Iran's nuclear programme by a few years. Israel has shown unprecedented superiority over Iranian skies while carrying out these strikes. It has demonstrated its ability to hit high-value targets deep within Iran at will. The attacks showed that the Israeli security establishment had precise intelligence about the secretive nuclear infrastructure and the whereabouts of Iran's

[38] Peter Beaumont, **"How Effective Was the US Attack on Iran's Nuclear Sites? A Visual Guide"**, *The Guardian*, 22 June 2025.

[39] **"IAEA Director General's Introductory Statement to the Board of Governors"**, IAEA, 23 June 2025.

[40] Ibid.

top military leadership and atomic scientists. Thus, Israel has been able to establish deterrence against Iran’s attempts to explore nuclear weapons, at least in the short term.

Second, Iran’s response has exposed vulnerabilities in the Israeli defence system, with more than 30 projectiles hitting Israel’s territory. Third, though Israel has attacked Iran’s physical nuclear infrastructure, it will not be able to destroy the knowledge gained by Iranians over the past decades.

Fourth, Israel has destroyed several centrifuges and centrifuge production lines. The converse of this is that several centrifuge lines and centrifuges remain intact. Minimum-to-no radioactive releases and the Iranian foreign minister’s letter to the IAEA about the shifting of HEU, corroborated by the satellite imagery, allow us to infer HEU's existence on Iranian soil. And if Israelis have not been able to find the hidden uranium despite having an extensive intelligence network, there are places in Iran where Israel has not been able to reach so far. After obtaining 60 per cent enriched uranium, with the use of fewer centrifuges, Iran can achieve 90 per cent uranium enrichment, which will enable it to assemble a bomb in a few months, if a political decision is taken to do so.

Fifth, the public pronouncement of the desire of the top Israeli and American leadership to change the Iranian regime might convince Tehran that the nuclear option would serve it as the best insurance against future regime change attempts. Thus, many speculate that Iran’s drive towards getting nuclear weapons might increase after this war.

Sixth, the Israel–Iran War has raised serious questions regarding the credibility of the IAEA and has shown structural deficiencies in the NPT. Although the war has stopped, there might be an interregnum before the next round of attacks and counterattacks. Therefore, the best way forward is a negotiated deal between Iran and the West acceptable to all sides.

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