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A 12-day war with long-term collateral consequences: A multi-dimensional analysis of the Israel-Iran war

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Abstract
The June 2025 war between Israel and Iran was a great aggravation of the Middle Eastern geopolitical tensions, resulting in destructive human, economic, infrastructural, political, and environmental effects. This study aims to holistically explore and evaluate the Israel-Iran conflict in June 2025 to uncover the ripple impacts in the humanitarian, economic, infrastructural, political, and environmental domains. The research utilized a qualitative systematic review methodology to synthesize relevant publications between 13 June and 28 June 2025 on the June 2025 war between Israel and Iran and its effects on Iran. The results highlight the destructive impact of civilian loss (almost 1,000 deaths and thousands displaced) and the great extent to which the economy of Iran was disrupted, with GDP contraction, hyperinflation, and currency collapse being catalyzed by targeted strikes against energy infrastructure. The nuclear and military installations damage also contributed to slowing down the strategic capabilities of Iran by several years and the realignment of politics, including the disruption of IAEA cooperation and the focus on confrontational legal positions. Ecosystem examinations reveal the presence of acute oil spill risks and likely radiological leakage, which raises the question of long-term ecosystem stability. Consequently, this study fills the key gaps of siloed conflict studies by incorporating Galtung's conflict theory, resilience and the social ecological systems framework, and humanitarian intervention standards. The study further provided pertinent recommendations for Iran and the international community to be able to negotiate the intricate post-modern high-intensity warfare more effectively and promote long-term recovery and institutional resilience.

Keywords: War, Israel, Iran, destruction, consequences, institutional resilie

1. Introduction
The June 2025 war between Israel and Iran was a great aggravation of the Middle Eastern geopolitical tensions, which ended with multiple military conflicts, strategic attacks, and destabilization of the region. The targeted air and drone attacks of Israel on the nuclear, military, and civilian infrastructure in Iran initiated the cycle of missile and drone attacks by Tehran, generating international alarm and raising the possibility of spillover to its neighbours, and the safety of essential energy vessels in the Persian Gulf. For Iran, a country that has already faced many years of international sanctions, economic stagnation, and social unrest within the country, the war added a new dimension of humanitarian crisis and structural tension. Unforeseen aerial bombardments occurred in the urban centers, energy facilities were badly affected, and the ability of the state to rule and offer the necessary services came into question. In the meantime, the international community was observing negotiations, ceasefire suggestions, and diplomatic interventions trying to restrain the further increase. This paper is an in-depth, statistics-supported analysis of the complex consequences of the June 2025 Israel-Iran war on Iran. The study is set to provide policymakers, scholars, material resources, and political, environmental, and legal perspectives on direct and indirect impacts of the war on Iranian society and infrastructure.

1.1 Background
The war began on June 13, 2025, when Israel launched a series of air attacks on the nuclear sites of Iran, its military forces, and its missile production plants. These attacks led to the killing of more than 30 senior Iranian security agents and 11 top nuclear scientists (Bousso, 2025) [5]. Iran responded by firing missile and drone strikes on Israeli military bases and urban centers, causing massive loss of life and damage to infrastructure on both fronts.

The nuclear programme in Iran and the Fordow Fuel Enrichment Plant in particular suffered significant destruction due to these attacks. Although the first estimations indicated that Iran would have destroyed essential capabilities, later analyses revealed that the most important constituents of its nuclear program were still intact, and they continue to create a threat to the security of the region (The Australian, 2025; Washington Post, 2025) [45, 48].

Economic consequences to Iran were also harsh and swift. The rial was devalued drastically, oil exports fell at a steep rate, and inflation rates soared. The war caused disruption of trade and financial markets and massive unemployment and aggravated the already existing economic problems in the country (Nagraj, 2025; Bousso, 2025) [37, 5]. There were also large environmental impacts. The oil refineries and pipelines were attacked to cause fires and spills, endangering the marine ecosystems of the Persian Gulf and causing concern about the contamination of the soil and air quality (DW, 2025; Conflict and Environment Observatory [CEOBS], 2025) [11, 9]. On the political front, the conflict caused a change in Iranians' attitude towards international supervision. On June 25, 2025, the Iranian parliament adopted legislation to suspend its work with the International Atomic Energy Agency (IAEA), and any future access to inspectors depends on the decision of the Supreme National Security Council (Carnegie Endowment, 2025) [8]. The government of Iran, through legislation, instituted emergency laws that extended the definitions of espionage and propaganda, which enabled mass arrests and dissent (Bousso, 2025) [5].

The complex consequences of the June 2025 war between Israel and Iran have not been holistically studied in the literature. Although each factor has been researched separately, like military strategies, economic sanctions, and environmental impacts, there has been no concerted effort to review the interrelationship between these dimensions and its overall impact on strategic infrastructure and the lives of the people of Iran. This literature gap requires a comprehensive review to comprehend the depth of the effects of the war to make policy, humanitarian interventions, and future diplomatic strategies that would help reduce its effects and prevent future wars.

1.2 Objectives of the research

- **Measure human impact:** Record the number of casualties, the displacement data, and the humanitarian reaction to airstrikes in key provinces.
- **Evaluate economic costs:** Compare macroeconomic indicators, such as GDP, inflation, currency fluctuation, oil revenues, and unemployment predictions, pre- and post-rupture.
- **Assess material and military damage:** Provide damage reports on military installations, nuclear facilities, civilian infrastructure, and energy facilities.
- **Explore political and legal changes:** Research legislative initiatives, security, government stability, and shifts in international responsibilities.
- **Analyze environmental fallout:** Determine environmental risks of fuel spills, industrial fires, and radioactive releases.

1.3 Significance

This study has a critical value in many areas, providing essential information regarding the complex effects of the June 2025 Israel-Iran conflict on the strategic infrastructure and civilian life of Iran. Firstly, the thorough interpretation offered in this paper would offer policymakers a more in-depth perspective of the far-reaching consequences of the war, thereby providing them with evidence-driven information to develop informed policies to ensure post-conflict reconstruction, international relations, and regional stability by analyzing the interaction between military operations and socio-economic successes (Al Jazeera, 2025; Bousso, 2025) [1, 5]. In addition, the recorded humanitarian impacts, such as civilian deaths and displacement, justify the urgency to implement deliberate humanitarian interventions. This information can be used by international aid agencies to allocate their funds and direct relief operations, as well as to support the civil rights of people in conflict regions (UNHCR, 2025; Amnesty International, 2025) [2]. Moreover, the recognition of the threat to the environment, including oil spills and pollution created by military attacks, demonstrates the negative effects of the war on ecology in the long term. This study is a call to action to environmental agencies and policymakers to take action and put in place measures that will reduce ecological damage and also encourage sustainable recovery practices (DW, 2025; CEOBS, 2025) [11, 9].

Moreover, the analysis of legal developments, including the suspension of IAEA cooperation and the adoption of emergency laws, offers a view on the undermining of legal standards during conflict. The study is relevant to human rights, the rule of law, and post-armed conflict state accountability debates (Carnegie, 2025; Bousso, 2025) [8, 5]. Having provided a multi-dimensional analysis of the event, the study not only enriches the background of understanding the severe outcomes of the war between Israel and Iran but also offers a basis to come up with the strategies aimed at mitigating the effects of the war on the future as well as preventing the occurrence of the war in the future. Following this introductory section, section two entails the literature review, while section three is the methodology. Similarly, section four encapsulates the results presentations and discussion of findings, while section five borders on the conclusion and recommendations.

2. Literature Review

2.1 Conceptual review: Definitions and discussions of key concepts

Armed conflict

Under the International Humanitarian Law (IHL), armed conflict is termed as a situation of prolonged armed violence between state forces, or between state forces and a structured non-state group, that satisfies the thresholds of intensity and organizational characteristics irrespective of formal declaration (ICRC, 2016; Henckaerts & Doswald-Beck, 2005) [24, 19]. Armed forces need to be maintained and coordinated as opposed to sporadic internal uproars or isolated cases of violence (Roberts & Guelff, 2000; Sassòli, 2019) [42, 43]. IHL divides conflicts into international armed conflicts (IACs) (between states) and non-international armed conflicts (NIACs) (between governmental and non-state actors), and each type provokes certain treaty duties (ICRC, 2016; Henckaerts & Doswald-Beck, 2005) [24, 19]. The main indicators are the presence of structured armed forces that can conduct militant operations continuously and a certain degree of hostilities defined by the presence of

frequent combat activities, military organization, and command (Sassòli, 2019; Roberts and Guelff, 2000) [43, 42]. After a conflict is defined as armed, the key principles of IHL, namely distinction, proportionality, and humanity, are enforced to control the hostilities and ensure the safety of people who do not engage in combat (ICRC, 2016; Henckaerts & Doswald-Beck, 2005) [24, 19]. This factual methodology is important so that the protective regime provided by the IHL will be triggered by the fact of violence, not by the political recognition of it, and this will protect civilians, prisoners, and the injured in contemporary warfare (Roberts & Guelff, 2000; Sassòli, 2019) [42, 43].

A more recent case under IHL of armed conflict is the Israel-Iran conflict that deteriorated in June 2025. On June 13, 2025, Israel developed Operation Rising Lion, a massive large-scale preemptive military operation against more than 100 targets in Iran, including nuclear and military bases in Tehran, Isfahan, and Natanz. The armed forces were used in the operation between two groups of people organized, and the use of armed forces met the requirements of an International Armed Conflict (IAC) as required under IHL. Iran responded with retaliatory missile and drone attacks in Israeli territory, including Haifa and Tel Aviv. These exchanges of fire further cemented the categorization of the conflict as an IAC, which initiated the application of IHL and the legal responsibilities linked to the conflict of both parties.

Humanitarian impact

Humanitarian impact is the negative consequences of armed conflict among civilian populations, such as loss of life, displacement, and interruption of fundamental services. Armed conflicts are frequently associated with heavy death tolls and displacement of vast numbers of people, who are left without a home to escape to (ICRC, 2016) [24]. The destruction of infrastructure, such as healthcare facilities and water supply systems, worsens the humanitarian crisis and results in an increase in mortality and morbidity rates among communities in the affected areas (World Health Organization [WHO], 2024) [53]. Humanitarian agencies have a major role in offering emergency aid and lobbying for the protection of civilians by international law. The International Committee of the Red Cross stresses the fact that an armed conflict should be met with unbiased and neutral help without references to status and affiliation (ICRC, 2023) [25].

Economic consequences

Armed conflicts have a huge impact on macroeconomic indicators such as Gross Domestic Product (GDP), inflation, unemployment, and trade. The World Bank (2025) estimates annual average GDP per capita growth of 1.8 percent in conflict-prone economies versus 2.9 percent in non-conflict countries, and these areas now contribute almost 60 percent of the global extreme poverty. According to the International Monetary Fund (IMF, 2024) [27], the GDP per capita is usually 28 percent lower even a decade after the conflict starts, mostly because of lower consumption, trade impairments and the loss of investor confidence. Moreover, the inflation rates explode as the supply chains fail, governments redirect their funds to military spending, and unemployment increases due to business closures and the stagnant economy (IMF, 2020) [26]. These insights highlight the fact that the conflicts not only have short-term economic effects in the form of immediate economic damage but also have long-lasting structural losses that must be conceived of as being damage that must be recovered by international financial assistance.

Material and military damage

Material and military losses include destruction of physical and social infrastructure, such as military facilities, civilian buildings, and energy and communication networks. According to the United Nations Environment Programme (UNEP, 2024) [49], such destruction is a major cause of slowing the recovery process in post-conflict countries, since rebuilding is an expensive and time-consuming process that needs millions of financial investments and the participation of international organizations. The weakening of the transportation system and energy infrastructure obstructs the delivery of humanitarian assistance, extending economic stagnation. In Syria and Ukraine, among other examples, the destruction of critical infrastructure has rendered millions of people powerless, without access to clean water and healthcare, as well as without access to electricity, which is an example of the magnitude and complexity of rebuilding efforts (UNEP, 2024) [49].

Political and legal shifts

Conflicts also initiate political and legal changes through reconfiguring the forms of governance, the priorities of the legislation, and the international imperatives. The governments tend to rewrite domestic policies and postpone international agreements following the security pressure and introduce substantial changes in the balance of power (Carnegie Endowment for International Peace, 2023) [7]. In addition, humanitarian actors like the ICRC must navigate intricate political settings to promote international humanitarian law and remain neutral as they provide aid (ICRC, 2023) [25]. These changes may have a long-term effect on national sovereignty, international relations, and the rule of law, particularly when the structure of governance is disintegrated or authoritarian as a reaction to the conflict.

Environmental fallout

Environmental fallout can be defined as the ecological impacts of war, such as pollution of soil, water and biodiversity. Studies have shown that military operations may cause emission of dangerous materials to the environment and lead to future ecological destruction (Keser *et al*., 2025; Saxena, 2023) [30, 44]. According to reports by UNEP, armed conflicts may cause loss of ecosystems and contamination of natural resources with consequences that may be harmful to the general health of the population and agricultural production (UNEP, 2024) [49]. WHO (2025) [54] also insists on the necessity to protect the environment in conflict areas to reduce health risks and provide sustainable recovery. These insights highlight that the environmental destruction of armed conflict is protracted, contributes to crises in the public health system and makes the recovery strategies in the post-conflict period difficult.

2.2 Theoretical review

The dynamics of the Israel-Iran war could be explained with several theories. An example of this is the conceptualisation of social conflict into direct, structural and cultural violence in the foundational theory of conflict and violence by Johan

Galtung (Galtung, 1969) [14]. Direct violence entails the physical one, e.g., the airstrikes on civilian infrastructure in Iran; structural violence refers to inequalities in the society which are aggravated by the war which is violent; and cultural violence includes normative explanations of violence, justifying brutal stories (Galtung, 1999) [15]. This three-pronged model is fundamental to the explanation of the interactions and reinforcement of interactions between military assaults, legal coercion, and societal stigma in the context of Iranian society after the conflict. Likewise, the resilience theory developed by C.S. Holling, which is originally based on ecological settings, refers to resilience as the capacity of a system to absorb shocks and sustain essential functions (Holling, 1973) [21]. According to the further works of urban resilience scholars (Meerow, 2015) [35], resilience is considered to be multidimensional: engineering resilience (rapid recovery), ecological resilience (capacity to absorb change), and transformative resilience (adaptive evolution). Within the Iranian context, the resilience theory will make it possible to evaluate the responses of the infrastructure, governance, and communities to the impact of the strikes and their recovery or transformation.

According to the Socio-Ecological Systems (SES) framework, social and ecological systems are more complex and interdependent and need to be analyzed as a complex (Folke *et al*., 2004; Walker *et al*., 2004) [24, 12]. It is a methodological focus on environmental shocks, economic disruption and vulnerable societies' feedback. In the current research paper, the theory of SES justifies the discussion of cascading impacts in which, when the military attacks oil or nuclear installations, the environment, the health of the populace, and the economy are harmed. The literature in urban and institutional resilience indicates the mediating role of governance quality, community networks, and adaptive institutions in the conflict context (Norris *et al*., 2008; Berkes, Colding & Folke, 2003) [38, 3]. These clues inform the investigation into how the crisis management in Iran, in the form of emergency budgets, legal orders, and military coordination, defines the results of state and local management. With the incorporation of the multidimensional conflict theory, SES frameworks, resilience scholarship, and humanitarian norms, the proposed study provides a theoretical platform upon which the interconnected impacts of the June 2025 war, which include violence, institutional response, environmental and social resilience, and humanitarian legality, can be discussed. Together, these theories provide a holistic approach to the analysis of the crisis of war and recovery in Iran.

2.3 Analysis of research gaps

A number of gaps are critical to the current existing literature on armed conflict impacts. Firstly, analyses have tended to be compartmentalized silos, wherein the health, education, or environmental dimensions are examined independently instead of multi-sectoral models that establish links between human, economic, material, environmental, and legal outcomes (Justino *et al*., 2024) [29]. Secondly, socio-ecological interactions, including the possibility of increased environmental damage or environmental deterioration as a result of economic shocks or the reverse, have not been studied extensively, which complicates modelling of resilience in war and sanctions environments (Diwakar, 2023; Lahr *et al*., 2024; Lujala *et al*., 2010) [10, 32, 33]. Thirdly, the topic of humanitarian financing and logistics after conflicts is a relatively underexplored research area; the interdependence of financial tools, supply-chain management, and governance in the context of recovery work is an interdisciplinary area that needs to be studied in more detail (Kondraganti, 2023) [31]. Lastly, it remains unclear how these legal changes perpetuate structural violence in wartime regimes. It is in light of these gaps that this study attempts to produce granular knowledge that can guide better resilience-building and reconstruction options through a multi-dimensional, systems-based approach.

3. Methodology

The research utilised a qualitative systematic review methodology to synthesize relevant publications about the June 2025 war between Israel and Iran and its effects on Iran. Publications reviewed, which comprise journal papers, industry reports, official statements, and reliable news coverage, were published between 13 June and 28 June 2025.

3.1 Search strategy

A systematic search was performed in academic databases (Web of Science and Scopus), institutional repositories (ICRC and UNESCO), and select news aggregators on publications dated between 13 and 28 June 2025. Search terms consisted of the integration of conflict descriptors with impact dimensions: "Israel Iran war June 2025 and humanitarian impact", "Israel Iran war AND economic consequences", and "Israel Iran war AND environmental fallout". Grey literature (which includes government communiques and NGO situation reports) was also incorporated so as to capture developments in real time (Petticrew & Roberts, 2006) [40].

3.2 Inclusion and exclusion criteria

- **Inclusion:** Peer-reviewed journal articles, government/ industry reports, and large international media reports in English published in 2025 that covered one or more research objectives.
- **Exclusion:** Opinion pieces that lack data, social media posts and anything that is not within the specified date or language.

3.3 Data extraction and management

NVivo 13 was used to code selected documents. The data extraction table (Appendix 1) includes author, publication date, type of source, conflict dimension, major findings, and referenced statistics (Higgins & Green, 2011) [20]. The data was extracted individually by three research assistants to guarantee consistency.

3.4 Quality appraisal

All the documents selected for the review were evaluated based on the qualitative research and credibility of the reports. Criteria such as methodological transparency, the credibility of the source and reporting clarity were assessed.

3.5 Data synthesis and analysis

Data synthesis was done via a thematic analysis approach (Braun & Clarke, 2006) [6]. Codes were organised under the research objectives. Themes were refined through iterative reading and discussion with colleagues to saturation. Furthermore, impact relationships among the dimensions

were shown by conceptual maps.

3.6 Rigour and trustworthiness

Rigour was maintained by means of reflexive memoing, peer debriefing, and documentation of decisions made at every review stage (Lincoln & Guba, 1985) [34].

4. Results and Discussion

4.1 Results presentation

Human impact

Iran has suffered the terrible human losses of the war. According to HRANA (2025) [22], as of June 23, more than 974 Iranians and 3,458 others (including 387 civilians and 268 military personnel) were killed in Israeli airstrikes. Some high-profile people were killed; three of the leading Iranian generals (including the army commander and IRGC leader) and some prominent missile scientists were assassinated at the very beginning of the events (Gambrell *et al*., 2025) [17]. Iranian officials have also detained hundreds of its citizens; at least 705 people had been arrested on political or security-related charges by June 23 (HRANA, 2025) [22], and there have been reports of executions for alleged espionage (three Kurds were reportedly executed on espionage charges) (The Guardian, 2025) [46].

The war led to a huge internal displacement as Iranian authorities were warning people to leave large cities. According to UN experts on human rights, millions of people living in Tehran had to leave their houses after air attacks (The Mirage, 2025) [47]. Others, such as Tabriz and Isfahan, were left by thousands more (Frouws *et al*., 2025) [13]. There were traffic jams and long fuel queues on the roads out of Tehran as the people tried to find safety (Frouws *et al*., 2025) [13]. There was also a slight increase in border crossings (to Turkey, Armenia and Iraq), whereas visa-free travel and closed airspace have so far constrained any mass exodus of refugees (Frouws *et al*., 2025) [13]. Altogether, the human cost in Iran has been catastrophic, almost 1,000 people have been killed, many thousands injured, and mass displacement with complete communities displaced (The Mirage, 2025) [47].

Economic and financial impact

The already battered Iranian economy is in a free fall due to war pressures. Analysts describe the situation as "devastating," as the economy has lost the resilience it had after 14 years of sanctions (Nagraj, 2025) [37]. Capital markets have been shut down since mid-June in Iran, and operations in Tehran, Tabriz and Isfahan have been crippled, which has left workers unsalaried and distorted trade. The supply-chain shocks (due to the strike on the Kharg oil terminal and truck strikes) have led to fuel and goods shortages, and analysts predict a further increase in prices, which increases the rate of inflation (Nagraj, 2025) [37]. Efforts by the government to cap prices have not worked so far. The currency of Iran has gone further down under the crisis. The rial has already lost 90 percent of its value since 2018 due to war jitters (Nagraj, 2025) [37]. The parallel exchange rate stood at approximately 92,250 rials per US$1 in June 23 (compared to approximately 1,039,000 in April) (Nagraj, 2025) [37]. Analysts predict additional depreciation as the Iranian stock and bond markets have been closed.

Government revenues and exports were also struck. According to Bousso (2025) [5], the oil imports of Iran are virtually frozen; the weekly oil supply decreased to almost 1.7 million barrels/day and dropped to only 102,000 bpd. Kharg Island exports (90 percent of Iranian oil exports) came to a halt (Bousso, 2025) [5]. The gas production of Iran also suffered; the fire of South Pars (the largest gas field in the world) caused a partial shutdown, and this destruction of the energy sector will increase inflation and strike against the foreign earnings that Iran is in dire need of (Bousso, 2025) [5]. There is yet no unemployment or other labour-market data, but with whole industries shaken and refugees flooding out of cities, unemployment is likely to skyrocket. There is a common agreement among credible forecasts that Iran will enter a severe recession with a crumbling standard of living (Nagraj, 2025) [37].

Material and military damage

Iranian infrastructure and military resources have also been destroyed in the war. It is reported that 26 provinces were struck by airstrikes, striking military bases, nuclear facilities and cities alike (HRANA, 2025) [22]. The biggest impact was on residential constructions: emergency services in Iran reported that over 90 percent of the 206 locations that Israel attacked were residential (HRANA, 2025) [22]. They struck hospitals, schools and factories such as an autism clinic for children in Tehran (The Mirage, 2025) [47] and an oil depot in Tehran (Bousso, 2025) [5]. Infrastructure also degraded as one of the primary power lines into northern Tehran was struck down before being restored (HRANA, 2025) [22], and the refinery work has become sluggish as employees flee to danger.

The nuclear and military installations of Iran were targeted, and the bombing of the enrichment plants in Iran resulted in enormous destruction. Video and satellite imagery, as well as UN reports, show that Israel has bombed Natanz and Fordow (HRANA, 2025) [22]. The whole above-ground enrichment hall and power systems were destroyed at Natanz (Gambrell *et al*., 2025) [17]. Iranian uranium-enrichment facilities in Natanz and conversion facilities in Esfahan were destroyed, but underground facilities might have eluded damage (CEOBS, 2025) [9]. Iran admits that these strikes inflicted major damage on its nuclear program.

Air defense and military command bases were also struck. A total of dozens of radars and missile launcher sites in western Iran were destroyed by Israeli drones and bombs (Gambrell *et al*., 2025) [17]. Iran also claimed to have been attacked at Evin Prison (a maximum-security prison in Tehran), which led to the destruction of wards of prisoners. It was reported that some parts of the missile base in Iran (Tabriz, Kermanshah, and Ghadir) were also damaged (CEOBS, 2025) [9]. Even cybersecurity infrastructure suffered; the headquarters of the Cyber Police of Iran (FATA) was hit (HRANA, 2025) [22], and the headquarters of the IRIB broadcasting (radio/TV) was bombed, and three media workers were killed (The Mirage, 2025) [47]. Thus, the military command and control of the Iranian nuclear program, and power supply have been destroyed by the war, leaving significant damage to the urban and industrial areas of Iran.

Political shifts and security measures

Iranian political changes have emerged as a result of the war. On record, the regime has not accepted the terms of ceasefire, declaring that it would persist in its efforts to enrich its nuclear capabilities and terminating the U.S. at the expense of its action. In a theatrical defiance, the parliament in Iran (June 25) voted to suspend cooperation with the IAEA and halt the UN nuclear inspections, claiming the

U.S. has torpedoed its diplomacy. This action, which the Council of Guardians would sign, will in effect terminate voluntary cooperation of Iran in regard to nuclear supervision and will be an indicator of an aggressive stance. Iran also sanctioned an emergency war budget (apparently billions of dollars) and could request further foreign loans from allies such as China and Russia.

Domestically, there has been heightened repression on the part of authorities. When strikes were initiated, security forces turned to an inward orientation (The Guardian, 2025) [46]. The Revolutionary Guards and Basij were put on guard, particularly in areas prone to ethnic tensions. Official messages threaten spies, foreign agents and separatists who take advantage of the mayhem (The Guardian, 2025) [46]. This in reality entailed mass arrests: human rights monitors affirmed 705 suspected dissidents or spies arrested since the middle of June (The Guardian, 2025) [46]. Wartime security is becoming a pretext to suppress protesters and journalists: trials have been expedited, and some of them have been executed for allegiance to Israel (The Guardian, 2025; The Mirage, 2025) [46, 47].

The hardline leadership of Tehran (Supreme Leader Khamenei and President Raisi) has become even more firmly in power. They have mobilised the masses with nationalistic propaganda and TV programs of the state. There have been demonstrations by the street demanding revenge against Israel (and the U.S.), which have been frequently coordinated by IRGC-associated organizations. Although people are angry with the government because of the failures, there is no vast anti-regime movement (The Guardian, 2025) [46]. Rather, social media reflects a mood of patriotism and frustration; however, with heavy internet censorship and detentions of critics (including of Baha'i community leaders), there is an implication of dissent being smothered. Hence, the war has intensified the security state of Iran (HRANA, 2025) [22]. New legal instruments and summary actions are instituted: Iran acted swiftly to establish martyrdom decrees to compensate the families of soldiers that were killed, and parliament prepared the groundwork to tighten laws on spies and propaganda. The political lines have been further drawn towards the clerical hardliners who insist on confrontation, and moderate voices have been pushed to the background.

Economic indicators (Before and after war)

Prior to the war, the macroeconomic indicators of Iran were in a sorry state. The IMF predicted zero growth (0.3 in 2025) and hyperinflation (~43) (Nagraj, 2025) [37]. Inflation would have probably reached 40 or more by mid-2025. The war instantly drove indicators even more off the rails. The available official post-war data is meagre, *yet all* the plausible forecasts are pointing at recession. Interest rates on government bonds shot up, stock markets are shut down and international investment has been frozen. Using GDP, even with projected growth of 0.3% in the years, the World Bank/Central Bank is expecting negative growth in the year 2025 (actual figures are yet to be received).

Oil incomes decreased by almost 95 percent as exports almost ceased, which in itself may have deducted approximately 5-10 percentage points from the GDP (Bousso, 2025) [5]. Manufacturing and services are other non-oil industries that are crippled by strikes and power cutoffs. Inflation, already at 40%, is climbing. The lack of food, medication and fuel (stemming from panic buying and sanctions) has caused prices to skyrocket. It was notified that supply shocks would increase inflation. Daily double-digit price increases on staples are being reported by the Iranians. Inflation in the black market will be further enhanced by the price controls that the government places on basic products.

Another sector of the Iranian economy that was affected by the war is its currency (rial). When the war started the rial dropped in value. The parallel market is now trading at a price of about 92,000 to 1 USD compared to about 78,000 to 1 USD just prior to it (a fall of over 18 percent) (Nagraj, 2025) [37]. By 2025, it had already dropped to more than 1,000,000 (parallel) out of its former number of approximately 150,000 because of sanctions. The resulting flight of capital and shortage of commodities caused by the war will drive the rial further down without the introduction of large-scale new control. Besides, even though the official unemployment statistics are lower, it has been estimated that unemployment was at or below 10-12%. As industries and offices shut and millions of people lose their jobs, analysts anticipate soaring unemployment over the next several months. Anecdotally, factory gates were shut and construction sites were halted as people ran out of cities. Most of the private companies had already been eliminated by sanctions; a war economy (and possible mobilization) would reduce the civilian workforce. In general, the findings indicate an economic disaster: recession, inflation and a currency crash.

Environmental fallout

The war also has environmental threats. Initial reports center on the energy infrastructure in Iran: a number of oil depots and oil refineries were targeted. Reuters observes the paralysis of oil exports, which were virtually reduced to zero following attacks on storage facilities (Bousso, 2025) [5]. Air and soil have been contaminated by spilled crude and fires (e.g., in the Shahran oil depot in Tehran). Flaring of gas occurred as a result of damage at South Pars. These oil-and-gas strikes endanger local ecology: any oil or gas leaked into the Persian Gulf would destroy fisheries and coral reefs (a comparable catastrophe was witnessed during the 1980-88 Iran-Iraq War). Analysts caution that the aim to destroy chemical or energy facilities is a threat to spread toxins (benzene, mercury, etc.) into the atmosphere and the water (CEOBS, 2025) [9]. In the most severe scenario, the consequences of oil pollution might cause severe damage to the marine environment of the Persian Gulf (Bousso, 2025; CEOBS, 2025) [5, 9].

Furthermore, assaults on the nuclear plants are serious. The Natanz and Fordow enrichment sites contain uranium hexafluoride (UF6), which is a corrosive gas. According to the IAEA monitors, their attacks might lead to the release of chemicals and radioactive materials (CEOBS, 2025) [9]. To date, off-site radiation levels are normal, but any containment failure would endanger millions of downwinders (Tehran is located 125 km downwind of Natanz) (CEOBS, 2025; Gambrell *et al*., 2025) [9, 17]. Israel claims it did not want a nuclear disaster, but even shockwaves of structures can break laboratory equipment. The Bushehr reactor in Iran (which has already been shut down) was in a precautionary mode for an Israeli strike.

Military sites are additional hazards. The toxic fuels (hydrazine and nitric acid) found in Iranian missile bases have the capabilities to contaminate the ground and water in the case of leakage and the emissions of dioxins and heavy metals in the case of combustion (CEOBS, 2025) [9]. The air

quality in the Persian Gulf has deteriorated already in relation to oil fires and blasts. Ash and water contamination are reported in the southern provinces. There is also the threat to public health with the fuel shortage and lack of equipment in hospitals that are saturated with blast injuries. An online service outage and panic of air attacks interfere with disease monitoring. Programs of vaccination and maternal health are probably discontinued. People in displacement camps are experiencing a crisis in hygiene. Analysts anticipate a humanitarian environmental crisis to come in case the war persists and the resources are limited (CEOBS, 2025; Nagraj, 2025) [9, 37].

4.2 Discussion of findings

The Israel-Iran war of June 2025 has caused deep humanitarian pain in Iran. At least 974 Iranians were killed and 3,458 wounded, including 387 civilians and 268 military personnel, by Israeli airstrikes by June 23, and dozens of children were confirmed dead by rights groups (Gambrell & Keath, 2025; HRANA, 2025) [16, 22]. The feeling of insecurity and fear led to the flight of millions of residents of Tehran and thousands of others of Tabriz and Isfahan, overloading roadways and causing chaos in the fuel line (The Mirage, 2025) [47]. At the same time, the Iranian officials arrested more than 705 people on politicized security grounds, and there were reports of summary executions of alleged spies, which highlights an atmosphere of repression (HRANA, 2025; The Guardian, 2025) [22, 46].

The war aggravated already existing economic distress. The growth in the GDP of Iran, which initially was estimated to be only 0.3 percent in 2025, is currently in the process of shrinking with a closed capital market in Tehran, Tabriz, and Isfahan (IMF, 2025; The National, 2025) [28, 37]. Inflation, which is already at 43.3 percent, is soaring higher with supply-chain shocks due to Kharg oil-terminal strikes and lorry work stoppages causing acute shortages (Nagraj, 2025) [37]. By June 23, the parallel-market exchange rate of the rial had fallen to around 92,250 IRR/USD, an 18% devaluation spike in a few days, and the stock and bond markets were closed (Nagraj, 2025) [37]. Attacks on critical infrastructure have caused grave material damage. In 26 provinces, military bases, power plants, hospitals, schools, and residential blocks were damaged in air raids more than 90 percent of targets in Tehran alone were civilian residences (HRANA, 2025) [22]. Enrichment plants in Natanz and Fordow were also damaged, above-ground halls and power systems were destroyed, and the nuclear development was delayed by years (Goller & Landay, 2025; CEOBS, 2025) [18, 9]. The Cyber Police HQ and IRIB broadcasting center attacks depict that even digital and media infrastructure were not left out (HRANA, 2025) [22].

Iran has also changed to a warlike position politically. In a form of official legal break with nuclear controls, its parliament voted on June 25 to suspend its cooperation with the IAEA and suspend UN inspections (Al Jazeera, 2025) [1]. Emergency war appropriation bills and broadened security statutes make it easy to allocate billions of dollars to defense and cage civil liberties and anti-spy actions (The Guardian, 2025; Mirage, 2025) [46, 47]. The conflict has acute and longer-term risks on the environment. The occurrence of oil-depot and pipeline strikes in Tehran and Kharg Island sparked the massive fires and spills that threatened soil and marine life in the Persian Gulf (Bousso, 2025; CEOBS, 2025) [5, 9]. The radiation levels at the site around Natanz are only nominal, yet the threat of uranium hexafluoride leakage highlights the possibility of public-health catastrophes in case of the failure of containment (CEOBS, 2025) [9]. Generally, the results indicate a war that extends beyond classic military action and generates human, economic, infrastructural, political, and environmental effects. This underscores the need for comprehensive humanitarian help, specific economic stabilization, strong environmental cleanup, and renewed legal frameworks to safeguard civilians and provide resilience to the social fabric in the face of continuing hostilities.

5. Conclusion and Recommendations

5.1 Conclusion

This study is a multi-level exploration and evaluation of the Israel-Iran conflict in June 2025, uncovering the ripple impacts in the humanitarian, economic, infrastructural, political, and environmental domains. The results highlight the destructive impact of civilian loss (almost 1,000 deaths and thousands displaced) and the great extent to which the economy of Iran was disrupted, with GDP contraction, hyperinflation, and currency collapse being catalyzed by targeted strikes against energy infrastructure. The nuclear and military installations damage also contributed to slowing down the strategic capabilities of Iran by several years and the realignment of politics, including the disruption of IAEA cooperation and the focus on confrontational legal positions. Ecosystem examinations reveal the presence of acute oil spill risks and likely radiological leakage, which raises the question of long-term ecosystem stability.

This study fills the key gaps of siloed conflict studies by incorporating Galtung's conflict theory, resilience and the social ecological systems framework, and humanitarian intervention standards. It shows the usefulness of a systems-based approach in mapping interdependencies, e.g., infrastructural damages are known to induce economic downfall, social fragmentation, and environmental destruction. By doing so, it provides a theoretical contribution to the conflict scholarship as well as practical information to policymakers and humanitarian actors.

5.2 Recommendations

- **Enhance integrated monitoring systems:** Join forces in the development of joint data-sharing partnerships among humanitarian agencies, environmental monitors, and economic analysts to monitor indicators that are real-time across sectors to enhance early warning and responses (Rice *et al*., 2017; Mueller *et al*., 2020) [41, 36].
- **Strengthen civilian protection mechanisms:** Strengthen independent observing with robust accountability structures like mobile civilian protection units with satellite communications to reduce harm to civilians and to observe cultural and proportionality observance (ICRC, 2016; Henckaerts & Doswald-Beck, 2005) [24, 19].
- **Economic stabilization and social safety nets:** Establish cash-transfer schemes to families and small businesses, financed with emergency loans provided by the multilateral institutions, to cushion the GDP shocks and hyperinflation (IMF, 2025; The National, 2025) [28, 37].
- **Environmental remediation and resilience planning:** Initiate spill and strike site environmental impact assessments, and then roll out remediation projects such

as the Kharg Island coastal clean-ups and make ecological restoration a part of national reconstruction budgets (CEOBS, 2025; Lahr *et al*., 2024) [9, 32].

- **Legal reform and governance dialogue:** Support national dialogues that are inclusive to review emergency laws, restore judicial independence, and recalibrate security legislation to the human rights standards, rebuilding public trust and addressing structural violence (Human Rights Watch, 2025; Carnegie Endowment for International Peace, 2025) [8].
- **Research future conflict resilience:** Stimulate interdisciplinary research integrating satellite imagery analytics, economic modelling and social network analysis to enhance resilience measures and evidence-based policy to narrow the research gaps in this paper (Justino *et al*., 2024; Kondraganti, 2023) [29, 31].

Through these suggestions, Iran and the international community will be able to negotiate the intricate post-modern high-intensity warfare more effectively and promote long-term recovery and institutional resilience.

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8. Data availability statement

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Appendix

Author/ publication date	Type of source	Conflict dimension	Major Findings	Referenced Statistics
HRANA, 2025 [22]	Human rights NGO report	Human impact	Civilian and military deaths, detentions, infrastructure damage	974 Iranians killed; 3,458 killed in Israeli airstrikes (387 civilians, 268 military); 705 arrests; 26 provinces struck; 90% of 206 attack sites residential
Gambrell *et al*., 2025 [17]	News agency (AP/Reuters)	Human Impact & Military Damage	Assassination of senior generals and missile scientists; destruction of nuclear facilities; strikes on radar and missile bases	3 generals killed (army commander, IRGC leader); Natanz enrichment hall destroyed; dozens of radar/missile sites destroyed
The Guardian, 2025 [46]	International media	Human Impact & Political Shifts	Reports of executions, repression, propaganda, suppression of dissent, and mass arrests	3 Kurds executed for espionage; 705 dissidents arrested since June; expedited trials and executions reported
The Mirage, 2025 [47]	Regional/ independent media	Human Impact & Political Shifts	Displacement from Tehran, Tabriz, Isfahan; repression of protesters; propaganda-led demonstrations	Millions displaced from Tehran; thousands from Tabriz/Isfahan; mass displacement
Frouws *et al*., 2025 [13]	Migration analysis/report	Human Impact	Internal displacement and border movements	Traffic jams, fuel queues, slight increase in border crossings (Turkey, Armenia, Iraq); visa-free/closed airspace limited mass exodus
Nagraj, 2025 [37]	Economic analyst/media	Economic Impact	Severe recession, inflation, rial depreciation, capital flight	Rial depreciation: ~92,250 per USD (June 2025) vs ~1,039,000 (April); rial lost 90% value since 2018; IMF predicted inflation ~43%; unemployment forecast 10-12%+
Bousso, 2025 [5]	Energy market analyst (Reuters/Bloomberg)	Economic & Environmental Impact	Halt of oil exports; damage to Kharg oil terminal and South Pars; environmental risks from oil spills/fires	Oil exports fell from 1.7 million bpd to 102,000 bpd; Kharg exports (90% of Iran's oil) halted; South Pars partial shutdown
CEOBS, 2025 [9]	Environmental NGO	Environmental Fallout & Military Damage	Environmental hazards of oil/gas strikes, nuclear plant risks, contamination from toxic fuels	UF6 chemical risk at Natanz/Fordow; environmental remediation warnings; hydrazine/nitric acid contamination risk