WWW.IJRPR.COM

International Journal of Research Publication and Reviews

Journal homepage: www.ijrpr.com ISSN 2582-7421

Operation Sindhur: A Comprehensive Analysis of India's Strategic Response

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ABSTRACT

Operation Sindhur: A Comprehensive Analysis of India's strategic response explores the multidimensional impact of a landmark Défense initiative that marked India's transition toward hybrid, technology-driven warfare. This study analyses operation sindhur 2025 through a qualitative Lense supported by comparative case analysis of pervious Indian military operation such as operation Vijay (Kargil War) and the Balakot air strikes. The paper investigates how indigenous technological advancements-including AI-enabled surveillance, autonomous drones, and smarter missile systems-played a pivotal role in enhancing operational effectiveness and reducing dependency on foreign defence imports under the make-in-India initiative.

In addition to the tactical dimension, the research delves into the political and discourse surrounding the operation. It evaluated the government's strategic messaging, opposition responses, and the role of media in shaping national and international perceptions. The diplomatic ramifications are examined through an analysis of bilateral tensions with Pakistan and the varied responses of global powers and institutions, particularly the United Nations.

A comparative military strategy framework is used to assess key factors such as objectives, scale technological integration, international response, and long-term impact. The study concludes with strategic recommendations, emphasizing the need for doctrinal modernization, ethical AI governance, and enhanced diplomatic communication.

Finally, the paper identifies areas for future research including the psychological impact of tech-enabled operations, civilian military trust and India's emerging role in setting global norms for digital warfare. This comprehensive analysis provides both academic and policy insights onto India's evolving strategic environment.

Keywords: Operation sindhur, India defence policy, hybrid warfare, indigenous military technology, Make-in India, AI in warfare strategic communication, India-Pakistan relations, geopolitical strategy, military doctrine.

INTRODUCTION

On April 22, a devastating attack was carried out in Pahalgam, India, by the Pakistani terrorist group "The Resistance Front" (TRF). In this crime, 26 defenseless tourists were split up into groups based on their religious convictions and then brutally slaughtered. TRF is a branch of the Pakistan-backed, well-known terrorist organization Lashkar-e-Taiba. TRF made two claims of responsibility for the attack within a few hours of the strike. When Pakistan refused to acknowledge or dismantle these terrorist networks, India was compelled to act responsibly but firmly. On the evening of May 7-8, 2025, the Indian government conducted "Operation Sindhur" in retribution. The precise, non-escalating response targeted nine different terrorist training facilities in Pakistan and Pakistan-Occupied Kashmir. There was no military involvement. However, Pakistan responded more forcefully in the early hours of May 8 by launching coordinated drone and missile attacks against over a dozen Indian military installations in the northern and western theaters, including Srinagar, Jammu, Pathankot, Amritsar, Ludhiana, Bathinda, and Bhuj. India's robust multi-layered air defense system and integrated counter-drone grid prevented these strikes by recovering debris that could be positively identified as belonging to Pakistan.

In reaction to these provocations, India launched precision attacks against Pakistani Air Defense installations at multiple locations in Pakistan. These assaults were conducted under the precept of "equal intensity in the same domain" and were deliberately restricted to destroying the systems that had made the earlier Pakistani strike possible. By concentrating only on the installations that were directly involved in the attack, India was able to balance the necessity for deterrence with its larger commitment to de-escalation. In the meantime, sixteen innocent people—including three women and five children—were killed when Pakistan unjustly bombarded civilian areas along the line of control in Jammu & Kashmir with mortars and heavy-calibre artillery. Here, too, India was compelled to respond in kind with mortar and artillery fire. Although it would vehemently oppose any attempts by Pakistan to do so, the Indian military reiterates its commitment to non-escalation.

Throughout Operation Sindhur, India's strategic calculations were directed by an unwavering objective: to protect civilian lives and national sovereignty without inciting a larger military war. By restricting military strikes to terrorist infrastructure, India showed its non-escalation strategy and respect to

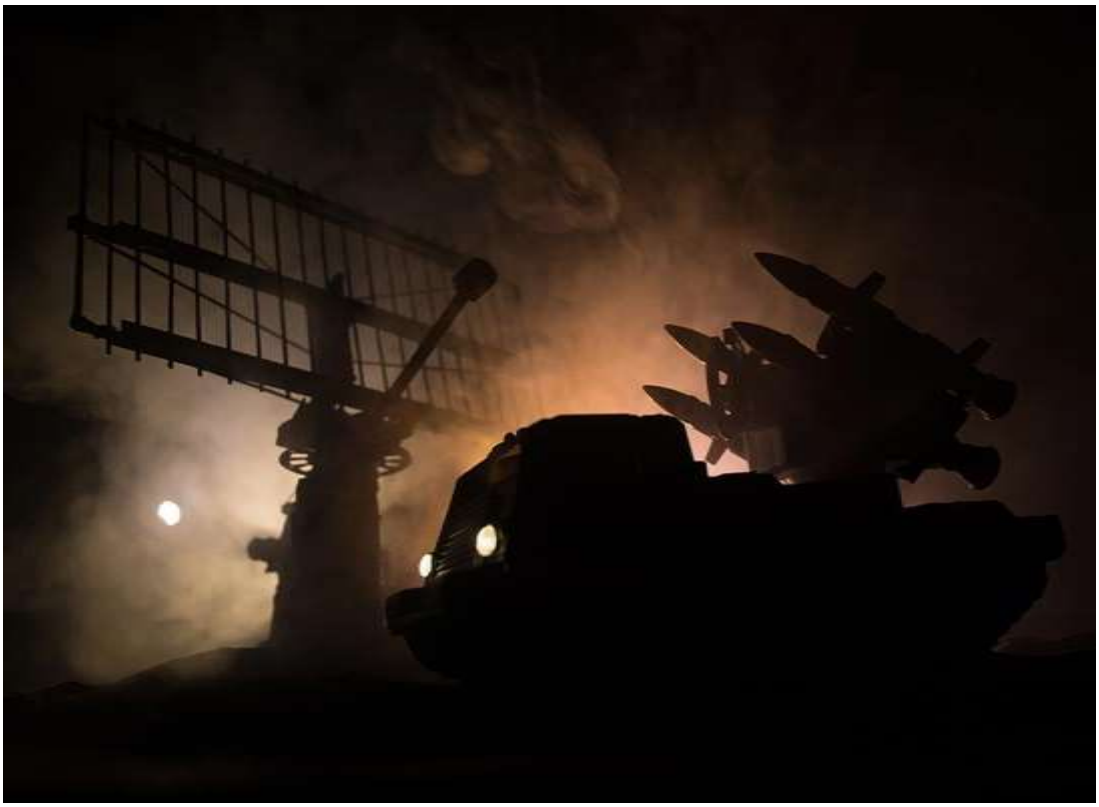
recognized international norms. Pakistan has become the focal point of international terrorism due to a number of occurrences; fingerprints from Pakistan have been found in several terrorist attacks across the globe. In an attempt to provide justice to the victims of terrorist attacks, such as those in Mumbai in 2008, Pathankot in 2016, Pulwama in 2019, and many more, India has already provided forensic evidence and asked Pakistan to prosecute the assailants. India also submitted an updated dossier detailing Pakistan's role in sheltering and aiding designated terrorists to the UN 1267 Sanctions Committee.

Pakistan has repeatedly blocked joint investigating teams, proving that its promises for new "joint investigations" are nothing more than postponements, even though India fully cooperated in forensic, call-data, and on-site evidence sharing for the Mumbai 2008 and Pathankot 2016 probes. India has also suspended the Indus Water Pact due to population changes, climate change, and other problems. The terms of the pact's signing have been significantly changed by these events. It is a "violation of the Treaty" and a betrayal of its "goodwill and friendship" spirit alone that Pakistan has consistently refused to engage in government-to-government negotiations to resolve the changes.

Operation Sindhur is a principle-driven military response that is based on strategic restraint. It was a response to a brutal terrorist attack that began in Pakistan and targeted innocent visitors. India had the right to reply and did so in a calm, measured, reasonable, and non-escalating manner.

OPERATION SINDHUR: DETAILED OVERVIEW

A high-precision, multi-domain offensive, Operation Sindhur represents the strategic evolution of India’s counter-terrorism doctrine



On the intervening night of 6-7 May, 2025, from 01:05 to 01:30 AM, Indian armed forces conducted a tri-service military operation codenamed ‘Operation sindhur’. It targeted terrorist infrastructure in Pakistan and Pakistan-occupied Jammu and Kashmir (PoJK), aiming to neutralise the operational capabilities of groups responsible for cross-border terrorism on Indian soil.

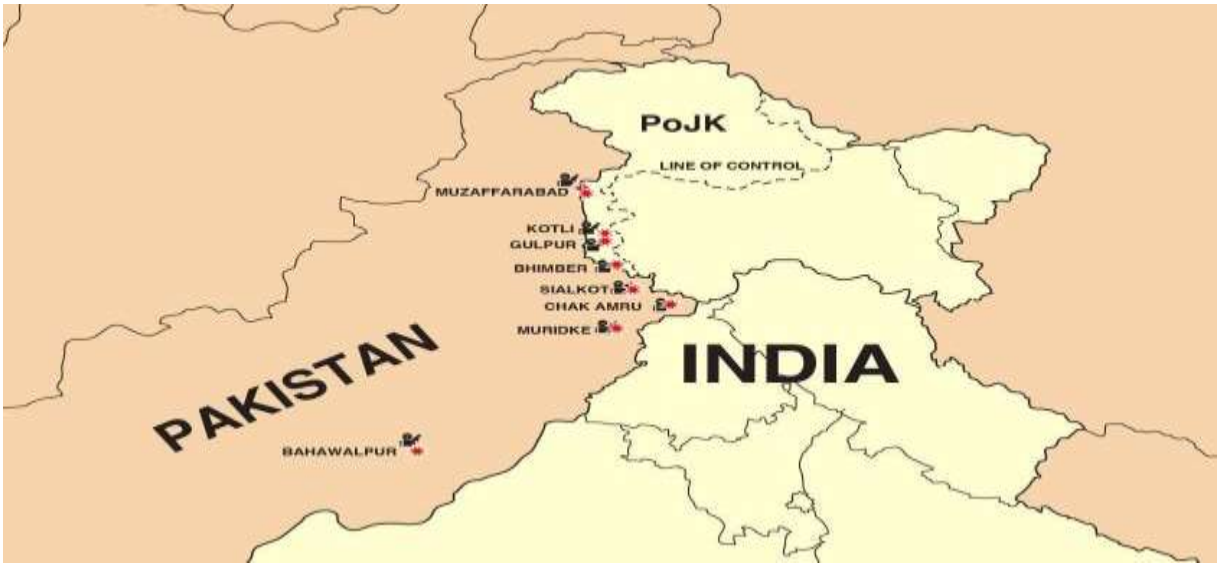
India said the operation was intended to “pre-empt” and “deter” cross-border terrorism, specifically the Pahalgam attack of 22 April, 2025, that killed 26 civilians (25 Indians and one Nepali) at Baisaran Valley in Jammu and Kashmir. The Indian government attributed the attack to The Resistance Front (TRF), a proxy of the Lashkar-e-Taiba (LeT). The group had initially claimed responsibility for the attack and subsequently denied it, alleging a “cyber intrusion”.

"Focused, measured, and non-escalatory in nature" is how India described its actions. The operation deliberately avoided hitting Pakistani military sites in order to minimize the likelihood of escalation. Defense Minister Rajnath Singh described Operation Sindoor as a "ongoing operation." He went on to say that the strikes had killed over 100 terrorists. One of the most well-known fatalities was Abdul Rauf Azhar, the commander of Jaish-e-Mohammed (JeM), who took part in the December 1999 hijacking of IC-814 and the killing of American journalist Daniel Pearl. According to reports, 10 members of Masood Azhar's family, the JeM commander, were killed.

The Indian military had not conducted a larger operation since the 1971 War. Moreover, unlike previous operations such as the 2016 surgical strikes and the 2019 Balakot attack, which were targeted responses, Operation Sindoor was a multi-domain, high-precision onslaught that swept across Pakistan's Punjab province and PoJK. This signaled a change in strategy for India's fight against transnational terrorism.

The operation involved targeted strikes on nine targets, including four in Pakistan and five in PoJK, linked to anti-India terrorist groups like as the LeT, JeM, and Hizbul Mujahideen. Among the targets were the JeM headquarters in Bahawalpur and the LeT headquarters in Muridke. The operation involved targeted strikes on nine targets, including four in Pakistan and five in PoJK, linked to anti-India terrorist groups like as the LeT, JeM, and Hizbul Mujahideen. Among the targets were the JeM headquarters in Bahawalpur and the LeT headquarters in Muridae.

Figure 1: Maps showing targeted sites in Pakistan and PoJK



Name	Location	Affiliation/Function	Reason for Selection
Sawai/ Shawai Nala	Muzaffarabad, PoJK	LeT training centre	Nearly 30 km from the Line of Control (LoC); terrorists involved in the Sona Marg (October 2024), Gulmarg (October 2024), and Pahalgam (April 2025) attacks trained here.
Syedna Bilal	Muzaffarabad, PoJK	JeM staging area; arms, explosives, jungle survival training	Major staging and training centre for JeM operatives.
Gulpur	Kotli, PoJK	LeT base active in Rajouri-Poonch	Located 30 km from the LoC; terrorists involved in the Poonch (April 2023) and Hindu pilgrims' bus (June 2024) attacks trained here.
Barnala	Bhimber, PoJK	LeT; Weapons handling, IED, jungle survival training centre	Located 9 km from the LoC; the main centre for weapons and IED training.
Abbas	Kotli, PoJK	LeT fidayeen (suicide attacks) training centre	Nearly 13 km from the LoC; used for training suicide attackers; capacity for 15 terrorists.

Sarjal	Sialkot, Pakistan	JeM; Training for attacks on J&K Police	Located about 6 km from the International Boundary (IB); terrorists who killed four J&K police personnel in March 2025 trained here.
Mehmoona Joya	Sialkot, Pakistan	Large Hizbul Mujahideen camp; control centre for Kathua-Jammu region	Located about 12 km from the IB; the Pathankot Air Force base attack of January 2016 was planned and directed from here.
Markaz Taiba	Muridke, Pakistan	LeT headquarters; training centre	About 25 km from the IB; the 26/11 attackers, including Ajmal Kasab and David Headley, trained here.
Masjid/Markaz Subhan Allah	Bahawalpur, Pakistan	JeM headquarters; recruitment, training, indoctrination	Located around 100 km from IB; the main centre for JeM leadership and operations.

- Operation Sindhoor was an intelligence-driven operation that involved the use of satellite monitoring, drone technology, and human intelligence. Indian Air Force (IAF) fighter jets took off under the guise of a training exercise, concealing their movements and increasing surprise using radar blackouts and NOTAM (Notice to Airmen). As part of the standoff weapons operation, missiles were launched by fighter jets operating from Indian territory. India used the HAMMER and SCALP weapon systems throughout the operation. Sky Striker suicide drones with a 10-kg warhead were also used by India.
- SCALP, also known as Storm Shadow, is an air-launched cruise missile well-known for its stealth feature and primarily employed for long-range deep-strikes into enemy territory.

- The all-weather air-to-ground precision-guided munition (PGM) called HAMMER (Highly Agile Modular Munition Extended Range) is manufactured by the French firm Safran. The PGM is not impacted by jamming and can be launched from low altitude across rough terrain. Precision-guided weapons were chosen with the goal of destroying target areas with little collateral damage, including civilian casualties
- The choice of precision-guided munitions was meant to neutralise target sites without causing any major collateral damage in the form of civilian casualties.

Aftermath of the Attack: Action-Reaction Cycle of Escalation

Following Operation Sindhur, Pakistan accused India of carrying out an act of aggression against civilians. It claimed that the Indian attack had killed 26 Pakistani civilians and injured 46 more. In response, Pakistan has carried out heavy bombardment along the Line of Control's neighboring villages, killing at least 12 Indian civilians, one army jawan, and wounded 51 more. Additionally, Islamabad highlighted the UN Charter's Article 51, which grants the authority to strike back at India "at a time and place of its own choosing." A gurdwara in Poonch was one of the targets. On the intervening night of May 7-8, 2025, Pakistan also attempted to engage several military targets in Northern and Western India. These included targets in J&K (Awantipura, Srinagar, Jammu), Punjab (Pathankot, Amritsar, Kapurthala, Jalandhar, Ludhiana, Adampur, Bhatinda, Chandigarh), Gujarat (Bhuj), and Rajasthan (Nal, Phalodi, Uttarlai). To counter these attacks, India deployed the Integrated Counter UAS (Unmanned Aerial Systems) Grid and air defense systems.

India responded on May 8 by targeting Air Defense Radars and Systems in several Pakistani cities, such as Rawalpindi, Lahore, and Karachi. The air defense system in Lahore was reportedly rendered inoperable. India is also accused of using Israeli Harop drones during these raids. Then came a series of drone strikes by Pakistan that hit a number of locations along the western borders, including Jammu, Pathankot, and Udhampur. The IAF used its Integrated Counter UAS Grid and other air defense systems, including the domestically produced Akash, S-400 Triumph, and Barak-8 MRSAM (medium range surface-to-air missile), to help avert the attacks.

GLOBAL DIMENSION

Diplomatic Signalling:

India briefed the United States (US), United Kingdom (UK), Saudi Arabia, United Arab Emirates (UAE), and Russia about its military operations and related developments. “India’s actions have been focused and precise. They were measured, responsible and designed to be non-escalatory in nature. No Pakistani civilian, economic or military targets have been hit. Only known terror camps were targeted,” a statement issued by the Indian Embassy in Washington and shared by the MEA read. National Security Advisor (NSA) Ajit Doval also spoke to the acting US NSA and Secretary of State Marco

Rubio and briefed him about India's actions. Doval also drew India's redlines, saying, "India had no intent to escalate but was well prepared to retaliate resolutely, should Pakistan decide to escalate".

Media Coverage:

The global media coverage has largely painted India's actions in a favourable light. The Wall Street Journal stated that the Operation Sindhur was "in retaliation for a deadly militant attack on tourists in Kashmir, intensifying a confrontation between the nuclear-armed neighbours." The BBC reported that "the Indian defence ministry said the strikes… were part of a "commitment" to hold those responsible for the 22 April attack which left 25 Indians and one Nepali national dead "accountable." It said the Pahalgam attack was "the worst attack on civilians in the region in two decades, and sparked widespread anger in India."

The French Le Monde compared the 7 May strikes with two past episodes of response in the wake of terror attacks in Uri and Pulwama. It noted that this time the response was "much more heightened and the retaliatory strikes much stronger". Referring to Pakistani PM Shehbaz Sharif's comments on his country's "right to respond decisively to this unprovoked Indian attack", the paper noted that "he does not hold the keys to power."

Anadolu, Türkiye's state-run news agency, said "multiple explosions were heard in different parts of Pakistan and Pakistani Kashmir," following India's strikes. Alongside the Indian military's statements, it heavily quoted Lt Gen. Ahmed Sharif Chaudhry, the spokesman of Pakistan's military, and Prime Minister Sharif.

UAE's The National reported on the civilian suffering on the Indian side from Pakistan's shelling fire and mentioned Sheikh Abdullah bin Zayed, UAE Deputy Prime Minister and Minister of Foreign Affairs, calling on India and Pakistan to "exercise restraint, de-escalate tension and avoid further escalation that could threaten regional and international peace."

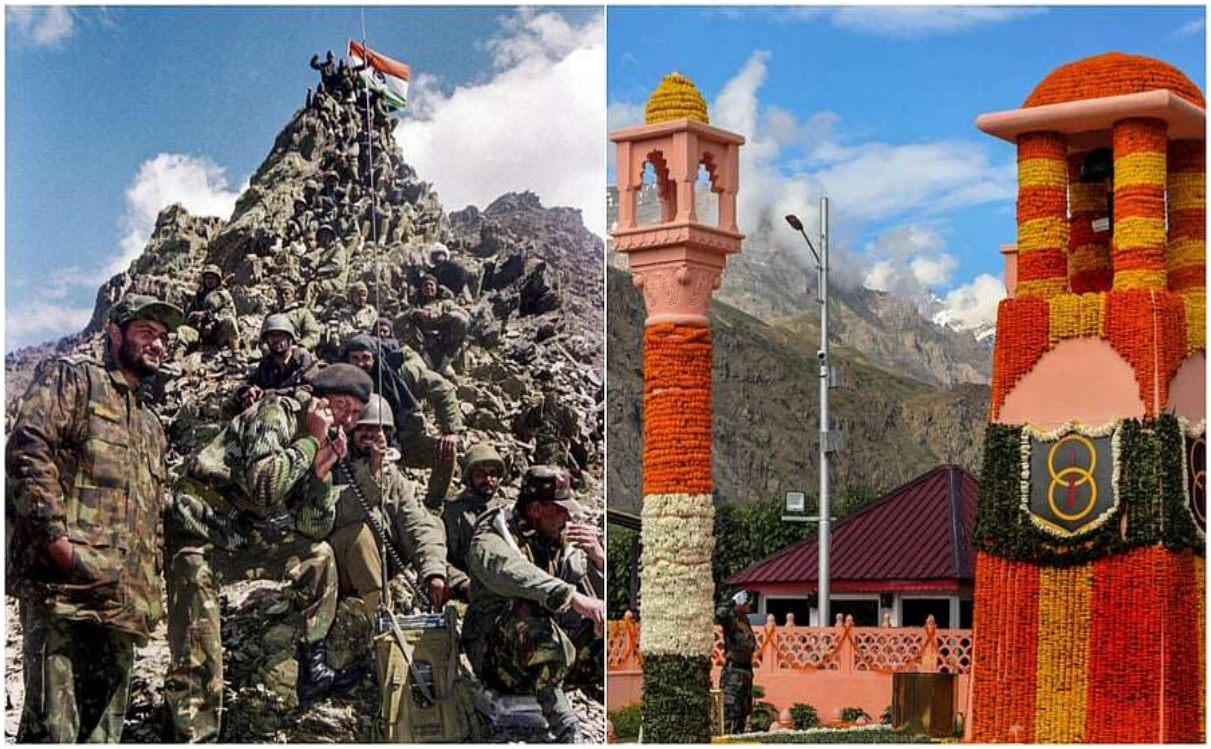
The Russian Tass news agency focused its reporting on India's official remarks and highlighted that the strikes aimed at "targeting the roots of cross-border terror planning".

As it stands, Operation Sindhoor represents an ongoing military campaign. It has unequivocally demonstrated a significant evolution in India's counter-terrorism strategy. It underscores the fact that India now reserves the right to conduct pre-emptive strikes against terrorist outfits irrespective of the location of their bases.

COMPERATIVE HISTORICAL CONTEXT

[OPERATION VIJIAY 1999: LIMITED WAR DOCTRINE]

Amid rising tensions between India and Pakistan, the month of May also marks Kargil War began on this day in 1999 | The Kashmir conflict, Operation 'Vijay' & how India won back its land the beginning of the Kargil war in 1999 that was one of the deadliest battles fought between the two nuclear armed nations.



In this photo from PTI archives, Indian army soldiers are seen at Tiger Hill in the Drass-Kargil area of Ladakh(L), Kargil War Memorial in Dra's.

The Pahalgam terrorist attack that killed 26 people, mostly tourists in Kashmir has yet again brought to the fore the constant tension simmering between India and Pakistan.

In the aftermath of the deadly terrorist attack, India took a series of drastic measures, both diplomatic and otherwise in retaliation-closing the land border, cancelling visas and suspending the Indus water Treaty.

Amid rising tensions between India and Pakistan, the month of May also marks the beginning of the Kargil war in 1999 that was one of the deadliest battles fought between the two nuclear armed nations. **The Kashmir conflict**

The division of India and Pakistan into Hindu and Muslim majority nations respectively, began a series of mass migration and communal violence in 1947. With the divide-and-rule policy implemented by the British, territorial conflicts over Kashmir also rose.

When armed terrorists backed by Pakistan aimed to take over Kashmir, the Muslim majority state which was headed by a Hindu king, agreed to cede to India in exchange for military protection, sparking off a dispute that would see at least two major wars and constant conflicts over the decades.

Kargil War- How it began

While both India and Pakistan had tested nuclear weapons a year earlier, the hostile neighbours in 1999 signed the Lahore Agreement to prevent a war. But despite that, Indian Army soldiers were tipped off in first week of May by some local shepherds of suspicious activity in the Indian side which also included the Kargil region. The armed men included both terrorists and Pakistani soldiers. Under Operation Badr, the infiltrators wanted to force their way and capture Kargil as part of a larger plan to claim Kashmir.

How India retaliated

The Indian Army hit back at the Pakistani side by launching operation 'Vijay' and reclaimed the infiltrated regions. The Indian Air Force also aided the Army alongside and their operation was named Operation 'Safed Sagar'.

The war lasted almost for three months and diplomatic negotiations that included international community also pressurising Pakistan to recede. Eventually, the then Pakistan PM Nawaz Sharif announced their side would retreat. The Battle of Tiger Hill was one of the fiercest battles in the war and India managed to recapture the point.

Pakistan on Saturday announced that it has conducted a successful training launch of the Abdali Weapon System a surface-to-surface missile with a range of 450 km, amid heightened tensions with India following the Pahalgam terror attack.

"The launch was aimed at ensuring the operational readiness of troops and validating key technical parameters, including the missile's advanced navigation system and enhanced manoeuvrability features," the army said in a statement.

The army said the missile launch was part of "Exercise INDUS" without giving details about the exercise.

[BALAKOT ARISTRIKES 2019: STRATEGIC AIRPOWER USE]

On February 14, 2019, a Central Reserve Police Force convoy was attacked by a vehicle-borne suicide bomber near Pulwama in Kashmir. The blast which killed 40 personnel was claimed by Jaish-e-Mohammed (JeM), a banned terror outfit from Pakistan. In response to the attack, on February 26, the Indian Air Force (IAF) struck a JeM terrorist camp at Balakot, located in the Khyber Pakhtunkhwa province of Pakistan. This was the first time since the 1971 War that Indian aircraft had carried out an airstrike on Pakistani soil.

The next day, the Pakistani Air Force (PAF) launched a retaliatory strike in the Rajouri sector of Jammu. In the ensuing aerial battle, India claimed to have shot down a Pakistani F-16 fighter aircraft while losing a MIG-21 whose pilot was captured after he was forced to eject over Pakistani-held-territory. The return of the Indian pilot after 48 hours and some quiet international mediation defused the situation. On February 28, then President Donald Trump announced at a press conference in Hanoi that there was "reasonably attractive news from Pakistan and India" and that the rising tensions could be coming to an end. After the situation had eased, both India and Pakistan claimed victory. This implies that the two countries have learned different lessons from the crisis, which is likely to have implications for how military force is used in the event of a future crisis.

Two Claims of Victory

On the Indian side, there is a sense that Pakistan's nuclear blackmail strategy has run its course. The Balakot airstrikes illustrated that strategic space exists for the limited use of military force, and fears that any level of conflict would quickly escalate into the nuclear domain are unfounded. With these lessons in mind, India can no longer remain in a passive posture that has encouraged Pakistan to continue with its "proxy war" in Jammu and Kashmir.

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There is also an opinion that India's conventional military superiority must be used to deter Pakistan from backing terrorist activity in India. This view is accompanied by criticism that India acted feebly in response to previous terror attacks—notably the Parliament attack in 2001 and the Mumbai attacks in

2008—by not employing its military power against Pakistan. While cross-border military strikes may not lead to Pakistan dismantling its terror network, they would send a strong message that Pakistan's behavior would incur costs.

From India's perspective, the Balakot strike also dispelled the notion that the use of airpower is escalatory. Speaking at a seminar in 2020, the Indian Chief of Air Staff, Air Chief Marshal RKS Bhaduria, stated: "Balakot was a clear demonstration that there exists a space within the sub-conventional conflict boundary wherein the Air Force can be used for targeting and yet have escalation control." With stand-off weapons and precise targeting capability, the use of airpower could be a more attractive and less risky option in the future compared to sending soldiers across the Line of Control (LoC) as was done in September 2016.

On Pakistan's part, the PAF's retaliatory strike on February 27 named "Operation Swift Resort" was also hailed as a victory. Addressing an Air Staff Presentation meeting held in Islamabad on May 1, 2019, Pakistan's Air Chief, Air Chief Marshal Mujahid Anwar Khan, said that a "befitting reply" had been given to the "enemy's misadventure" and that "the PAF's swift response was the demonstration of our firm resolve, capacity and capability in thwarting the nefarious designs of the adversary."

Pakistan's response following the crisis also indicates the military's belief that it can conventionally respond in a more than equal measure to any action restricted to a limited cross-border operation. Speaking at an IISS-CISS Workshop in London on February 6, 2020, retired Lt. Gen. Khalid Kidwai noted that Pakistan has a "declared policy of 'Quid Pro Quo Plus against a limited Indian attack." To prevent escalation, Pakistan also continues to rely on its nuclear capability. As opposed to the Indian thinking that it had called Pakistan's nuclear bluff, retired Gen. Kidwai further stressed that the Balakot crisis "amply demonstrated" that "Pakistan's nuclear weapons continue to serve the purpose for which they were developed," and that: "It is precisely the presence of these nuclear weapons that deters, and in this specific case, deterred India from expanding operations beyond a single unsuccessful airstrike."

With neither side wanting to back down on its public posture, the graduated use of military force is likely in a future crisis.

The "Quid Pro Quo Plus" strategy noted by Gen. Kidwai is an attempt by Pakistan to restore nuclear deterrence by claiming that Pakistan is willing to climb the escalation ladder. India sees this as a bluster. With neither side wanting to back down on its public posture, the graduated use of military force is likely in a future crisis.

[OPERATION SINDHUR 2025: INTEGRATED TECHNOLOGY AND POLITICAL MESSAGING]

Operation Sindhur 2025: Integrated Technology and Political Messaging is a sophisticated, state-backed initiative designed to harness the power of emerging technologies in tandem with carefully orchestrated political narratives to influence public perception, shape electoral outcomes, and assert strategic dominance in key regions. At its core, the operation utilizes artificial intelligence, machine learning algorithms, and big data to analyse population behaviour, detect sentiment trends, and tailor content that resonates with specific communities. Through coordinated campaigns across social media, messaging apps, and traditional media channels, Operation Sindhur disseminates both overt and covert messages that support desired political ideologies or undermine opposition movements. Deepfake technology, bot networks, and psychological operations (psyops) are employed to create confusion, reinforce ideological divisions, or build consensus where needed. The political messaging is not only localised to reflect linguistic and cultural nuances but also subtly aligned with broader geopolitical objectives, such as regional stability, economic alignment, or territorial assertion. By integrating digital surveillance, cyber capabilities, and narrative control, Operation Sindhur 2025 represents a new era of hybrid influence warfare—where borders are less defined by geography and more by control over information and perception.

INDIGENOUS DEFENCE INNOVATION: KEY TECHNOLOGIES USED IN OPERATION SINDOOR

Operation Sindhur has highlighted India's military might and indigenous weapons. Indigenous development of the defence ecosystem has been made possible by contributions of the Defence Research and Development Organisation (DRDO), and lately by Innovations for Defence Excellence (iDEX).

Indigenous Technologies used in Operation Sindhur:

Sky Striker Loitering Munitions:

- Suicide drones developed by Bengaluru-based Alpha Design Technologies in collaboration with Elbit Systems (Israel).
- The precision-striking drone can carry a 5-10 kg warhead and has a range of 100 km.
- Its electric propulsion system helps reduce noise, making it suitable for covert missions at low altitudes.
- Cost-effective solution for long-range precision strikes. The drone supports direct aerial fire missions and enhances operational awareness and survivability for ground forces.

D-4 Anti-Drone System

- Anti-drone system developed by DRDO.
- Capability to neutralise hostile drones by disrupting GPS signals.

- Equipped with advanced radar, RF jammers, and laser-based kill mechanisms, the D4 system can disrupt and disable enemy UAVs mid-flight.
- Can be utilised for other purposes like- real-time battlefield monitoring and surveillance.

Akashteer

- Akashteer is an indigenous AI-powered Air Defence System (India's own Iron Dome).
- **Designed and manufactured jointly by**: DRDO, ISRO and Bharat Electronics Limited (BEL).
- **Part of India's overall C4ISR:** (Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance) system.
- Akashteer works in coordination with ISRO satellites and Indian Regional Navigation Satellite System (NAVIC) GPS.
- Integrates data from radars and sensors, and provides real-time situational awareness and enables swift responses to aerial threats (drones, missiles, UAVs and other loitering munitions).
- Through automated detection-and-response mechanisms, Akashteer can neutralise hundreds of incoming threats with unmatched precision.
- Its vehicle-based, mobile configuration guarantees flexibility in high-risk areas.

Akash Missile Defence System

- Indigenously developed by DRDO.
- Medium-range, mobile surface-to-air missile (SAM) designed to neutralise aerial threats such as fighter jets, drones, cruise missiles, and air-to-surface missiles.
- Operates on a command-guidance system with datalink for mid-course corrections and switches to active radar homing in the terminal phase.
- **Propulsion:** The missile is propelled by an integrated ramjet-rocket engine, allowing it to maintain supersonic speeds (Mach 1.8 to 2.5) throughout its flight.
- **Range:** Its range extends up to 25–45 km, with the ability to intercept targets at altitudes up to 20 km. The missile carries a 60 kg high-explosive, pre-fragmented warhead, detonated by a digital proximity fuse for maximum impact.
- **Supported by a sophisticated radar network**: Real time multi-sensor data processing enables simultaneous engagement of multiple targets from any direction.
    - Rajendra phased array radar can track up to 64 targets and guide eight missiles simultaneously.
    - 3D Central Acquisition Radar (3D CAR) provides long-range surveillance and target acquisition.
- Akash has evolved over the years, with variants like Akash-1 (25 km range), Akash-NG (up to 30 km with improved guidance), and Akash Prime (up to 35 km, optimised for low-altitude threats).

The Akash's integration with advanced command-and-control systems like Integrated Air Command and Control System (IACCS) enabled real-time threat neutralisation.

POLITICAL AND PUBLIC DISCOURSE IN OPERATION SINDHUR 2025

Operation Sindhur 2025 is not only a technological and strategic campaign but also a carefully constructed political project that deeply influences public discourse. At the forefront is the political rhetoric, government narrative and which frames the operation as a symbol of national strength, digital sovereignty, and strategic self-reliance. Government leaders emphasize themes such as security, innovation, and patriotism, using Operation Sindhur as a rallying point to consolidate public support and project a vision of a technologically empowered India ready to face 21st-century challenges. This rhetoric is often reinforced through speeches, state-backed media content, and symbolic gestures designed to resonate with nationalist sentiments.

In contrast, opposition parties and civil society actors have raised concerns about transparency, overreach, and the potential misuse of technology for political gains. Critics argue that the operation may blur the lines between national security and political surveillance, pointing to the risks of data manipulation, suppression of dissent, and digital propaganda. The public perception of Operation Sindhur is thus sharply divided—while some view it as a forward-looking initiative ensuring national security and technological progress, others see it as a means to centralize control and marginalize democratic debate.

The role of media-both traditional and digital-is pivotal in shaping these narratives. State-aligned outlets often echo the government's messaging, celebrating the operation's milestones and downplaying controversies. Meanwhile, independent media and investigative journalists attempt to uncover the operation's less visible dimensions, including algorithmic bias, surveillance practices, and the targeting of political opponents. Social media platforms serve as battlegrounds where competing narratives clash, amplified by bots, influencers, and digital campaigners. In this environment, Operation Sindhur 2025 illustrates how information, perception, and power are increasingly interlinked, and how the control of narrative is as crucial as control of territory in the modern strategic arena.

DIPLOMATIC RAMIFICATIONS

The aftermath of Operation Sindhur 2025 significantly impacted India's diplomatic landscape, particularly in its bilateral relations with Pakistan. The operation, perceived by Islamabad as a demonstration of India's growing technological edge and assertiveness, intensified tensions across the Line of Control and led to heightened military alertness on both sides. Diplomatic dialogue stalled temporarily, with Pakistan condemning the operation in international forums as a breach of regional stability and a trigger for an arms technology race. However, some backchannel communication channels remained open, primarily to prevent escalation and maintain regional crisis management protocols.

The international community's reaction was mixed. The United Nations expressed concern over the potential for regional destabilization, calling for restraint and dialogue between nuclear-armed neighbours. Meanwhile, major powers like the United States, Russia, and China responded based on their strategic interests. The U.S. cautiously welcomed India's emphasis on technological innovation and defence modernization but urged transparency and adherence to international norms. Russia, a long-time defence partner, saw the operation as a validation of its cooperation with India and supported its right to self-defence. China, however, criticized the operation as provocative, especially in light of broader Sino-Indian tensions. Collectively, Operation Sindhur underscored the global community's growing concern about how new-age military technologies could accelerate regional rivalries and complicate diplomatic resolutions.

LESSONS LEARNED AND STRATEGIC IMPLICATIONS

Operation Sindhur 2025 yielded critical lessons that are now shaping India's evolving military doctrine. First, it marked a definitive shift from conventional to hybrid warfare, where technological superiority, cyber capabilities, and information dominance are as important as troop strength and firepower. The success of tech-enabled tactics in the operation prompted the Indian armed forces to accelerate the integration of AI, cyber units, and unmanned systems into their strategic planning and battlefield readiness.

Moreover, the operation highlighted the growing importance of readiness for hybrid warfare, where adversaries may combine military action with cyberattacks, psychological operations, and disinformation campaigns. India's defence doctrine now places greater emphasis on adaptability, speed, and the use of real-time data analytics to counter both state and non-state actors.

Another key takeaway was the enhanced role of intelligence and pre-emptive strategy. Operation Sindhur demonstrated how accurate, multi-source intelligence—especially from satellite imagery, signals interception, and AI-assisted pattern recognition—can provide a decisive advantage. It reinforced the need for seamless coordination between military intelligence, cyber units, and national security agencies to identify threats early and neutralize them proactively.

Ultimately, Operation Sindhur 2025 stands as a defining moment in India's defence evolution, showing how technology, strategy, and geopolitics must operate in synchrony to ensure security and maintain regional influence in an increasingly complex global environment.

METHODOLOGY

This research adopts a multi-method approach, combining qualitative analysis and a comparative strategic framework to examine the execution and implications of Operation Sindhur 2025 in the broader context of India's evolving military strategy.

Qualitative Analysis

(a) Case Study Method

A case study approach is used to conduct an in-depth analysis of Operation Sindhur, with comparative reference to two key historical operations:

- Operation Vijay (Kargil War, 1999)
- Balakot Air Strikes (2019)

These cases are selected for their strategic significance and relevance to India's defence evolution, enabling contextual analysis of shifts in doctrine, technological integration, and political communication.

(b) Content Analysis

Systematic content analysis is conducted using:

- Official government and military statements
- Reports from the Ministry of Defence and DRDO
- Media coverage (both national and international)
- Speeches and public communications by political leaders

The aim is to identify recurring themes, strategic priorities, and narrative construction across each operation.

Comparative Framework

To evaluate Operation Sindhur in relation to past operations, a military strategy comparison model is applied. This framework assesses each operation across five key dimensions:

- **Strategic Objectives**: Purpose and goals of the operation.
- **Operational Scale and Execution**: Troop involvement, geographic extent, and duration.
- **Technology Utilized**: Role of AI, drones, precision weapons, and indigenous systems.
- **International Response**: Diplomatic and media reactions, including those of key global actors.
- **Long-term Impact**: Influence on defence policy, regional stability, and military doctrine.

This comparative approach provides insight into how Operation Sindhur marks a progression—or deviation—from previous strategic models in Indian defence history.

RESEARCH OBJECTIVES

1. To analyse the strategic and tactical elements of Operation Sindhur.
2. To compare Operation Sindhur with earlier Indian military operations (Kargil, Balakot) in terms of execution, political narrative, and outcomes.
3. To assess the role of indigenous defence technologies in shaping modern Indian military doctrine.
4. To evaluate the domestic and international diplomatic responses to Operation Sindhur.
5. To understand the changing nature of India's counter-terror and cross-border response strategies.

RESEARCH QUESTIONS

1. What strategic needs prompted Operation Sindhur?
2. How did indigenous technologies impact the operation's success?
3. How was the operation portrayed politically and in the media?
4. What were the diplomatic consequences, especially with Pakistan and global powers?
5. What are the key military and strategic lessons from the operation?

CONCLUSION

Operation Sindhur 2025 marks a critical inflection point in India's strategic and defense landscape, showcasing the country's transition toward technology-driven, hybrid warfare capabilities. The operation demonstrated the effective use of indigenous innovations—such as AI-powered surveillance systems, autonomous drones, and precision-guided munitions—underscoring the growing impact of the Make-in-India initiative in defence. Politically, the operation was tightly embedded within a broader narrative of nationalism and technological self-reliance, while opposition responses and public opinion reflected a mix of cautious support and scepticism. On the diplomatic front, Operation Sindhur strained India-Pakistan relations and drew measured reactions from the international community, highlighting global unease with the militarization of emerging technologies and the potential for regional escalation. The comparative analysis with previous operations like Balakot and Kargil indicates a distinct evolution in India's military doctrine, emphasizing speed, data integration, and psychological influence alongside conventional force.

Based on these findings, several policy and strategic recommendations emerge. India should prioritize the expansion of its AI and cyber defence infrastructure while institutionalizing hybrid warfare strategies within its national security doctrine. Clearer frameworks for civil-military communication and post-operational diplomatic engagement are essential to maintaining both domestic trust and international legitimacy. Additionally, mechanisms for oversight and ethical governance of military technology use must be strengthened to prevent overreach or misuse.

Future research should delve into the long-term psychological and political effects of tech-based military operations on domestic populations, the ethical implications of autonomous weapons systems, and India's role in shaping norms for digital warfare in the global arena. Comparative studies with other nations engaged in similar strategic operations can further enrich understanding and policy development in this emerging domain.

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