

From Strategic Defence to Pre-emptive Strikes Shifting India's Airpower Strategy Post *Operation Sindoor*

Sunaina S, Dr T. K. Singh & Dr Kishor Jose¹

Abstract

The security nexus has been vulnerable to transitional polarity and shifting geopolitical interests. Modern battlefields are more complex in the absence of a clear distinction between war and peace. This has expanded the employment spectrum of modern militaries, and air power has emerged as a sine qua non of modern warfare. India's *Operation Sindoor* was not only a strategic response to terrorism but also marked a transformation in India's anti-terrorism policy. It has redefined its means to tackle the menace and its methods to maintain a deterrence posture. The paper uses a qualitative case study approach to analyse *Op Sindoor*, doctrinal evolution, indigenous technological developments and adaptations, and the response of the global community. The purpose of this study is to discuss the factors that have caused India's strategic stance in counterterrorism operations to change, including the use of the air force. It also examines the doctrines of the Indian Air Force during the year, as well as counterterrorism and airstrikes. The operation demonstrated a shift by calibrated strikes beyond international borders in an assertive and non-escalatory manner. The employment of India's integrated air power was a critical factor given its strategic leverage. The operation was successful due to the integrated multi-domain strategy of the armed forces and intelligence agencies. Additionally, India reiterated its zero-tolerance policy for terrorism and maintained strategic rationality with the international community. The operation demonstrated how India's strategy for upcoming operations will integrate all state resources in collaboration to produce significant and sustainable results.

Keywords- *Op Sindoor*, pre-emptive strikes, non-escalation, counter-terrorism, doctrinal evolution, multi-domain operations

¹ Sunaina S is a PhD Research Scholar with SNSS, Dr TK Singh is Associate Professor at SST and Dr Kishor Jose is an Assistant Professor at SNSS, Central University of Gujarat, Vadodara, Gujarat.

Introduction-

The April 2025 terrorist attack in Pahalgam, Anantnag, Jammu and Kashmir (J&K) exposed vulnerabilities in India's security framework. It has a striking resemblance to the 26/11 Mumbai terrorist attack. The attack evoked old memories while introducing new militarised tactics and brutal methods of execution. The incident crossed the threshold previously set by the government and catalysed reconsideration of military retaliation. India responded to the gruesome attacks by launching an offensive air campaign known as *Operation Sindoor*, targeting nine terrorist hideouts and strategic installations across Pakistan and Pakistan-occupied Kashmir (POK) with precision strikes. The operation's name is unique because it refers to an orange or vermilion red powder that married women use to symbolise female devotion and vigour (Oxford English Dictionary, n.d). The operation demonstrated India's military and technological capabilities while maintaining a calibrated and targeted approach to neutralise terrorist facilities. *Operation Sindoor* marked a turning point in India's counter terrorism doctrine, ushering in a new era of assertive and calibrated military response to cross-border terror threats. The operation marked a significant shift in India's national security strategy, moving away from a reactive to a proactive policy of punishment and deterrence. It replaced the century-old tradition of symbolic relations, establishing a new precedent of direct and punitive military response to cross-border terrorism. *Operation Sindoor* was launched in early May 2025, marking a significant transformation in India's air power doctrine and approach to counter-terror operations. The operation redefined India's security narrative by revising the air power doctrine that had been sustained since the *Cold Start* doctrine (Ladwig, W. C., 2007). It was a pre-emptive response to a year of cross-border terrorism, missile threats and doctrine incursions in the near border areas. It calibrated a military-political response that imposed significant costs on the adversary while carefully managing escalation risks, demonstrating India's strategic acumen in balancing assertiveness with restraint. The campaign was focused, measured and non-escalatory, targeting only terrorist hideouts and training facilities to dismantle terror infrastructure without engaging the military and civilian installations (*OPERATION SINDOOR*, 2025). This marked a strategic shift in India's aerospace landscape by introducing a new doctrine focused on precision air strikes to punish terrorist infrastructure across international borders. This was evident through the collaboration and integration of the three forces, i.e., Army, Navy and Air Force, using indigenously developed technologies and encouraging a sovereign defence structure. The campaign

demonstrated India's air power capability to plan and execute deep strikes and to intercept targeted weapons through air defence systems.

Pakistan condemned the strikes as an "act of war", labelling them unjustified aggression and provocative acts. In response to the operation, Pakistan employed cost-effective military options, including the Asisguard Songar drone, Turkish-origin YIHA-III drones, locally produced GIDS Shahpar UAVs, long-range munitions, and the Fatah series of missiles, among others. Pakistan also deployed multi-role fighter jets such as the Chinese-origin J-10C and J-10CE, along with long-range missiles like PL-15 and PL-15E (India Names China, 2025). Apart from using drones, missiles, loitering munitions and air-launched precision weapons, Pakistan also engaged in a widespread campaign of political propaganda and misinformation (Narang, 2025). Despite denunciation and propaganda efforts, India maintained transparency and accountability at the international level, clearly communicating its strategic rationale and measured response to the global community. India reached out to the key partner nations through an all-party delegation for political engagement and strategic communication regarding the operation (Press Information Bureau, 2025). India's security concerns in South Asia were highlighted, and future anti-terror cooperation was bridged. This helped India to present its sovereign interests accurately at the regional and global level. Through these military and non-military efforts, India reinforced its policy of non-tolerance against terrorism. India redefined its security nexus after the operation and conferred that future terror provocations will be dealt with active, precise and responsive retaliation. It also emphasised that future operations will incorporate all the state's resources and that all forces will work collaboratively to achieve tangible results.

Operation Sindoor: Reshaping India's Strategic Air Power

Since 1947, India's strategic posture has been largely defined by its adversarial relationship with Pakistan. This dynamic has evolved into a persistent state of hybrid warfare, in which non-state actors play a crucial role. At the launch of the Victims of Terrorism Association Network at the United Nations, India's Deputy Permanent Representative described the attack as the worst civilian attack since the 26/11 Mumbai attacks ('Pahalgam Attack Worst since 26/11,' 2025). The terrorists who killed 26 people were linked to Lashkar-e-Taiba (LeT) and its proxy, *The Resistance Front*. In response to this security calculus and pressing strategic interest, India initiated a decisive military response. This began with the launch of *Operation Sindoor* on 7th May 2025, swiftly followed by *Operation Mahdev* in June the same year (MHA, 2025). These

Operations now form the cornerstone of India's new counter-terrorism and security policy, which is specifically designed to counter Pakistan's sub-conventional strategy of asymmetric warfare via terror sponsorship. India meticulously identified the terror facilities and then neutralised them with restraints imposed to avoid collateral damage. During the operation, the forces paid special attention not to harm civilian properties. Operation Sindoor was a precise military campaign that successfully targeted nine terror camps situated in Bahawalpur, Muridke, Kotli, among other areas, resulting in the neutralisation of over 100 terrorists (Special Briefing on OPERATION *SINDOOR*,2025). The sites selected were either training centres or operational headquarters of terrorist organisations, LeT, Jaish-e-Mohammad (JeM) and Hizbul Mujahideen (HM).

Since independence, India has been concerned about terrorist organisations functioning within Pakistan's frontiers. In his book *Aarthatrasatra*, India's military strategist Kautilya suggests that a state needs to strike without holding off with greater force to inflict injury by demonstrating force, which can further deter future escalations (Kangle, 1972). Furthermore, he determines other reasons for *Yana* (launching an offensive operation), especially the basic concept that it should benefit one more than the adversary with superior national power. He emphasised that a state should undergo indirect offensive tactics, including targeting leadership and power projection centres, without direct confrontation. John Mearshimer proposed the theory of offensive realism in his work and articulated that war is a tool used by states for power maximisation, used by states to ensure their survival. He argued that states are rational actors and respond to their security threats to avoid future escalations when it has the capacity to respond to ensure survival (Snyder, 2002). Thus, India retaliated to the Pahalgam attack by attacking the terrorist facilities since doing so ensured internal security and served as a message of potential terrorist assaults in the future. India crossed a strategic threshold by conducting airstrikes deep inside Pakistan's territory to fight terrorism, which it considers an existential threat. This makes the operation a significant campaign. Through this, India re-emphasised its zero-tolerance policy against terrorism and showcased its willingness to use military hard power to tackle security concerns. On 15th August, during his speech, Prime Minister Narendra Modi emphasised that cross-border terrorism will be regarded as a war strategy and will be met with a befitting response from the security forces (Highlights from the PM's Address,2025). He also mentioned that no nuclear blackmail will be considered, and the armed forces have autonomy to respond to security threats. Major General Asthana describes the operation as a strategic declaration of contemporary warfare and notes that it demonstrated India's position

for anticipatory attacks against the impending threat (Pardesi,2025). Thus, the operation marked a tectonic shift in India's counter-terrorism policy and towards a punitive and assertive posture of the security forces. Besides the tri-services, the Research and Analysis Wing (R&AW) and the Defence Intelligence Agency were involved in the operation and provided strategic intelligence throughout the cross-border secret network.

The Indian Air Force carried out precision strikes at the key terrorist hideouts and related infrastructure by actively selecting sites of interest only. Meanwhile, the Integrated Defence Staff (IDS), Ministry of Defence (MoD) ensured tri-service coordination and synchronisation for unified cooperation throughout the event (Game-Changer, 2025). The Defence Minister also acknowledged the synergy between the services at various forums and emphasised that this operation has set a benchmark for future integrated operations. He pointed out that with the changing security environment, integration of the forces is not only a policy implementation, but a necessity to survive future security threats (Tri-Services Integration, 2025). The synergy helped in taking timely actions and enhancing situational awareness for precise actions during the operations. During the operation, India also demonstrated its remarkable ability to integrate emerging technologies into national security. Multi-layered air defence systems formed an impenetrable shield with the Pechora, Osa-AK, LLAD guns and the indigenously developed Akash Weapon System exhibited exceptional performance (Government of India, 2025). The Indian Air Force (IAF) demonstrated its capabilities in every dimension. The IAF officials reported that five Pakistani fighter aircraft, including F-16 and JF-17s, were shot down during the operation. Additionally, the IAF also intercepted and destroyed aerial strikes launched by Pakistan in the border area of Rajasthan and Gujarat. The operation exposed the vulnerabilities of Pakistan's air power capabilities and air defence systems, particularly Chinese-origin HQ-9 systems and their variants (Sagar, 2025). This air defence system was considered a breakthrough in air defence capabilities, but proved vulnerable and ineffective to India's jamming and deceptive tactics. This exposed the limitation of Pakistan's air defence system, drawing the attention of global defence stakeholders and enthusiasts. The campaign also underscored India's advanced electronic warfare capabilities. The deployment of *Akashteer* Air Defence System and *Lakshay* UAVs served the dual purpose of deceiving the electronic signals and saturating Pakistan's air defence systems (*Operation SINDOOR*,2025). The operation integrated indigenous hi-tech across multiple domains, including kinetic, non-kinetic, outer space-based ISR, etc. The technological adoption of

advanced systems demonstrated India's ability to respond to multi-domain threats, a reality of modern-day air power strategy.

Operation Sindoor served as a testament to India's mastery of the complexities of modern warfare, which is inherently multi-domain. Pakistan integrated hybrid warfare tactics by incorporating cyberwarfare and tried to penetrate deep into India's cyberspace. Cyberspace has been a contested, vulnerable space; however, this time the attacks were unique, paired with a military campaign. India faced targeted attacks not only from Pakistan but also from several other countries, including Bangladesh, Turkey, Indonesia, Morocco, etc. (Escalated Rivalry in Cyberspace,2025). The targets included the government website, major Public Sector Undertaking (PSU), investment infrastructure, the educational and communication and other critical sectors. These attacks were characterised by a range of sophisticated methods, including website defacement, phishing, Denial of Service (DoS), Distributed Denial of Service (DDoS), malware, etc., to establish command and control over the compromised servers. An assessment by Maharashtra's Cyber Agency found that India faced around 1.5 million cyberattacks during the operation, and some of the attacks even breached its digital infrastructure (Surge in Cyber Attacks, 2025). False propaganda and misinformation campaigns were another dimension of this new age operation. Pakistan conducted a coordinated information warfare campaign across social media platforms using fake images, AI-generated content, old and unrelated videos and even applied video game footage to create distorted narratives and manipulate perception worldwide. India countered these attacks with coordinated efforts among the government and private players, various agencies and intelligence sharing facilitated by bodies such as the Data Security Council of India (DSCI)(Sharma & Bappanad,2025). To address misinformation campaigns on social media, the Indian government responded by providing authentic information through media briefings and relevant audiovisual evidence, coordinating across departments with intelligence agencies, and blocking sites that propagated propaganda. The electronic and network-centric systems also proved their viability during *Operation Sindoor*. The Integrated Air Command and Control System, in conjunction with the Defence Communication Network, provided strategically secure information that enabled synchronised responses across the forces (*Operation SINDOOR*, 2025). These integrated efforts ensured cyber resilience throughout and after the operation.

Pre-Emptive Action as a Strategic Doctrine in Counterterrorism

The modern security landscape is complex and tangled. India's security ecosystem is fragile, with adversaries on both sides of the border and a strategy aimed at disrupting internal security. India's experience of the 2020 Galwan clash with China, together with persistent terrorist infiltration and ceasefire violations along the Line of Control, has progressively shaped its security posture toward preparing for a potential two-front conflict involving the simultaneous confrontation of the Chinese and Pakistani Forces (Gupta, 2024). Pakistan has used state-sponsored terrorism as an instrument of its foreign policy against India, thus engaging in a constant state of proxy wars rather than direct military confrontation. Pakistan's strategy involves training, recruiting and providing logistical support to terrorist organisations while denying accountability for their actions. Over time, India has taken significant measures at strategic, institutional and doctrinal bases to prepare for and respond to these proxy wars.

After the terrorist attack on the parliament in 2001, India launched *Operation Parakram*, where there was a large-scale mobilisation of conventional forces at the border. Though the forces remained in the same position for more than a year, there was no actual confrontation. India's objective through the operation was not to engage in conflict; rather, it exerted coercive diplomacy and put domestic and international pressure on Pakistan to dismantle terror infrastructures that encourage cross-border terrorism (Kalyanaraman, 2002). The operation was to compel Pakistan to take necessary actions through a visible force without taking retaliatory measures. The delayed response during *Operation Parakram* prompted scholars and military analysts to discuss the fundamental changes necessary for India's limited war strategy, particularly against Pakistan. The strategic paralysis led the discussion between scholars and policy makers and the discourse towards India's 'Cold Start Doctrine', which marked the evolution from prolonged defensive operations to a swift and calibrated response (Ladwig, W. C, 2007). Shashank Joshi analysed and pointed out that the doctrine is a hybrid combination of maintaining international pressure and transforming the force structure with emphasis on speed and integration of the armed forces for calibrated and limited objectives (Joshi, 2013). After the Mumbai terrorist attack in 2008, India did not resort to military action and refrained from armed conflict. There was considerable clamour for a retaliatory strike after the attack; however, the Prime Minister and National Security Adviser supported a policy of sustained restraint and diplomatic isolation at the international level (MEA, 2009). It also initiated a long-term policy framework, focusing on strategic interests and structural reforms following the

26/11 attacks. The framework encompasses measures for developing international cooperation against terrorism, strategic infrastructures and capabilities of the armed forces, strengthening intelligence, and establishing an effective doctrinal framework.

Over the past two decades, technological and organisational reforms have enhanced military capabilities and enabled the deployment of advanced weapons systems. Anti-terror operations at Uri in 2016 and at Balakot in 2019 reflected the air force's technological modernisation, as well as the coming into play of the "cold start" doctrine. Those operations were within and restricted to the LoC, yet contained elements of quick response and punitive strikes, which are a hallmark of operational sophistication and an ability to project force beyond a contiguous border. Through both operations, India demonstrated its tactical ground-level retaliation and airpower capabilities to achieve strategic objectives and deterrence. The operations redefined India's rules of retaliation and established a doctrine centred on pre-emptive strikes. The Director General of Military Affairs, Lt. Gen. Ranbir Singh, acknowledged the Uri strike, thereby providing strategic credibility on the international stage while avoiding escalation into a sub-conventional war (Press Statement by DGMO, 2016). After the 2019 strike, the Foreign Secretary of the state also addressed the media about the strike at the JeM training camp in Balakot, calling it a pre-emptive military campaign (Statement by Foreign Secretary, 2019). These operations provided a clear strategic message to the international platform that India will decisively retaliate against cross-border terrorism. These operations marked a significant evolution in India's counter-terrorism policy and a strategic shift in its retaliatory approach.

Operation Sindoor represents a milestone in terms of its comprehensive, strategically framed design, surpassing previous air strikes. It struck nine terrorist sites deep inside Pakistan; hence, it has a scope far larger compared to earlier efforts such as Uri or Balakot. Only one location in Balakot, POK, was targeted by the Balakot airstrikes, whereas nine sites and twenty-four targets were targeted in the 2025 operation. The 2019 attacks also made use of Spice bombs, Mirage planes, and other weapons. During the initial phase, asymmetric leverage was gained by the deployment of advanced versions of Rafales, SCALE missiles, precision bombs, drones, and air defence systems. Additionally, the operation lasted longer than three days, including a high-intensity engagement of all the services, whereas the 2019 airstrike was a one-shot action primarily by the air force (The Economics Times, 2025). The operation can be termed as a well-planned joint military offensive rather than a purely reactive measure targeted at counter-terrorism. This marks a significant evolution in India's security policy across strategic,

technical, and political levels. The operation was a constrained and calibrated military action meant to inflict punitive strikes while ensuring deterrence (From Strategic Restraint, 2025). This marked a clear shift in India's doctrine against terrorism, moving away from a reactive, attack-based approach to a proactive, multi-domain strategy. The Indian government formally declared cross-border terrorism as an act of war, thereby justifying direct diplomatic and political isolation (India's Strategic Clarity, 2025). By outlining its counter terrorism policy across multiple platforms, India has removed any ambiguity regarding its position. This policy emphasises the new threshold of response for national security, potentially formalising a strategy of swift, calibrated and proportionate retaliation. It also symbolised India's strategic shift towards deterrence through punishment as a central tenet of its counter-terrorism directive (Kashyap, 2025). Though both states are nuclear-capable, India refrained from escalating the nuclear threshold. New Delhi officially declared the operation as a conventional military response, explicitly rejecting any discussion on nuclear weapons (Kumar (Retd), 2025). The operation exemplified the Cold Start theory of strategic paralysis by emphasising speed, accuracy, and objective clarity with conventional capabilities, while ensuring strategic stability. Thus, the operation once again reemphasised the doctrine by responding to non-conventional threats while maintaining the nuclear threshold.

Operation Sindoor was India's first action of its kind to deploy a synchronised multi-domain approach, integrating kinetic, non-kinetic, Intelligence, Surveillance, and Reconnaissance (ISR), electronic, and space-based capabilities, along with air power. This tri-service collaboration developed a unified campaign by enabling coherent decision-making and drastically shortening the decision-making cycle (MOD, 2025). It highlighted the integration of innovative systems in modern combat. The operation deployed the Integrated Command and Control System to coordinate integrated actions across domains. The operation embraced the notion of no-contact warfare by employing precision-guided weapon projectiles such as SCALP, Brahmos, Unmanned Aerial Vehicles (UAVs), drones and sophisticated air defence systems (Precision, Technology, and Depth, 2025). These capabilities enabled highly precise, flexible and deceptive targeted strikes. Countering information warfare and protecting cyberspace were an integral part of the operation. Thus, to counter these narratives and psychological warfare, a comprehensive integrated approach was employed.

Offensive Airpower in a Changing Security Nexus

The security strategy of India has conventionally been one of territorial protection, strategic restraint, and conflict prevention. This resulted from the region's colonial past, socially varied states, and the economic vulnerability it faced. In his work, Shivshankar Menon holds the view that India's security posture seeks to deter aggression, is non-provocative, and wards off war (Menon, 2018). It is a strategy laid out by the state's strategic long-term interests, not dictated by outside forces of offensive escalation. An offensive military posture has been consistently avoided as it would lead to destabilisation or a so-called security dilemma. However, the changing geopolitical environment, reorientation of strategic interest and doctrinal evolutions led towards an offensive compellence-oriented policy. The *Cold Start Doctrine* also facilitated assertive military operations by enabling rapid, proactive responses that neutralised threats without escalating confrontation (Kanwal, 2010). The new security paradigm, which includes ongoing Pakistan-sponsored cross-border terror strikes and geostrategic competition with China, has contributed to a steady transition toward a more offensive strategy.

India's air power was mainly deployed to take a defensive attitude, with a focus on surveillance and interception. The adoption of new theories, however, has influenced India's airpower strategy. In 1995, the IAF introduced its first doctrine. It emphasised the role of air power as a force multiplier, an active enabler of national interest and not an operational support arm (Subramaniam, 2015). After Kargil, the IAF revised its doctrine and introduced yet another doctrine in 2007 and later in 2012 in response to the strategic shift in the security dynamics and technological evolutions. Both the doctrines recognised the decisive role air power will play in modern warfare and the role it will play in deterrence and coercion. The 2012 doctrine was more comprehensive as it emphasised strategic deterrence through integrated, multidimensional operations in space and cyberspace involving all forces, thereby enhancing offensive capabilities (Indian Air Force, 2022). This doctrine also addressed the challenges posed by Pakistan and China, highlighting the need for India to prepare comprehensively for a potential two-front war. In 2022, IAF revised the previous doctrines to prioritise offensive operations within the evolving geopolitical landscape. This new doctrine shifted the focus from "deterrence by denial" to "deterrence by punishment", aligning a proactive and calibrated strategy. This transition was evident in the counter-terror operations and air strikes in Balakot as well (Indian Air Force, 2022). The revised doctrine emphasised the need to acquire cutting-edge technologies, including AI, stealth capabilities, integrated air defence systems, UAVs, and

UCAVs, to meet the demands of modern warfare. The doctrine also emphasised the necessity of combining all forces for operations in critical theatres and advancing indigenous air power capabilities to achieve strategic independence. The Observe-Orient-Decide-Act (OODA) concept developed by U.S. Air Force Colonel John Boyd is at the core of contemporary military operations. His focus on data analysis and speed serves as the cornerstone of contemporary military operations (Atkins, 2018). In swift, multi-dimensional battlegrounds, air power combined with the previously described modern technology is crucial. These updates to the doctrine reflected a comprehensive alignment of India's air power strategy with its perception of threats, enabling a more effective response to both conventional and contemporary security issues through an integrated approach.

Operation Sindoor represents a watershed moment in India's air-power operations, marking an irrevocable movement toward an offensive air-power paradigm. It goes beyond a punitive reaction against terrorism. The use of offensive airpower sends an unmistakable signal of a transformed security posture by India. This operation showcased how India could register its clear intent to ensure that its capabilities for power projection over trans-border targets, with precision and minimum collateral damage, would strengthen strategic autonomy in the region (*Operation SINDOOR*, 2025). Former Air Vice-Marshal Ashish Vohra describes the operation to bring a 'new normal' in India's security strategy, with objectives concerning operational excellence and sustaining strategic synergy between all armed forces (Vohra, 2025). He also acknowledged the indigenous weapon systems that are used and called the strikes bold and precise. On this 93rd Air Force Day, Air Chief Marshal AP Singh described the operation as a high-impact intervention that has reaffirmed the role of airpower in the national security strategy (Offensive Air Action, 2025). He further stated that due to its crisp execution and significant offensive success, the operation is a doctrinal achievement, and the use of air power in such grey-zone scenarios will determine future operations.

Operation Sindoor exemplified strategic progression toward using advanced systems and ISR capabilities in support of improved tactical operations. The employment of unmanned aerial vehicles (UAVs and UCAVs), laser-guided munitions, air defence systems, and associated technologies supported the successful outcome of the operation. The precision with which these strikes are done shows the adaptation at the level of tactics in the use of cutting-edge technologies. Integrated ISR systems, in tandem with long-range strike platforms, reveal the dual utility of these technologies in enabling both offensive deep strikes and effective

penetration of the defensive layers of adversary security architectures (PIB, 2025). This operation allowed the Indian forces to conduct Suppression of Enemy Air Defence (SEAD) and Disruption of Enemy Air Defence (DEAD) missions, which in turn gave them greater freedom of operation. The major contribution of electronic warfare in this operation was that it allowed the IAF to neutralise Pakistan's air defence by jamming and conducting SEAD, among others, to act as a force multiplier (Pandey, 2025). Another important aspect that cropped up related to multi-domain warfighting. The battlespace has extended from the traditional battlefield into cyberspace, space, and communication networks. These domains were actively defended and managed, and social media and information warfighting were opposed with fact-checking and content regulation by government stakeholders (PIB, 2025).

Technological transformation and institutional synergy

Battlefields have always been shaped by technological evolution and changes. Advances in technologies associated with AI, space-based assets, ISR, information warfare, and autonomous systems have transformed the nature of contemporary battle spaces. Located in a challenging security landscape, India has integrated these technologies into its armed forces at an active clip (Technology Approach and Capability Roadmap, 2025). The country has emphasised developing indigenous capabilities but has also acquired foreign equipment where needed. Driven by its geostrategic interests, India is moving ahead with an integrated command structure, precision-targeting systems, autonomous platforms, electronic warfare capabilities, and advanced air-defence systems. India's *Atmanirbharta* initiative in defence pursues two key goals: one, increasing indigenous production and procurement and second, achieving strategic autonomy. Correspondingly, the country has given high priority to long- and short-range stand-off missiles, guided and loitering munitions, unmanned aerial vehicles, and satellite-based communication systems that would enable no-contact warfare. Not surprisingly, in the face of aerial threats arising from the proliferating use of drones and radar systems, the development of a multi-tiered air defence system has been pursued with renewed vigour (PIB, 2025). The initiatives expand the defence ecosystem, adding private entities and new opportunities while ensuring technological sovereignty.

Indigenous defence production has shown remarkable growth over the period, with a financial year 2023-24 output of ₹1,27,434 crores, representing a 174% increase from 2014-2015 (MOD, 2025). In the Financial Year 2024-25, India recorded its highest-ever defence production amounting to ₹ 1.54 lakh crores, and the private share contributes to nearly 23% of

the total production. *Operation Sindoor* is a testament to the technological reforms and absorptions that India has undertaken. It refines the battlefield tactics that India adopts in multi-domain warfare, with a network-centric model at the centre. Artificial intelligence, autonomous systems, and a multitude of ISR assets created the foundation for the precision strikes during the operation (Chopra, 2025). These technologies worked together to speed up the Observe-Orient-Decide-Act (OODA) loop, swiftly turning information into tactical action even in uncertain battlefield conditions. By integrating the domestically developed 'Akashteer' AI system with the S-400, Barak-8, Pechora and Akash systems, the air defence network shifted from just being defensive to taking proactive measures (PIB,2025). This transformation improved operational readiness and precision while minimising risks for human operators. Real-time data analysis and transfer through advanced surveillance platforms became crucial for effective monitoring and response coordination. Moreover, a strong intelligence system served as a force multiplier by offering superior navigation, positioning, communication capabilities, persistent monitoring, and situational awareness. This helped India to secure strategic autonomy of action for the force. The precision-guided munitions such as SCALP, Harop, BrahMos, used for accurate strikes inside hostile territory, marked non-contact and calibrated warfare (PIB, 2025). Electronic warfare and systems were crucial, ensuring operations ran smoothly with almost no airspace breaches, by soft-kill effectors that jammed signals, while hard-kill effectors destroyed threats. The Defence Research and Development Organisation (DRDO) developed laser guns, MRSAM, and D-4 CUAS, which effectively countered drone systems through the Integrated Air Command and Control System (IACCS) (Rajan, 2025). The plan focused on safeguarding critical infrastructure and maintaining strategic vision.

It is institutions that give credibility to national security strategy through codified doctrine, adapting to emerging battlefield concepts, and fostering strategic coherence across diverse domains. They can establish a foundational environment wherein political objectives and doctrinal frameworks can operate in conjunction to further military capability and national interests. Such reforms allow greater organisational flexibility for states to develop, integrate technologies and systems that enable decisive and sustained coordination (Mukherjee, 2011). India has undertaken substantial institutional reforms, as reflected in the establishment of bodies such as the Chief of Defence Staff (CDS), iDEX, Defence Cyber Agency (DCyA), and Defence Aerospace Agency (DAA), among others, which together create an integrated and innovative ecosystem. These institutions have contributed to shaping India's operational

understanding, moving from a reactive stance to a proactive and calibrated posture characterised by an integrated approach and maintaining strategic clarity. *Operation Sindoor* was not a display of tactical superiority; rather, it reflected the institutional transformations India has undergone over the years at multiple levels. It had multi-agency collaboration in intelligence coordination, technological integration, and information communication, which synergised the response of the Indian forces. The Integrated Command and Control Centre marked a significant evolution of the previously scattered command to an integrated tri-service single framework driven by a unified strategy (PIB, 2025). The whole operation demonstrated unprecedented tri-service synergy, reducing the OODA cycle and risk of fratricide. The IAF's IACCS worked in unison with the Indian Navy's *Trigun* and the Army's *Akashteer*, emphasising the joint operational nature of the operation.

The operation reiterated how important it is for IDS and CDS to work together to coordinate operations. Additionally, the Defence Minister praised the operation's integrated approach and emphasised that cooperation among the security services is essential for survival in the rapidly evolving threat environment rather than just a question of policy formation. (MOD, 2025). He said that the present critical domains of aviation, space, and cyberspace cannot work in divergence, and a baseline for standard interoperability is needed that calls for structural reforms and technological adaptation. Besides the actual operation, many information operations were also launched to combat propaganda and misinformation. Similarly, other agencies that functioned together included the Integrated Defence Staff, Defence Intelligence Agency, and DCyA under one command for better coordination and communication. *Operation Sindoor* has emerged as a beacon in this regard, setting the pace for India's future defence strategies, emphasising the need for modernisation, synergy, and crisis management in this new age of networking in complex warfare. The success in *Operation Sindoor* is expected to set the tone for the future in operational planning.

Strategic Implications and Global Perspective

In the anarchic world, countries have to protect their own survival by responding to any threats to their existence. The geopolitical, geostrategic, and technological advantages of the states also compel them to implement new strategies accordingly. *Operation Sindoor* has impacted the strategic and operational thinking of India by validating cross-border strikes, defence modernisation and strategic autonomy. It has reflected a shift in the state's long-term strategy towards a proactive defence through calibrated offensive actions. While addressing the nation

after the operation, the Prime Minister said that *Operation Sindoor*, by setting up new parameters, is the 'new normal' in the national security doctrine (India's New Normal, 2025). He mentioned that through the operation, India has shown its capability to retaliate on its own terms and will continue to retaliate in a measured manner while considering nuclear blackmail. He emphasised India's stance of zero tolerance and outlined that the operation has brought a decisive shift in India's counter terrorism policy, where it will refrain from enduring terror attacks and act on its terms (PM Modi Address to Nation, 2025). This operation is, however, different from any of the previous operations like Uri and Balakot air strike, as it symbolises a shift in the state's doctrine of strategic restraint by striking beyond the borders. The operation emphasised the strategic credibility by targeting terror infrastructure at its origin across the borders and without differentiating the masterminds of terrorism and the government that harbours them. Through the operation, India has also redefined its strategy of deterrence. With calibrated, precise and proportional strikes, India underscored a shift from deterrence by punishment to deterrence by denial and thus has reduced the threshold of conventional response (Kashyap, 2025). Navroop Singh, a geopolitical analyst, describes that India's policy of strategic restraint had become a liability which was necessary to be redefined by 'sovereign retaliation' (From Strategic Restraint, 2025). The operation, with the induction of precise weapons, ISR systems, air defence systems, munitions, and integrated commands, provided the leverage to achieve tangible deterrence and planned objectives. The modern-day security nexus is complex and tangled, and thus requires a multi-domain operational strategy for clarity and sustained success. The operation demonstrated India's joint doctrine of forces into action and marked the integration of the tri-services towards a unified objective. Defence Minister have said that the tri-service integration is a fundamental necessity forming the core component of the national security strategy (Pubby, 2025). The operation demonstrated that the tri-service synergy can produce strategic objectives on the battlefield. The synergy requires not only a change in operational behaviour but also structural and doctrinal reforms at the base level for an integrated approach. In light of the region's complex security calculations, the operation also offered a template for future missions. In order to ensure success in future endeavours, tri-service synergy will be crucial.

The operation sparked several international responses to India's shift in its anti-terrorism strategy and tactical approaches to combat terrorism and maintain global stability. The USA condemned the attack on civilians, and President Donald Trump affirmed that India has the sovereign right to combat and respond in a calculated manner (PIB, 2025). In a press release,

the UN Security Council reaffirmed India's right to take security-related measures and emphasised that security dynamics necessitate holding terrorists, their financiers, and sponsors accountable. Some states take a different view due to their strategic interests, even though they appreciate India's efforts to maintain a security nexus without escalating the situation. Additionally, Chinese Foreign Minister Wang Yi took a Pakistani stance, stressing that India should take action to find a peaceful solution and that Pakistan has every right to defend its sovereignty (Tharoor, 2025). Turkey was yet another country that supported Pakistan operationally by providing intelligence during the operation and reiterating its diplomatic support on multiple fronts (*India Today*, 2025). It became crucial for India to express its goal on a global platform for transparency amid the fog of misinformation and operational objectives. Through the operation, India delivered a global statement for its approach towards retaliating against terrorism in the present times. India sent committed all-party delegations of 59 MPs to 32 nations and the European Union headquarters to brief them on the purpose and goal of the operation in order to maintain strategic clarity with strategic allies (PIB, 2025). India demonstrated its united stance on the zero-tolerance policy against terrorism through this diplomatic endeavour. Dr S. Jaishankar, India's External Affairs Minister, expressed gratitude to the delegation and emphasised that it presented India as a responsible international participant in anti-terrorism operations and policy formulation (Kumar, 2025). Through the projection of both hard and soft power, India introduced a more assertive security strategy with advanced technological adaptation at its core.

Conclusion-

Through *Operation Sindoor*, India has made a striking shift in its geopolitical and security strategy. The once-defensive posture of the military shifted to a proactive, offensive stance. The multidimensional offence doctrine gained attention considering the hybrid nature of the battlefield. The coordination of the three forces with other intelligence services has created a foundation for joint doctrines and a threat command structure. The Joint structure helped to undertake precise, analysed and timely decisions. This was reflected when the Defence Minister released the Joint Doctrine of Multi-Domain Operations in August 2025, ensuring an integrated, coordinated and unified approach to all the state's assets (PIB, 2025). This also highlighted the need to integrate advanced technologies for interoperability and strategic leverage. The CDS also releases the Joint Doctrine of Cyber-Space Operations and the Joint Doctrine of Amphibious Operations in the aftermath, for executing operations integrating tri-

services (PIB, 2025). These were released in order to provide a unified environment for alignment throughout the services and to realign the tactical shift's strategic approach. Additionally, the deterrence strategy changed during the operation to include punitive deterrence. Through political and strategic involvement, this places a heavy burden on the enemy. By establishing new thresholds and conducting targeted and directed operations against the terror infrastructure, it altered public opinion. The political pledge also reaffirmed that any terror incident in the future will be regarded as an act of war. The calibrated approach sustained the nuclear threshold, thereby providing a trajectory for future crises. The operation was dominated by advanced technologies with artificial intelligence, critical technology and electronic warfare systems at the core. Thus, it became more important to develop advanced weapon systems indigenously for operational autonomy. The defence budget for 2025-2026 is ₹6, 81,210 crores, an increase of nearly 9.31% from the previous year, which was ₹6,21,940 crores (MOD,2025). Approximately ₹26,817 crore of the ₹1.39 lakh crore allotted for domestic procurement went toward the development of cutting-edge systems such as hypersonic, artificial intelligence, next-generation radars, aircraft, drones, air defence systems, glide vehicles, and missiles. Reducing foreign dependency and achieving the strategic autonomy required for tactical and operational success requires the development of indigenous technology. More attention needs to be given to initiatives like *Atmanirbhar Bharat*, 'Make in India', iDEX, etc., in order to increase private partnership (PIB, 2025). When developing its doctrines, implementing institutional changes, and operationalising future security policies for regional stability, India must take these aspects into account. In order to strengthen domestic R&D and improve the involvement of private businesses, which was around 45 per cent in 2025–2026, India must further grow its share of the global armaments industry.

Although the operation successfully displays India's strategic shift, several challenges and complexities still need to be addressed. Considering the security implications of the state, this shift towards 'strategic offence' must be dealt with as a matter of state priority. The security dilemma through an offensive posture can lead to rapid escalation that can cross the nuclear threshold. Thus, the line between punitive punishment and nuclear de-escalation must be managed and redefined consistently (*Annual Reports*, 2025). Pakistan's age-old approach of using proxy wars, cross-border terrorism, infiltration and cognitive warfare, etc, is to be dealt with for the strategic stability of India. Additionally, the operation redefined the non-escalation and proactive reaction strategies for security concerns. Since the operation's success does not guarantee that there won't be any more attacks, the shift has also brought with it the obligation

to be prepared for the future. India must broaden its domestic capabilities and reevaluate its security strategies. This shift can also increase hostilities with China. The Deputy Chief of the Army Staff, Lieutenant General Rahul R. Singh, while speaking at an event on ‘New Age Military Technologies’, mentioned that *Operation Sindoor* was a case of ‘one border, three adversaries’, for India has to deal with the military hardware and intelligence provided by China and Turkey (Philip, 2025). Considering China’s strategic interest vested in Pakistan, the risk of hybrid and asymmetrical warfare has increased. Therefore, India needs to be prepared for multi-front adversaries for its strategic interests. For a shortened OODA cycle and a successful operation, the operation demonstrated the need for multidomain coordination of diverse troops, intelligence and cyber agencies, and command and control systems. The integration process of the three services has to be more thorough for fewer operational lags. The institutional dormancy is to be succeeded by upholding offensive capabilities. Future, although the indigenously developed systems have proven their vitality, India is still the second largest arms importer in the world (Deshpande, 2025). Therefore, in order to produce cutting-edge technologies that guarantee operational autonomy, defence manufacturing, R&D, and private sector involvement must be streamlined. Although the operation was brief, it lasted just four-day, domestic capabilities must be strengthened for a long-term campaign in the future. Precision weapons, compact drones, radars, sensors, AI-enabled equipment, analytic systems, etc., should all be produced by private enterprises. Cyberspace remains vulnerable to state-sponsored attacks, alongside threats posed by non-state actors. Although most of the targeted attacks were diffused and blocked, India still suffered cyber infrastructure disruptions and misinformation spread. Pakistan's misinformation campaigns helped to disseminate a false narrative against India. This needs to be addressed to bring strategic clarity and shape perception at domestic and international forums through diplomatic engagements. Further, clear and distinct boundaries of engagement for each department and service are necessary to enable better strategies. The transition must lie not only in ensuring military superiority but also in demonstrating the larger regional and global aspiration of India as a responsible nation.

References

- Analyzing the Pahalgam Terror Attack 2025—Compliance Blogging*. (2025, April 25). <https://www.csannusharma.com/analyzing-the-pahalgam-terror-attack-2025/>
- ANI. (2025, April 29). “*Pahalgam attack worst since 26/11,*” says India’s Deputy Permanent Representative to UN. BusinessLine.

- <https://www.thehindubusinessline.com/news/pahalgam-attack-worst-since-2611-says-indias-deputy-permanent-representative-to-un/article69503884.ece>
- Annual Report. (2025). *Annual Reports*. Carnegie Endowment for International Peace. <https://carnegieendowment.org/annual-reports>
- Atkins, F. (2018). *Multidomain observing and orienting: ISR to meet the emerging battlespace*. *Air & Space Power Journal*, 32(3), 4–18. Air University. https://www.airuniversity.af.edu/Portals/10/ASPJ/journals/Volume-32_Issue-3/F-Atkins.pdf
- Bairagi, S. (2025). *Cross-Border Terrorism and the India-Pakistan Security Dilemma*. 12(6).
- Bhat, V. (2025, June 13). Op Sindoor: IAF Achieved its Aim and Validated Weapon Systems. *CAPSS India*. <https://capssindia.org/op-sindoor-iaf-achieved-its-aim-and-validated-weapon-systems/>
- Carnegie (2025). *2025 AnnualReport_final-1.pdf*. Retrieved 12 March 2026, from https://assets.production.carnegie.fusionary.io/files/2025_AnnualReport_final-1.pdf
- Chopra, A. (2025, August 10). Op Sindoor: Indigenous Systems Gave India the Edge – More Needs to Be Done. *Air Power Asia*. <https://airpowerasia.com/2025/08/10/op-sindoor-indigenous-systems-gave-india-the-edge-more-needs-to-be/>
- Correspondent, H. T. (2016, September 29). *India's surgical strikes across LoC: Full statement by DGMO Lt Gen Ranbir Singh*. Hindustan Times. <https://www.hindustantimes.com/india-news/india-s-surgical-strikes-across-loc-full-statement-by-dgmo-lt-gen-ranbir-singh/story-Q5yrrp0gjvxKPGazDzAnVsM.html>
- Desk, I. T. N. (2025, July 2). *Op Sindoor delegations conveyed national unity message: Jaishankar to Quad leaders*. India Today. <https://www.indiatoday.in/india/story/op-sindoor-delegations-conveyed-a-message-of-national-unity-s-jaishankar-told-quad-leaders-2749763-2025-07-02>
- Desk, I. T. W. (2025, May 26). *Shehbaz Sharif thanks 'dear brother' Erdogan for backing Pak against India*. India Today. <https://www.indiatoday.in/world/story/shehbaz-sharif-thanks-dear-brother-erdogan-for-backing-pak-against-india-glbs-2730441-2025-05-26>
- Doc202558551901.pdf*. (n.d.). Retrieved 11 March 2026, from <https://static.pib.gov.in/WriteReadData/specificdocs/documents/2025/may/doc202558551901.pdf>
- Escalated Rivalry in Cyberspace. (2025, November 26). *Operation Sindoor and India-Pakistan's Escalated Rivalry in Cyberspace*. <https://www.rusi.orghttps://www.rusi.org>
- FINAL-TPCR-2025_0.pdf*. (n.d.). Retrieved 11 November 2025, from https://mod.gov.in/dod/sites/default/files/FINAL-TPCR-2025_0.pdf?utm_source=chatgpt.com
- FOUNDATION, O. R. (n.d.-a). *In the Aftermath of Operation Sindoor: Escalation, Deterrence, and India-Pakistan Strategic Stability*. Orfonline.Org. Retrieved 11 November 2025, from <https://www.orfonline.org/research/in-the-aftermath-of-operation-sindoor-escalation-deterrence-and-india-pakistan-strategic-stability>
- FOUNDATION, O. R. (n.d.-b). *Operation Sindoor and the Evolution of India's Counter-Terrorism Strategy*. Orfonline.Org. Retrieved 13 October 2025, from <https://www.orfonline.org/expert-speak/operation-sindoor-and-the-evolution-of-india-s-counter-terrorism-strategy>

- From Strategic Restraint. (2025). *Operation Sindoor: From strategic restraint to sovereign retaliation* | *DD News*. <https://ddnews.gov.in/en/operation-sindoor-from-strategic-restraint-to-sovereign-retaliation/>
- Game-Changer. (2025). *Operation Sindoor: How jointness was the game-changer—India Today*. <https://www.indiatoday.in/india-today-insight/story/operation-sindoor-how-jointness-was-the-game-changer-2730775-2025-05-26>
- Global Solidarity with India: A United Front Against Cross-Border Terrorism*. (2025). <https://www.pib.gov.in/www.pib.gov.in/Pressreleaseshare.aspx?PRID=2128747>
- Government Debunks Pakistani Propaganda Against India and Armed Forces via Official Fact-Check Unit*. (n.d.). Retrieved 6 November 2025, from <https://www.pib.gov.in/www.pib.gov.in/Pressreleaseshare.aspx?PRID=2150213>
- Government of India. (2025). *Operation SINDOOR: The Rise of Aatmanirbhar Innovation in National Security*. <https://www.pib.gov.in/www.pib.gov.in/Pressreleaseshare.aspx?PRID=2128746>
- Gupta. (2024). *Preparing for a two-front conflict: The role of the Indian Navy and the Indian Air Force: Comparative Strategy: Vol 43 , No 2—Get Access*. <https://www.tandfonline.com/doi/full/10.1080/01495933.2024.2317254>
- Gurmeet Kanwal. (2010). *India's Cold Start Doctrine and Strategic Stability. MP-IDSA*. <https://idsa.in/publisher/comments/indias-cold-start-doctrine-and-strategic-stability>
- IND_Doctrine_Air_Force_832d5b6c62.pdf*. (n.d.). Retrieved 26 December 2025, from https://cms.spacesecurityportal.org/uploads/IND_Doctrine_Air_Force_832d5b6c62.pdf
- India Names China. (2025). *First time, India names China as supplier of missiles used by Pak, shows remnants* | *India News—The Indian Express*. <https://indianexpress.com/article/india/first-time-india-names-china-as-supplier-of-missiles-used-by-pak-shows-remnants-9999365/>
- India second-largest arms importer after Ukraine, reliance on Russia declines, says SIPRI report*. (n.d.). Retrieved 11 March 2026, from <https://theprint.in/defence/india-second-largest-arms-importer-after-ukraine-reliance-on-russia-declines-says-sipri-report/2541373/>
- India Today. (2025). *Post-Operation Sindoor, why Pakistan's air defence hype stands crushed—India Today*. <https://www.indiatoday.in/india-today-insight/story/post-operation-sindoor-why-pakistans-air-defence-hype-stands-crushed-2791424-2025-09-22>
- India's new normal 2025. (2025). *India's 'new normal': 3 doctrines mentioned by PM Modi in first speech on Operation Sindoor* | *India News—The Indian Express*. <https://indianexpress.com/article/india/pm-modi-speech-operation-sindoor-india-new-normal-3-doctrines-9998594/>
- India's Strategic Clarity. (2025). *Operation SINDOOR: India's Strategic Clarity and Calculated Force*. <https://www.pib.gov.in/Pressreleaseshare.aspx?PRID=2128748®=3&lang=2>
- Jointness is survival, and it needs mindset change: Rajnath Singh—The Economic Times*. (n.d.). Retrieved 11 March 2026, from

<https://economictimes.indiatimes.com/news/defence/jointness-is-survival-and-it-needs-mindset-change-rajnath-singh/articleshow/124242624.cms>

Kangle, R. P. (1972). *The kautiliya arthasastra*. University of Bombay, Bombay.
<http://archive.org/details/dli.csl.8820>

Kashyap, O. R. (2025). *Operation Sindoor and the Evolution of India's Counter-Terrorism Strategy*. Orfonline.Org. <https://www.orfonline.org/expert-speak/operation-sindoor-and-the-evolution-of-india-s-counter-terrorism-strategy>

Kumar (Retd), L. G. P. (2025, October 17). Operation Sindoor: Redefining India's Deterrence and the Nuclear Threshold. *Bharat Shakti*. <https://bharatshakti.in/operation-sindoor-redefining-indias-deterrence-and-the-nuclear-threshold/>

Kumar, V. (2025, July 2). *Op Sindoor delegations conveyed national unity message: Jaishankar to Quad leaders*. India Today. <https://www.indiatoday.in/india/story/op-sindoor-delegations-conveyed-a-message-of-national-unity-s-jaishankar-told-quad-leaders-2749763-2025-07-02>

Mastering existing tech & staying ready for new innovations & unforeseen challenges is key to effectively tackle complexities of modern-day warfare: Raksha Mantri at RAN SAMWAD. (n.d.). Retrieved 11 March 2026, from <https://www.pib.gov.in/www.pib.gov.in/Pressreleaseshare.aspx?PRID=2161131>

MEA. (2009). *MEA | Visits | Outgoing Visit | Visit Detail*. Ministry of External Affairs, Government of India. https://mea.gov.in/outgoing-visit-detail.htm?4702/Prime+Ministers+Press+Conference+in+Washington=&utm_source=copilot.com

Menon, S. (n.d.). *INDIA'S NATIONAL SECURITY: CHALLENGES AND ISSUES*.

MHA. (2025). *Union Home Minister and Minister of Cooperation Shri Amit Shah participates in the special discussion in the Lok Sabha today on India's strong, successful, and decisive response to the Pahalgam terrorist attack through 'Operation Sindoor'*. <https://www.pib.gov.in/www.pib.gov.in/Pressreleaseshare.aspx?PRID=2149811>

MOD. (2025a). *Make in India Powers Defence Growth*. <https://www.pib.gov.in/www.pib.gov.in/Pressreleaseshare.aspx?PRID=2116612>

MOD. (2025b). *Operation Sindoor demonstrated Tri-Services synergy with unified real-time operational picture, enabling timely decisions, enhancing situational awareness & reducing the risk of fratricide; True example of Jointness: Raksha Mantri*. <https://www.pib.gov.in/www.pib.gov.in/Pressreleaseshare.aspx?PRID=2173013>

MOD 2025. (n.d.). *A record over Rs 6.81 lakh crore allocated in Union Budget 2025-26 for MoD, an increase of 9.53% from current Financial Year*. Retrieved 12 March 2026, from <https://www.pib.gov.in/Pressreleaseshare.aspx?PRID=2098485®=3&lang=2>

Mukherjee, A. (2011). Facing Future Challenges: Defence Reform in India. *The RUSI Journal*, 156(5), 30–37. <https://doi.org/10.1080/03071847.2011.626272>

Offensive Air Action. (2025). *Operation Sindoor restored rightful place of offensive air action in national consciousness: IAF chief | India News—The Indian Express*. <https://indianexpress.com/article/india/operation-sindoor-93rd-air-force-day-ap-singh-hindon-airbase-10295421/>

Op Sindoor: Indigenous Systems Gave India the Edge – More Needs to Be Done – Air Power Asia. (n.d.). Retrieved 11 March 2026, from <https://airpowerasia.com/2025/08/10/op-sindoor-indigenous-systems-gave-india-the-edge-more-needs-to-be/>

Operation SINDOOR. (2025). *Operation SINDOOR: The Rise of Aatmanirbhar Innovation in National Security.* <https://www.pib.gov.in/www.pib.gov.in/Pressreleaseshare.aspx?PRID=2128746>

Operation Sindoor and India-Pakistan's Escalated Rivalry in Cyberspace | Royal United Services Institute. (n.d.). Retrieved 11 March 2026, from <https://www.rusi.org/explore-our-research/publications/commentary/operation-sindoor-and-india-pakistans-escalated-rivalry-cyberspace>

Operation Sindoor delegations conveyed national unity message: Jaishankar to Quad leaders—India Today. (n.d.). Retrieved 11 March 2026, from <https://www.indiatoday.in/india/story/op-sindoor-delegations-conveyed-a-message-of-national-unity-s-jaishankar-told-quad-leaders-2749763-2025-07-02>

Operation SINDOOR: Forging One Force. (n.d.). Retrieved 11 March 2026, from <https://www.pib.gov.in/www.pib.gov.in/Pressreleaseshare.aspx?PRID=2129453>

Operation Sindoor: Get Latest News, Photos and Videos along with latest updates on Operation Sindoor | Hindustan Times. (n.d.). Retrieved 3 February 2026, from <https://www.hindustantimes.com/topic/operation-sindoor>

OPERATION SINDOOR: INDIAN ARMED FORCES CARRIED OUT PRECISION STRIKE AT TERRORIST CAMPS. (n.d.). Retrieved 13 October 2025, from <https://www.pib.gov.in/www.pib.gov.in/Pressreleaseshare.aspx?PRID=2127370>

Operation Sindoor: Showcasing of IAF's strength, capability, and self-reliance—India Strategic. (n.d.-a). Retrieved 11 March 2026, from <https://www.indiastrategic.in/operation-sindoor-showcasing-of-iafs-strength-capability-and-self-reliance/>

Operation Sindoor: Showcasing of IAF's strength, capability, and self-reliance—India Strategic. (n.d.-b). Retrieved 12 March 2026, from <https://www.indiastrategic.in/operation-sindoor-showcasing-of-iafs-strength-capability-and-self-reliance/>

Operation Sindoor Secondary Stage.pdf. (n.d.). Retrieved 3 February 2026, from https://ncert.nic.in/pdf/module/Operation_Sindoor/Operation_Sindoor_Secondary_S tage.pdf

Pahalgam attack worst since 26/11. (2025). *'Pahalgam attack worst since 26/11,' says India's Deputy Permanent Representative to the UN.* ANI News. <https://www.aninews.in/news/world/us/pahalgam-attack-worst-since-2611-says-indias-deputy-permanent-representative-to-the-un20250429093456/>

Pandey. (2025a, May 18). Operation Sindoor: Showcasing of IAF's strength, capability, and self-reliance. *India Strategic.* <https://www.indiastrategic.in/operation-sindoor-showcasing-of-iafs-strength-capability-and-self-reliance/>

Pandey, D. (2025b, May 23). IACCS: Proves Mettle of IAF's Network Centric Operations. *CAPSS India.* <https://capssindia.org/iaccs-proves-mettle-of-iafs-network-centric-operations/>

- Pardesi, M. S. (2025). *Is India a great power? Understanding great power status in contemporary international relations*. *United Service Institution of India Journal*, 155(3), 17–28. <https://usiofindia.org/pdf/USI%20Journal%20-%20July-Sept%202025%20Issue-17-28.pdf>
- Patil, S. (2025a). *Operation Sindoor and India's Cyber Threat Landscape*. Orfonline.Org. <https://www.orfonline.org/english/expert-speak/operation-sindoor-and-india-s-cyber-threat-landscape>
- Patil, S. (2025b). *Operation Sindoor: India's Military Doctrine of Offensive Defence*. <https://www.orfonline.org/english/expert-speak/operation-sindoor-and-india-s-cyber-threat-landscape>
- Philip, S. A. (2025, July 4). '1 border, 3 adversaries': Army Deputy Chief on Op Sindoor, says Pakistan got live inputs from China. *ThePrint*. <https://theprint.in/defence/1-border-3-adversaries-army-deputy-chief-on-op-sindoor-says-pakistan-got-live-inputs-from-china/2679483/>
- PIB. (2025a). *Defence Atmanirbharta: Record Production and Exports*. <https://www.pib.gov.in/www.pib.gov.in/Pressreleaseshare.aspx?PRID=2191937>
- PIB. (2025b). *Highlights from the PM's address on the 79th Independence Day*. https://www.pmindia.gov.in/en/news_updates/highlights-from-the-pms-address-on-the-79th-independence-day/
- PIB. (2025c). *Operation SINDOOR: Forging One Force*. <https://www.pib.gov.in/www.pib.gov.in/Pressreleaseshare.aspx?PRID=2129453>
- PIB. (2025d). *OPERATION SINDOOR: INDIAN ARMED FORCES CARRIED OUT PRECISION STRIKE AT TERRORIST CAMPS*. <https://www.pib.gov.in/www.pib.gov.in/Pressreleaseshare.aspx?PRID=2127370>
- PIB. (2025e). *PIB Headquarters*. <http://www.pib.gov.in/PressNoteDetails.aspx?NoteId=154455>
- PIB. (2025f). *PM Modi has redefined India's policy against terrorism, any attack on Indian soil will be considered as an act of war: Raksha Mantri in Srinagar*. http://www.pib.gov.in/PressReleseDetail.aspx?PRID=2128840&utm_source=chatgpt.com
- PIB. (2025g). *Transcript of Special briefing on OPERATION SINDOOR (May 08, 2025)*. Ministry of External Affairs, Government of India. https://mea.gov.in/media-briefings.htm?dtl/39479/Transcript_of_Special_briefing_on_OPERATION_SINDOOR_May_08_2025
- PIB Headquarters*. (n.d.). Retrieved 24 December 2025, from <http://pib.gov.in/PressNoteDetails.aspx?NoteId=154448>
- PM Modi Address To Nation. (2025). *PM Modi Address To Nation, Operation Sindorr, India Pakistan Tension—"Not An Era Of War, But Also Not Era Of Terror": Prime Minister Narendra Modi*. https://www.ndtv.com/india-news/not-an-era-of-war-but-also-not-era-of-terror-pm-modi-8396508?utm_source=chatgpt.com
- Precision, technology and deopth. (2025). *Precision, technology, and depth: What makes 'Operation Sindoor' different | DD News*. <https://ddnews.gov.in/en/precision-technology-and-depth-what-makes-operation-sindoor-different/>

- Press Release: Press Information Bureau.* (n.d.-a). Retrieved 11 March 2026, from <https://www.pib.gov.in/PressReleasePage.aspx?PRID=2129254®=3&lang=2>
- Press Release: Press Information Bureau.* (n.d.-b). Retrieved 11 March 2026, from <https://www.pib.gov.in/PressReleasePage.aspx?PRID=2161131®=3&lang=2>
- Press Release: Press Information Bureau.* (n.d.-c). Retrieved 11 March 2026, from <https://www.pib.gov.in/PressReleasePage.aspx?PRID=2128746®=3&lang=2>
- Press Release: Press Information Bureau.* (n.d.-d). Retrieved 12 March 2026, from <https://www.pib.gov.in/PressReleasePage.aspx?PRID=2149811®=3&lang=2>
- Press Statement by DGMO. (2025). *Press Statement by DGMO.* <https://www.pib.gov.in/newsite/PrintRelease.aspx?relid=151242>
- Pubby, M. (2025, October 1). Jointness is survival, and it needs mindset change: Rajnath Singh. *The Economic Times*. https://economictimes.indiatimes.com/news/defence/jointness-is-survival-and-it-needs-mindset-change-rajnath-singh/articleshow/124242624.cms?from=mdr&utm_source=chatgpt.com
- Ranjan. (2025, June 4). CUAS and Air Defence Triumph in Operation Sindoor. *CAPSS India*. <https://capssindia.org/cuas-and-air-defence-triumph-in-operation-sindoor/>
- Rknarang-rotor-india-magazine.pdf.* (n.d.). Retrieved 13 October 2025, from <https://idsa.in/wp-content/uploads/2025/05/rknarang-rotor-india-magazine.pdf>
- Sagar, P. R. (2025, September 22). *Post-Operation Sindoor, why Pakistan's air defence hype stands crushed.* India Today. <https://www.indiatoday.in/india-today-insight/story/post-operation-sindoor-why-pakistans-air-defence-hype-stands-crushed-2791424-2025-09-22>
- Sharma, L., & Bappanad, K. (n.d.). *Dissecting the Cyber Aspect of Operation Sindoor.*
- Shinghal, L. G. V. (2025, May 26). *Operation Sindoor: How jointness was the game-changer.* India Today. <https://www.indiatoday.in/india-today-insight/story/operation-sindoor-how-jointness-was-the-game-changer-2730775-2025-05-26>
- sindoor; n. Meanings, etymology and more | Oxford English Dictionary.* (n.d.). Retrieved 3 February 2026, from https://www.oed.com/dictionary/sindoor_n
- Snyder, G. H. (2002). Mearsheimer's World-Offensive Realism and the Struggle for Security: A Review Essay. *International Security*, 27(1), 149–173. <http://www.jstor.org/stable/3092155>
- Statement by Foreign Secretary. (2025). *Statement by Foreign Secretary on 26 February 2019 on the Strike on JeM training camp at Balakot.* Ministry of External Affairs, Government of India. https://mea.gov.in/Speeches-Statements.htm?dtl/31089/Statement_by_Foreign_Secretary_on_26_February_2019_on_the_Strike_on_JeM_training_camp_at_Balakot=
- Surge in cyber attack. (2025). *Surge in cyber attacks, Maharashtra cyber department warns to stay vigilant—The Hindu.* <https://www.thehindu.com/news/national/maharashtra/surge-in-cyber-attacks-maharashtra-cyber-department-warns-to-stay-vigilant/article69560739.ece>

Surgical strikes: Full text of Indian Army DGMO Lt Gen Ranbir Singh's press conference | India News—The Indian Express. (n.d.). Retrieved 11 March 2026, from <https://indianexpress.com/article/india/india-news-india/pakistan-infiltration-attempts-indian-army-surgical-strikes-line-of-control-jammu-and-kashmir-uri-poonch-pok-3055874/>

Technology Approach and Capability Roadmap. (2025). *Technology Approach and Capability Roadmap (TPCR)-2025 | Department Of Defence.* <https://mod.gov.in/dod/index.php/hi/node/92702>

Tharoor. (2025). *Opinion | Operation Sindoor: What Can India Expect From The World's Reactions?* Wwww.Ndtv.Com. <https://www.ndtv.com/opinion/what-the-world-thinks-of-indias-operation-sindoor-against-pak-by-shashi-tharoor-8353725>

The Economic Times. (2025, March 5). *Operation Sindoor vs 2019 Balakot airstrikes vs 2016 surgical strikes: How India's latest attack marks a strategic shift.* *The Economic Times.* <https://economictimes.indiatimes.com/news/new-updates/operation-sindoor-vs-2019-balakot-airstrikes-vs-2016-surgical-strikes-how-indias-latest-strike-marks-a-strategic-shift/articleshow/120956655.cms>

Times of India. (2025, May 14). *Operation Sindoor: Govt digital infrastructure faced 75% of cyber attacks.* *The Times of India.* <https://timesofindia.indiatimes.com/city/hyderabad/operation-sindoor-as-pak-drones-took-to-skies-hackers-attacked-india-via-cloud/articleshow/121146853.cms>

Tri-services integration not only matter of policy but crucial for survival: Rajnath Singh—The Economic Times. (n.d.). Retrieved 11 March 2026, from <https://economictimes.indiatimes.com/news/defence/tri-services-integration-not-only-matter-of-policy-but-crucial-for-survival-rajnath-singh/articleshow/124232019.cms>

Vohra, A. (2025). *Operation Sindoor: India's Atmanirbharta Success Story.*

STATEMENTS-

1. This research paper has not been published previously, nor has it been submitted for publication in whole or in parts in any journal, book or institutional publication.
2. The authors declare that they have no conflict of interest regarding the content of this manuscript.
3. The authors have not received any specific grant from any funding agency or non-profit source.
4. The authors consent to the publication of this manuscript and agree to retain the copyrights for the work as part of the publication process.
5. The authors declare that no AI tools were used for research analysis and writing of the manuscript.