

Op Sindoor: IAF Achieved its Aim and Validated Weapon Systems



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Source: Maxar Technologies

Introduction

Operation Sindoor has proven to be another feather in India's cap after the Balakot strikes in February 2019. India's Air Defence (AD) and the Indian Air Force demonstrated their professional acumen and technological prowess, with the Indian Navy and Army playing a decisive and supportive role.

1 | <https://capsindia.org/>

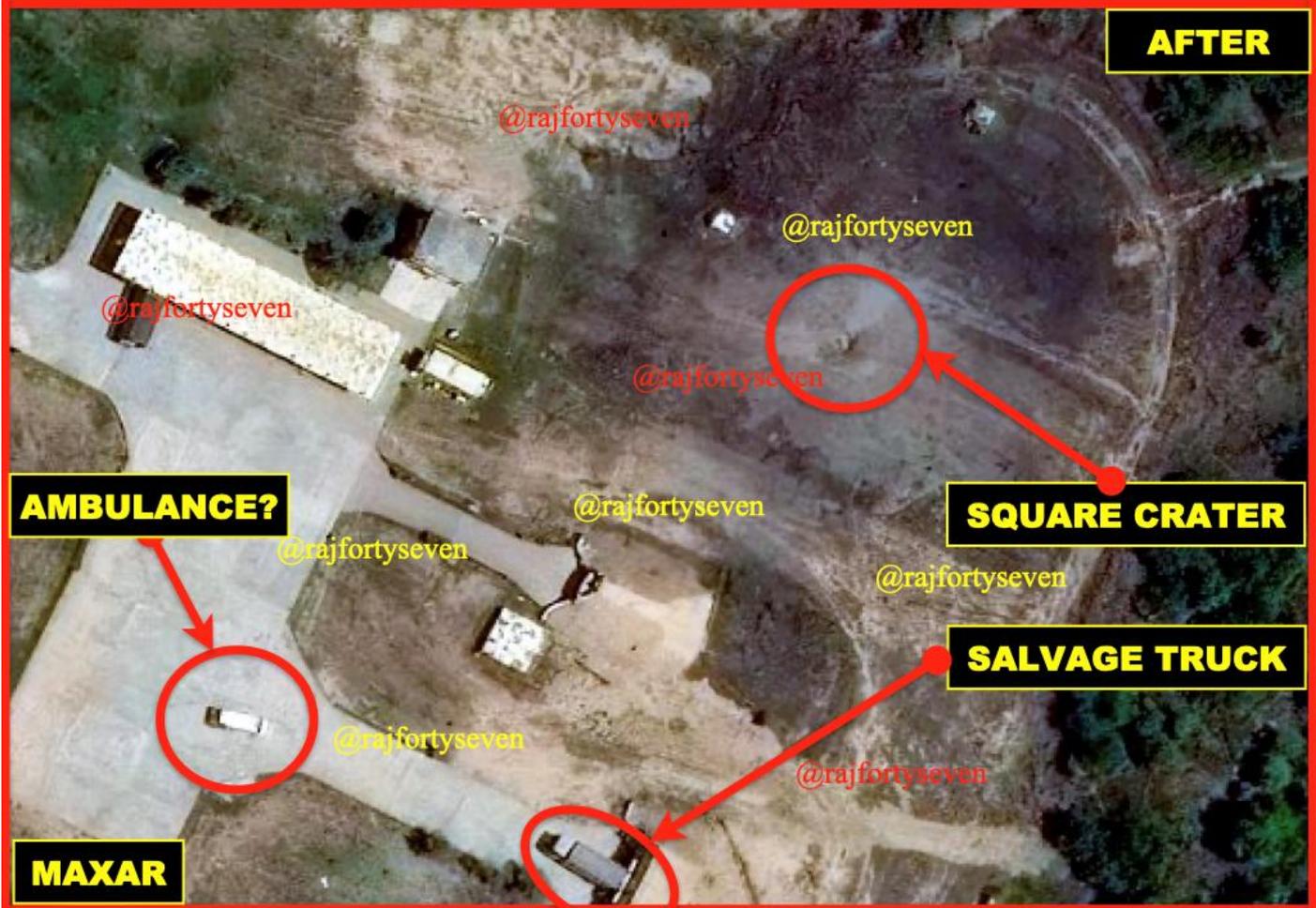
The planning for Op Sindoor was initiated following the unrestricted authorisation to use air power. Comprehensive intelligence was gathered regarding the status of terrorists at 21 identified locations. Ultimately, only nine of these locations were selected based on specific information indicating the presence of terrorists. Preparations were made for a plan to dismantle terrorist infrastructure in Pakistan and Pakistan-occupied Kashmir (PoK). The plan included various contingencies following an escalatory ladder disproportionate to Pakistan's actions in a carefully coordinated use India's air power.

Some members of the Indian media had started to question the preparedness of Indian forces, showing a lack of understanding regarding the complexities involved in preparing for military conflict with a determined, nuclear-armed, and religiously motivated adversary. One commentator even suggested, "India could stop short of an escalatory military assault similar to the Balakot air strike of 2019." ¹ Everyone thought Jabba Top attack was the highest point of India and any such strikes would breach the nuclear threshold for Pakistan and India was unlikely to take military measures and would be content with only abrogating the Indus Waters Treaty (IWT).

Precisely 14 days after the terrorist attack, the Indian government passed orders to all states to practice civil defence and blackouts on the evening of May 07, 2025. Blinded by the love for their terrorists, the adversary could never have assessed or even guessed the D-Day for Indian forces to be the same.

Pakistan tried in vain to clarify its position with regards to the Indian strikes on May 07, 2025, following a call from the Indian DGMO (Director General of Military Operations) to explain that India's fight was against terrorist activities targeting innocent tourists and that no civilian, military, or intelligence infrastructure was attacked.

Pakistan military and intelligence nexus which had become a collusive, all powerful front, superior to the Pakistani government, decided to attack Indian military installations and air bases in response to the Indian strike on terrorist infrastructure/ camps on May 07, 2025. They even dared to attack India with ballistic missiles creating a nuclear bogey but in vain. All Pakistani attacks, big or small were thwarted with professionalism keeping our men safe and systems operationally ready.

OP SINDOOR : MURID AB C2 AD CENTER HIT BY IAF

Source: Maxar Technologies

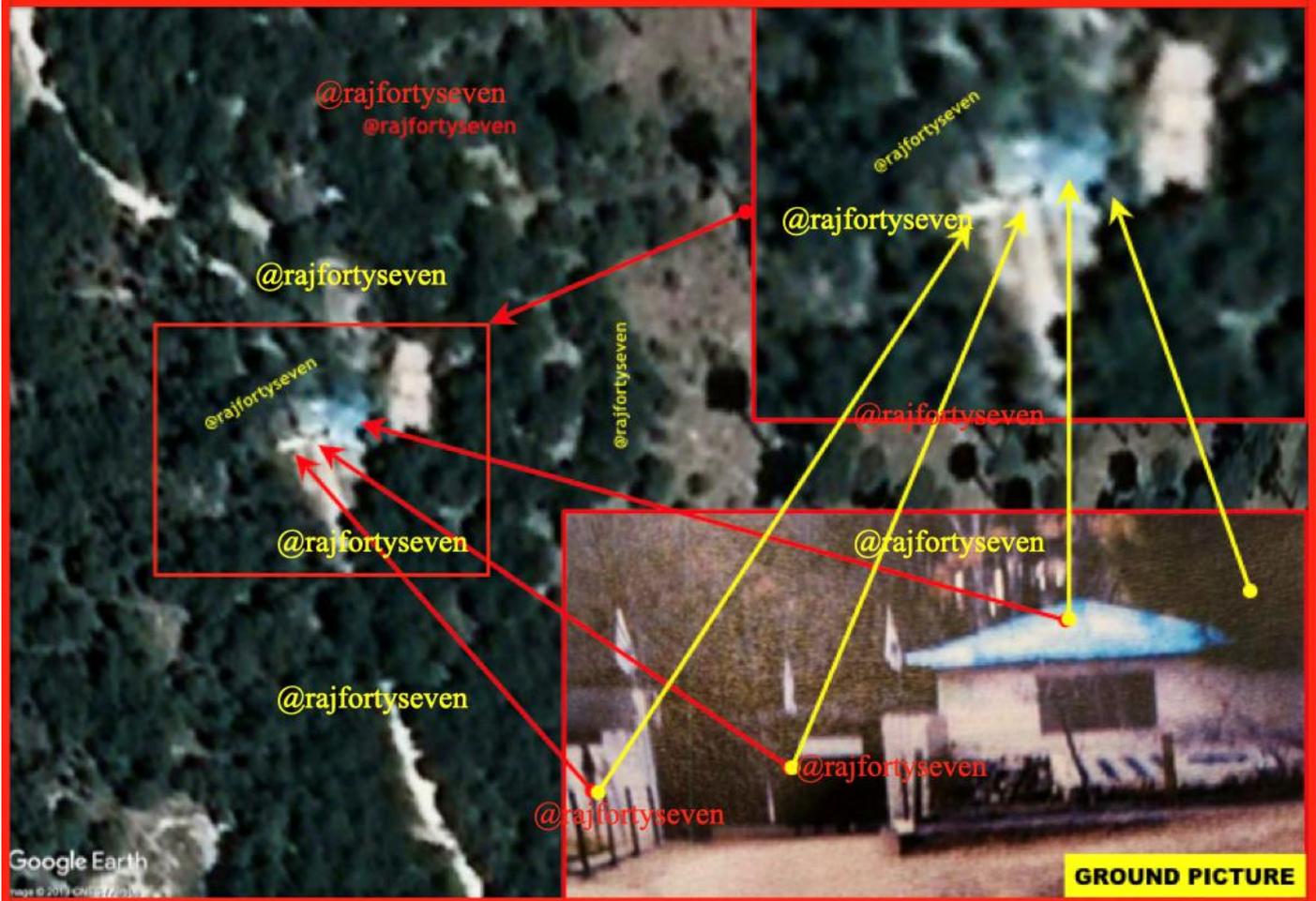
IAF's perfect and accurate attacks on Nur Khan and Murid Air Bases' C2 AD (Command and Control, Active Duty) facilities ² rendered Pakistan Air Force's capability to launch any air operations untenable bringing Pakistan to its knees.

This paper looks at Op Sindoore through the kaleidoscope of satellite imagery to explain India's intent of launching escalatory strikes to achieve its aim.

Revisiting Balakot

Pakistan has typically obfuscated evidence whenever it has been presented, especially in the form of dossiers. When the Pulwama attack happened, India decided to attack one of the terrorists' training camps, masquerading as a madrassa.

PAKISTAN TERRORIST NATION : JABBA TOP ACCESS CONTROL



Source: Google Earth and Internet

On February 26, 2019, the attack on Jaba Top took the PAF by surprise. The Indian Air Force (IAF), for the first time after the 1971 war, had crossed the International Boundary (IB) to hit a target inside Pakistan. Even before India announced it, Pakistan's Director General ISPR (Inter-Services Public Relations) had already tweeted about the attack. The aim of the early and quick tweets by DG ISPR was to ensure that India did not deny crossing the IB. However, on the contrary, India claimed the attack across the IB within minutes.

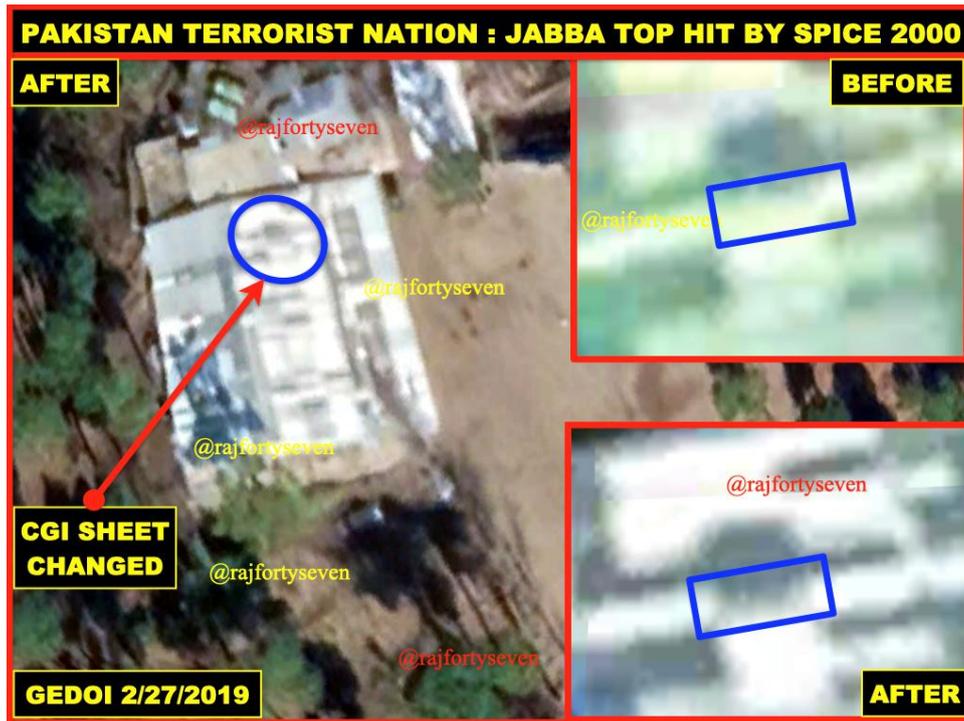
The Pakistan Army, which excels in cleaning operations, was more than ready that day. It ensured a cleanup and minor repairs before 10 am so that satellites wouldn't be able to notice anything unusual.

PAKISTAN TERRORIST NATION : JABBA TOP HIT BY SPICE 2000**AFTER**

Source: Google Earth and Digital Globe

However, a lot was observed on satellite images despite Pakistan Army's efforts to hide the damages. The peculiar small holes of SPICE 2000 were covered up in no time but the job obviously was done very unprofessionally leaving behind telltale signs.

The Corrugated Galvanised Iron (CGI) sheets are very pliable and have a tendency to try to regain their original shape. The penetrating power of the SPICE 2000 missiles is so strong at those high speeds (>Mach 2) that the holes created in CGI sheets look much smaller than even the size of the missile on satellite imagery. This makes it difficult for an untrained eye to believe if any attack had taken place.



Source: Google Earth

The change in CGI sheets is visible in the images of Google Earth dated February 27, 2019, which is not a particularly difficult thing to do. The comparison of before and after images provides more clarity on the changes to the CGI sheets that occurred after the IAF attack.



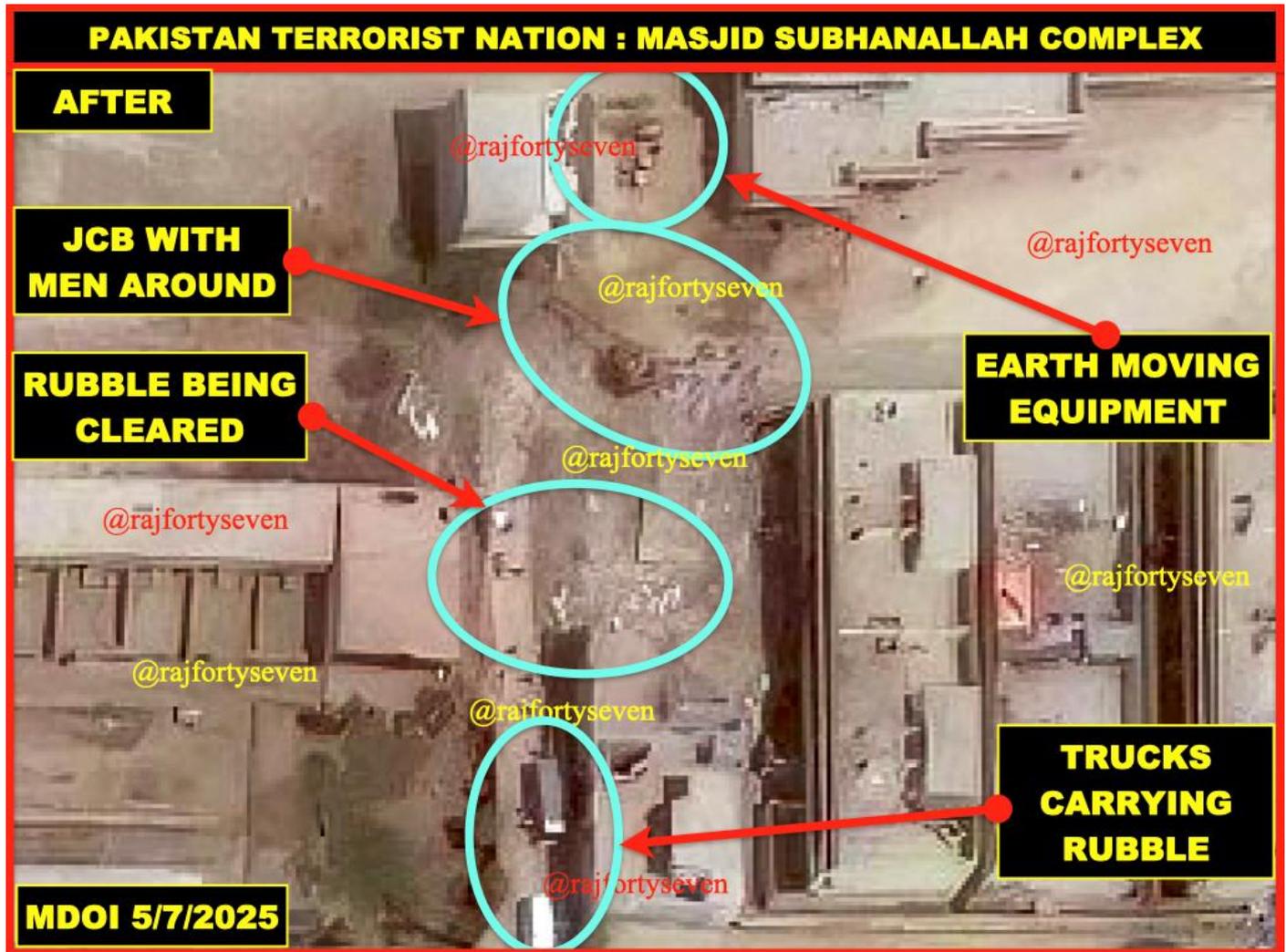
Source: Maxar Technologies

A similar comparison with images from Op Sindoor illustrates how challenging it is for an untrained eye to discern from satellite imagery that the IAF has indeed hit buildings, unless ground photos are made available. The size of the impact point is tiny (less than a meter), which is barely equal to two or three pixels on the satellite image with a 30 cm resolution.



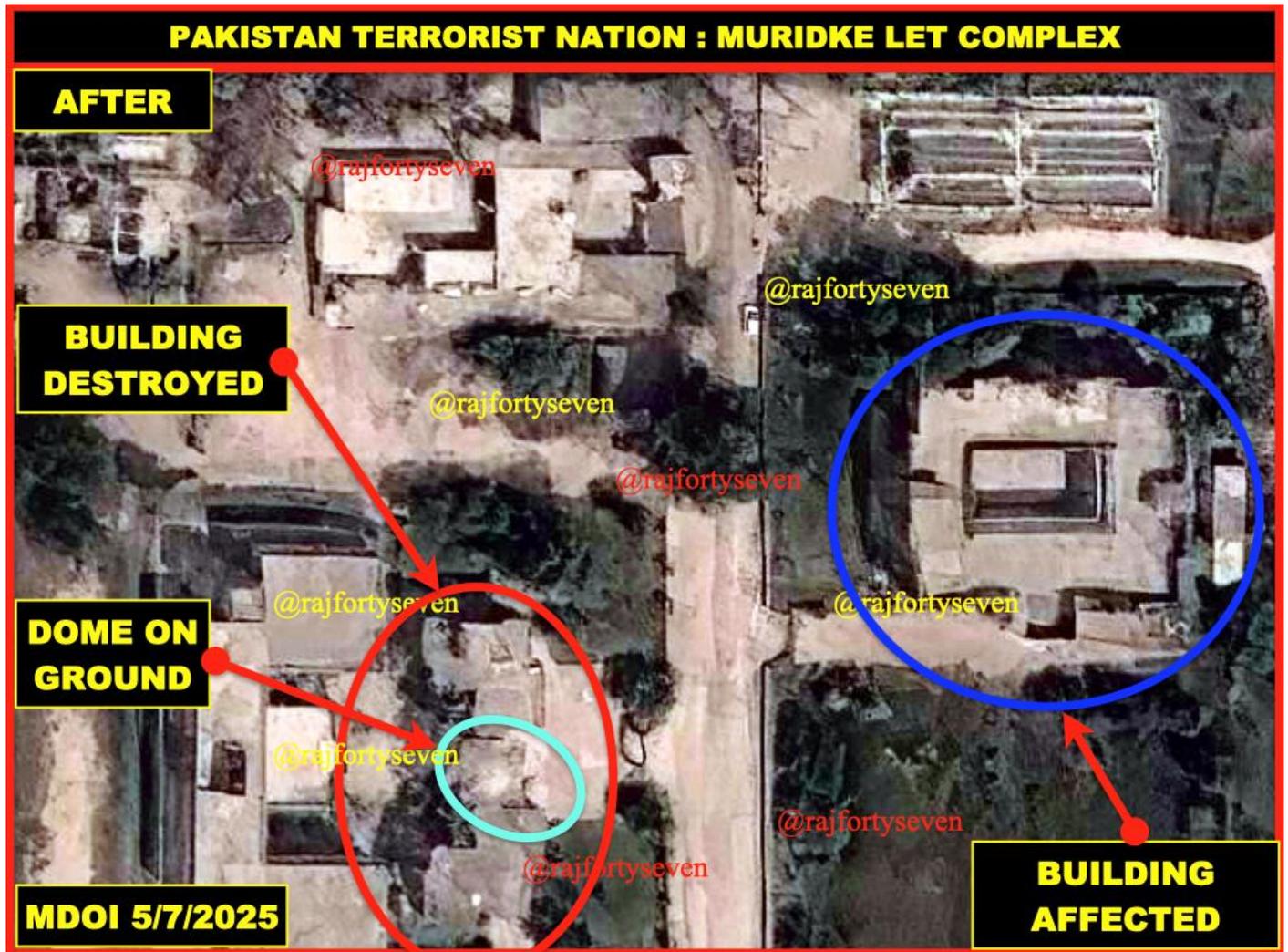
Source: Via Internet

The buildings in the Muridke headquarters of Lashkar-e-Taiba (LeT) were hit with precision and possibly with similar weapons used during the Balakot strike. This time, the cleaning operation by the Pakistan Army and Inter-Services Intelligence (ISI) was caught on satellite images.



Source: Maxar Technologies

The second building at Muridke, located next to the hospital, was used by terrorists as a storage facility for their small arms and was destroyed. However, the changes visible in satellite imagery were quite subtle, even to a trained eye. The distorted walls and roof suggest that the building had collapsed, and the dome had fallen below ground level.



Source: Maxar Technologies

These changes can be proved with ground photos. Still, Jaba Top being heavily guarded (Image-3 above), no one could access the site until the Pakistan Army opened it for the Defence Attaches 43 days after the attack. By then, all evidence of a terrorist camp being run under the garb of Madrassa Taleem-Ul-Quran at the site was removed.

Misinformation and disinformation campaigns by Pakistan were marred by the DG ISPR Twitter handle and his press conference, which claimed that two Indian pilots caught by them were being treated at Combined Military Hospital (CMH). Whatever escapades Pakistan was trying to make proved to be false, and their face of a pathological liar was exposed to the entire world then in 2019 and also now in 2025.

Jittery Pakistan

Pakistan's armed forces are the most jittery in the world and at the slightest hint of danger, they begin firing indiscriminately. The nighttime can be pretty entertaining. The troops of the Pakistan Army are so fearful of a potential attack from the Indian Army that they continuously launch flares throughout the night during tense periods.

In the aftermath of the Balakot strikes, Pakistan remained jittery throughout the month of March 2019.³ The airport in Multan suddenly shut down for all flights one day. The reports emanating from Multan city indicated an IAF attack on the airport, claiming Pakistan lost an F-16B, and later, some reports suggested the JF-17 was shot down by their own LY-80 Surface-to-Air Missiles (SAM). Chinese SAM systems identified their own aircraft. These were skylarking by PAF to somehow make good their losses of an F-16B during the episode with Wing Commander Abhinandan Varthaman.

Battlefield Testing of Indian Armed Forces Weapons and C2 Systems

In the early morning of May 10, 2025, Indian armed forces lit up Pakistan, covering its entire land border with India from Karachi to Skardu. The Indian Navy was already operationally deployed in the Arabian Sea to ensure that the Pakistani Navy was stalled in their ports and did not interfere in the actions of the IAF and the Indian Army. The aim was to disproportionately escalate to counter Pakistan's response of attacking Indian air bases and military installations, despite India successfully repelling the attacks; kudos to the latest IACCS (Integrated Air Command and Control System) supporting the air defence of Indian airspace.

To remind readers, the Mian Channu episode of the Indian BrahMos was a fluke firing of the missile in March 2022. The entire team was later punished adequately by the IAF for negligent firing, taking cognisance of the possible devastating consequences. It was reported that the missile was launched from Ambala and crossed into Pakistan through the Suratgarh border. When plotted on Google Earth, the missile's trajectory shows that it made a sharp 90° turn and reached Mian Channu without causing any damage. It possibly travelled around 124 kilometres within Pakistan for 3 minutes and 44 seconds, moving at a speed of approximately Mach 1.6. However, Pakistan's Center for International Strategic Studies (CISS) produced a report⁴ more than two years later, claiming that the firing was not inadvertent but a test in which Pakistan's radars failed miserably.

The BrahMos is notable for being the first cruise missile tested at supersonic speeds in a steep dive mode, which necessitated thorough validation, especially in the unpredictable conditions of a battlefield. The successful neutralisation of targets by the Indian armed forces, with significant impact, is no small achievement. However, a closer examination of the chosen targets along the entire land border with Pakistan reveals that India was not acting indiscriminately. Instead, it was testing its missiles and their variants, as well as the crucial Integrated Air Command and Control System (IACCS), across the entire country using live targets.

The plotted targets on the maps indicate that the chosen ranges were between 350 km and 500 km. This strongly suggests that the BrahMos was tested at its maximum ranges at night, against a live enemy who was at full alert. This information also indicates significant success in our radar systems, communications, and Navigation with Indian Constellation (NavIC), as well as the exceptional integration achieved by the Integrated Air Command and Control System (IACCS).

The complete cooperation, jointness and synergy between not only the various uniformed services but also branches of the Ministry of Defence (MoD) and other government departments was tested during Op Sindoor and proved to be outstanding.

Conclusion

Pakistan, after the Op Sindoor attacks, was in no position to claim that only a single crowd died. The enormous devastation was a stark reminder for everyone to see. The damage was so extensive that Pakistan could not hide any of the targets, even for a short time. Pakistan had no choice but to wave the white flag and request for a ceasefire. The considered decision by India to accept the ceasefire, when requested, should not be construed as a lack of Indian political or military will to escalate the situation.

India remains vigilant, with Operation Sindoor becoming the new normal. India has been prepared and continues to be willing to ensure that its adversary faces disproportionate consequences for its terrorist misadventures. This operation would undoubtedly go down in history as one of the best examples of the shortest war on terror with a stubborn nuclear neighbour called Pakistan.

दण्डो दमयतामस्मि नीतिरस्मि जिगीषताम् ।
मौनं चैवास्मि गुह्यानां ज्ञानं ज्ञानवतामहम् ॥ 10.38॥

(I am just punishment amongst means of preventing lawlessness, and proper conduct amongst those who seek victory. Amongst secrets I am silence, and in the wise I am their wisdom: Lord Krishna in The Bhagwat Gita Chapter 10 verse 38)

(Disclaimer: The views and opinions expressed in this article are those of the author and do not necessarily reflect the position of the Centre for Air Power Studies [CAPS])

Notes:

¹ Sidharth Raimedhi, Bashir Ali Abbas, "Any Cross-Border Strike by India Faces a Potential Drawback. It May be Seen as underwhelming," *The Print*, May 01, 2025, <https://theprint.in/opinion/cross-border-strike-india-pakistan-drawback-underwhelming/2610410/>. Accessed on June 04, 2025.

² Vinayak Bhat, "Precision, Perfection and Accuracy have been Hallmarks of IAF Golden Strikes in Pakistan: Targets Obliterated from the Face of Earth," *Centre for Air Power Studies*, May 30, 2025, <https://capsindia.org/precision-perfection-and-accuracy-have-been-hallmarks-of-iaf-golden-strikes-in-pakistan-targets-obliterated-from-the-face-of-earth/>. Accessed on June 03, 2025.

³ Vinayak Bhat, "Jittery Pakistan shut Multan airport not because it 'shot' own JF-17 jet or terror attack," *The Print*, March 27, 2019, <https://theprint.in/defence/jittery-pakistan-shut-multan-airport-not-because-it-shot-own-jf-17-jet-or-terror-attack/212141/>. Accessed on June 03, 2025.

⁴ Atia Ali Kazmi, "Accidental, Inadvertent or Deliberate Launch: The Case of Indian Air Force's Nuclear Supersonic Cruise Missile," *Center for International Strategic Studies*, April 06, 2024, <https://newsitedev.ciss.org.pk/blog/2024/04/06/accidental-inadvertent-or-deliberate-launch/>. Accessed on June 03, 2025.