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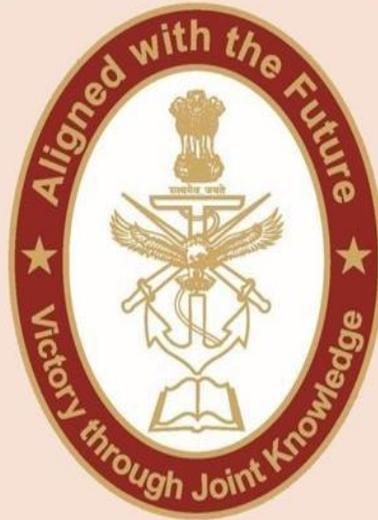
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**OPERATION SINDOOR:
INDIA CHECKMATES
PAKISTAN
ON CHINESE WEIQI
BOARD**

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Operation Sindoor: India checkmates Pakistan on Chinese Weiqi Board



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Abstract

Operation SINDOOR was a turning point in the conduct of joint force application by the Indian military within the conventional, non-contact domain. The operation escalated India's deterrence to a new normal. Integrated and calibrated multi-domain full-spectrum retaliation to every state-sponsored terrorist action will be an expectation and not an exception. Calibrated and non-escalatory responses covering the complete diplomatic, information, military and economic (DIME) spectrum across the strategic depth of Pakistan may be sure in case of next terrorist act. While India tested its indigenous joint architecture, weapons and platforms in conjunction with imported types for precision strikes and integrated defence, Pakistan had to majorly rely on Chinese and Turkish weapons and platforms. Pakistan Army succeeded in regaining the nation's overwhelming support by an intricate plan of disrupting Kashmir's peace after building up its military particularly its Air Force (PAF) since 2019 Balakot strike. The request to cease firing by Pakistan's Director General Military Operations to Indian counterpart within 84 hours of the launch of the operation, on 10 May 2025 proved that Pakistan had been checkmated on its iron brother China's Wei Qi board.

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Many of the advanced Chinese weapons and systems like the varieties of HQ9P Surface to Air Missile (SAM), J10CE and JF17 aircrafts, and PL-15 Beyond Visual Range Air to Air Missiles (BVRAAM) much ballyhooed before actual employment got battle tested. The planning period for the terrorist strike witnessed significant Chinese assistance in Space-based ISR to assist Pakistan execute a dastardly shameful strike on innocent civilians. Despite Chinese and Turkish support, the world witnessed the efficacy of Indian military in precisely striking the PAF bases. Pakistan thus found most Chinese systems failing on many accounts but has been forced to adopt them because of non-availability of any other alternatives. In any case, whether it was poor training of Pakistan military, poor quality of Chinese equipment, inadequate quantity of assets or their integration, PLA and Pakistan military would have commenced reviewing the lessons and preparing for the next standoff. This

monograph examines the Pakistan's scenario buildup since 2019 and Chinese assistance. It will then analyse Operation SINDOOR, summarise Chinese successes and failures to bring out relevant lessons.

Introduction

All-weather Siamese Terror Twin Pakistan has Chinese terrorist support Guaranteed,
Collusive Great Game makes it sweeter than honey and stronger than steel in need;
Karakoram Highway higher than the highest mountains to confront India indeed,
Driving Pakistan's array of resources from Gwadar to Kashagar through CPEC deed,
Higher than the highest debt, deeper than the deepest trap makes Pakistan bleed;

While Pakistan Army has a Nation, CPC has an Army to run the Chinese nation,
Collusive manifestation, fishing fleet, satellite constellations to disrupt Indian nation;
To divert strong neighbour's attention for planned Taiwan's forced reunification,
At the cost of innocent tourist lives in Kashmir- the pride of Indian Nation;

Pause in Operation SINDOOR a trailer to the Colluding All Weather Friendly Nation,
IWT Abeyance calibrated retaliation is not an exception but fundamental expectation;
Full-spectrum deterrence, precision Strikes the New Normal in Conflict Escalation,
No Symbolic actions but assets enabling terrorists will face assured Destruction;

Amidst failing Chinese Toy-like weapons, despite ballyhooed Three Modernisation,
Pakistan realised PLA's acclaimed A2AD bubble will be subject to Indian penetration;
Whole-of-Nation Space Collaboration is the way ahead for stronger confrontation,
Integrated layered defence, EM-cyber-drones-missiles-rocket-loitering munition,
Operation SINDOOR mark of Resilient United Bharat's Will, Intent and Motivation;

Victory Notion despite defeat, General to Field Marshal of a debt-ridden nation,
Bases devastated by BrahMos propulsion, PAF Chief gets an extension;
Uncovering of fake videos and images will upset the temporary national perception,
If not dismantled, home grown terrorism will face reverse retribution;

Indian Magic Mantra of Multi-Domain Modernisation Through Indigenisation;

Through relentless technological innovation, commercialisation and miniaturisation;
VIKSIT SURAKSHIT BHARAT is not just a dream of largest democratic nation,
Our beloved Country will come first and foremost for the talented Indian generation.

The Udhampur-Srinagar railway link was to be inaugurated on 07 May 2025. Increasing tourism in Kashmir hinted towards regaining of complete normalcy. This was a major worry for Pakistan Army as expressed by them in their 2020 Greenbook. Chinese military disengagement along India-Tibet border without achieving People's Liberation Army's (PLA) desired objectives, and mounting shortfalls in PLA's preparations for Taiwan's hopeful reunification by 2027 despite Xi's acceleration made even Pakistan's iron brother- People's Republic of China (PRC) uneasy. Thus, Pakistan's security establishment, with full Chinese assistance, executed a precise terrorist strike on 22 April 2025 at Pahalgam in J &K to regain the confidence of Pakistani national population. Pakistan military's barbaric and cowardly act, through six terrorists, killed 26 innocent civilian tourists of Hindu religion¹. However, the quality, lethality and precision of Indian punitive strike in form of Operation SINDOOR upset the Sino-Pak-Turkish alliance and finally checkmated Pakistan with lethal strikes on its Air Force bases on 10 May 2025, which were presumed to enjoy foolproof coverage of Chinese imported AD weapons.

While the Pakistan Army aims at short term gains, the Chinese are always known to play the long game. During the ongoing Russia-Ukraine war, Chinese military assistance to Russia has significantly increased particularly covertly through cross-border supply from local firms, as accepted by Russian drone developer². However, Chinese major equipment has remained untested on the battlefield. Although Chinese commercial drones have been used by both Ukraine and Russia and even many disputing West Asian factions, PRC's missile-drone-rocket-artillery-Air Defence (AD) did not get tested, unlike Iranians, Turkish, Americans or NATO countries which got most of their equipment battle tested. The Iran-Israel-Houthis conflict has tested the complete concept of long-range strikes and integrated rockets-artillery-air-missiles-drones-(RAAMD) defence and in turn their complete array of military equipment. The Israeli Iron Dome model is being further developed as the American Golden Dome. PLA has similarly developed a variety of weapons and platforms in a system architecture to replicate Israeli Iron Dome / RAAMD defence to have its own

Anti-Access Area Denial (A2AD) bubble as depicted in Figure 1, but it had not been battle tested till now. With the mounting pressure of ambitious reunification of Taiwan by 2027 marking the centenary of PLA, Chinese Central Military Commission (CMC) has found numerous faults within PLA from grassroots³ to theatre command level including lack of confidence of facing the battlespace hardships.



Figure 1: Comparison of Notional PLA's A2AD Wall with Israeli RAAMD Defence Against Iranian Strike in April 2024

(Source- Author's Research)

PRC's President and CMC Chairman Xi Jinping has repeatedly emphasised the need for PLA to be combat ready and fight in existing conditions⁴. Historically, Chinese are taught, through their 36 stratagems and Wei Qi game and as well officially listed in their Science of Military Strategy numerous times, to prevent a crisis from leading to war but exploit every opportunity during a crisis to gain advantage⁵ or 'shi'. Thus, the artificially created crisis by Pakistan's Army on Indian soil gave PLA a unique opportunity to test its weapons in battle without any Chinese casualties. Apropos, Chinese rushed some of its advanced platforms like the upgraded PL15 BVRAAM. This monograph will thus explore Pakistan military's actions and Chinese assistance for the terrorist strike, analyse Indian Military's Operation SINDOOR from 07 to 10 May 2025, and identify the key shortfalls noticed in Pakistan's military response due to failure or success of various Chinese equipment and platforms

employed by Pakistani military. The aim is to objectively assess Pakistani response, make an impartial assessment of Chinese assistance and equipment performance and come out with recommendations for Indian military for the next crisis which may occur again anytime either along Northern or Western Borders. Turkish assistance and its drones, manned-unmanned teaming will be discussed will be discussed in detail in a separate article.

Background

Post the Indian Balakot punitive strike in retaliation to Pakistan sponsored terrorist strike at Pulwama in 2019 and abrogation of Article 370 by Indian Government on 05 August 2019, Pakistan’s Greenbook 2020 edition made a Pakistan’s Security Threat Matrix 2019 which evaluated four futuristic scenarios and their ramifications which are reproduced below at Figure 2.⁶

Scenario	Pakistan’s Response	Ramifications
One	Pakistan in a hope to evade clash with India accepts post August 5 th Kashmir as new normal	<ul style="list-style-type: none"> ▪ Israel driven Palestine Model applied on Kashmiris and struggle totally subdued. Genocide, extraditions, mass RSS /Hindu settlements will totally change the demography and Pakistan’s claim will be defeated. ▪ Disappointed /discouraged and weakened Kashmiris may turn hostile towards Pakistan and accept solution within Indian folds. ▪ India satisfied with strategic partners and ready to serve their interests in the region (especially against Pakistan & China). ▪ US /Israel may be offered military bases in IOJK. ▪ Emboldened India will ask Pakistan to handover Azad Kashmir. Open attack is a possibility and World may accept this as well. ▪ Next step towards AKHAND BHARAT, to absorb Pakistan is taken at an opportune time in future.

Two	Pakistan seeks a solution based on division of Kashmir into 3 parts. Pakistan sheds away AJK, India sheds away Valley. Northern Areas go to Pakistan, while Laddakh goes to India. Or a similar agreement based on Chenab Formula.	<ul style="list-style-type: none"> ▪ Though this plan sounds the most feasible, but in reality it will be least probable due to extreme internal pressures both in India and Pakistan; more so in India. ▪ If anything like this materializes, it will not help securing Pakistan's strategic interests. ▪ Some factions of Kashmiris will be happy. ▪ Most of the global stakeholders in the region will term it as responsible intervention of the world power(s). ▪ India will compromise on Valley only, while Pakistan will have to compromise on entire AJK. ▪ US would intervene as moderator with pledge of providing security to newly established free Kashmiri state and for that it may seek to establish military bases at Srinagar and Muzafarabad. ▪ China will never like this solution. Such an agreement by Islamabad may affect adversely on bilateral ties with Beijing. ▪ India will witness an internal uprising against such a scheme by right wing politicians and intelligentsia leading to another conflict with free Kashmir or with Pakistan. ▪ Having settled the core issue of Kashmir with India, Pakistan will now be convinced / motivated / coerced to de-nuclearize as a responsible nation state. ▪ Pakistan armed forces will lose their credibility as a force to deter, that has promised to fight for Kashmiris till last bullet and last soldier. Morale within the rank and file will be shattered. ▪ Propaganda against Pak Army being a corporate entity rather than a defense force will intensify and will get more traction among locals. ▪ Due to massive internal pressure on both sides, threat of a war like situation will still prevail.
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Scenario	Pakistan's Response	Ramifications
Three	Pakistan takes bold and principled decision and responds to SOS call of Kashmiris, and supports native freedom struggle through aggressive diplomacy.	<ul style="list-style-type: none"> ▪ This is most practical and dignified option for Pakistan. It will yield internal cohesion as well. ▪ Pakistan Army will get invaluable vote of confidence, not only from local masses but from across the world by those who are being oppressed. ▪ Pakistan will get its true leadership role. ▪ Pakistan's water security will be ensured like never before. ▪ Pakistan will have to pay some price with a possibility of a war like situation on international border with India. Even then, entire nation will back armed forces.
Four	Pakistan delays its response and India consolidates and succeeds in changing the demography of the Valley.	<ul style="list-style-type: none"> ▪ Devastating effect for Kashmiris, Pakistanis and armed forces. ▪ IOJK will be lost forever and for real. ▪ Pakistan may have to face massive influx of refugees fleeing from IOJK to save their lives similar to Syrian and Palestinian refugees. ▪ Potential threat for a high intensity war with India still be prevailing as Delhi will take Pakistan's indecision as a sign of weakness.

Figure 2: Pakistan's Envisaged Four Scenarios

(Source- Pakistan Greenbook 2020⁷)

As is clearly evident from above table, Pakistan declared the third scenario as the most practical response wherein Pakistan must upset Kashmir's normalcy in order to ensure internal cohesion of its own nation. Pakistan Army feels that it can gain its own population's confidence, even at the cost of a war situation against India, only by creating a crisis in Kashmir. They felt that they would have the backing of the complete nation and that a Kashmir oriented operation would ensure water security for the complete nation. Most importantly, Indian consolidation of Kashmir (Scenario 4) was considered devastating for Pakistan's armed forces. While Kashmir had actually stabilised significantly in India with tourism at an all-time high, Pakistan was facing trouble from all quarters including Afghanistan, mounting terrorist attacks and rising demands of Baluchistan's independence. The status of Pakistan Army and national support for the Army was at an all-time low with Imran Khan's PTI supporters regularly disrupting the government functioning.

The elevation of Pakistan's Chief of Army Staff (COAS) General Asim Munir to the rank to Field Marshal and grant of extension of PAF Chief seen in the light of stated intentions in their "Green Book 2020" and the statements of DG ISPR and PAF Spokesperson AVM Aurangzeb, show the broad contours of Pakistan's planning from 2019 to 2025 clearly: -

- The abrogation of Article 370 on 05 August 2019 had upset China and Pakistan both. While PLA tried its best to disrupt the normalcy since April 2020 in the area of Eastern Ladakh for four years plus, activation of a new front may have been felt necessary to disturb Kashmir's normalcy. A crisis in Kashmir will adversely impact the Indian military thereby allowing PLA to prepare for Taiwan's unification. The increasing frequency of PLA's Taiwan oriented exercises and Xi's repeated calls for accelerating strategic capabilities by 2027 indicate PRC's main strategic direction.
- The inauguration of train link with Srinagar on 07 May 2025 and further reaching Baramulla would have further strengthened Kashmir Valley's integration.

- The Pakistan Army intentionally created a crisis in Kashmir on 22 April 2025 to create religious disharmony. While they expected religious riots in India post such an incident in Kashmir and success in garnering international support for Pakistan's stance on Kashmir, they majorly aimed to try and win back waning national support for the Army.
- A major IW campaign needed to be implemented to win the support of Pakistan's populace particularly post the attacks by the supporters of the PTI on Pakistani military installations⁸. Simultaneously, a diplomatic outreach was planned. Pakistan's COAS General Munir's address to overseas Pakistanis on 15 April 2025 evidently made it clear that Kashmir was the primary factor in Pakistan Army's mind. He evidently forgot the famous advice of the previous Pakistan's Field Marshal Ayub Khan, post 1965 war, to Pakistan's cabinet "***I want it understood that never again will we risk 100 million Pakistani for 5 million Kashmiri—never again.***"⁹ However, he followed Ayub's pre 1965 belief that "*as a general rule Hindu morale would not stand more than a couple of hard blows at the right time and place. Such opportunities should, therefore, be sought and exploited*"¹⁰.
- With American restrictions of provision of F16 spare parts and accessories, PAF and Pakistan Army's AD needed to be built up significantly. The only cost-effective option was to rely on the Chinese equipment and ensure continuous Chinese infrastructure development through China-Pakistan Economic Corridor (CPEC). During the 2019 Pulawama-Balakot incident, Pakistan's military had hardly used Chinese equipment and relied on American F-16s etc. Pakistan's military conducted numerous precision strikes, employing drones, air power and missiles, on Afghanistan and even Iran on 18 January 2024 although latter was in response to Iranian strikes on Pakistan soil on 16 January 2024.

Chinese Wei Qi Moves

In his speech to Pakistan, after the understanding reached on 10 May to cease cross-border firing, their Prime Minister Mr Shehbaaz Sharif thanked and called China a "very dear, very trustworthy and very dear friend."¹¹ It is abundantly clear that China comprehensively supported Pakistan in the Pahalgam standoff from inception till now. It is thus important to identify and understand Chinese involvement in planning of the operation and the motive behind it. Having faced a setback on India-Tibet-Xinjiang disputed line during the four years plus standoff, China surely wants to keep Indian attention diverted on its Western front while PLA can focus and prepare for its primary strategic direction of Taiwan's reunification by 2027. Accordingly, the Communist Party of China (CPC) and its Army – PLA assisted Pakistan with significant opportunities of testing its concept of Multi-Domain Intelligence Surveillance Reconnaissance (MD-ISR), long-range precision strikes, and A2AD concepts through a wide variety of equipment and platforms being fielded by Pakistan military. The succeeding paragraphs will thus cover the various aspects noticed which confirm detailed joint planning by Pakistan and China before 22 April 2025 and then from 22 April 2025 to 06 May 2025 and even beyond.

Buildup of PAF. Since the employment of American F-16s in the previous Balakot standoff, PAF as per their spokesperson AVM Aurangzeb, had assessed that the IAF would employ the French Rafale in any next air battle. Thus, with Chinese help and joint production, they had inducted JF17, J10CE, and the key payload PL-15 BVRAAM in addition to LY80 (HQ16) MR-SAMs and HQ-9P LR-SAMs for Air Defence (AD). A study of Military Balance editions from 2018 onwards clearly gives out the change.

Table 1: PAF's Induction of Chinese Equipment Since 2018

(Data Source- IISS Military Balance Editions 2018-2025)

Aircrafts FGA Variety

Year	FGA	F16A	F16B	F16C	F16D	J10CE	JF17BI	JF17BII	JF17BIII	JF17B
2018	269	24	21	12	6		49	36		
2020	248	24	21	12	6		49	62		
2021	258	23	21	12	6		49	61		12
2022	261	23	21	12	6		49	61		15
2023	273	23	21	12	6	12	49	61		15

2024	297	23	21	12	6	14	49	58	15	25
2025	310	23	21	12	6	20	49	57	23	25

SAMs – PAF

Year	Total	MR	HQ2	SR	Crotale	SPADA 2000	Igla-1
2018-2025	190+	6	6	184	144	40	Y

SAMs- Pak Army's Air Defence

Year	Total	LR	HQ9P	HQ2	MR	LY80 (HQ 16)	SR	FM90	PD	RBS70	Anza-II	FN6	QW18
2018					Y	Y	Y	Y	Y	Y	Y	Y	Y
2020					Y	Y	Y	Y	Y	Y	Y	Y	Y
2021	27+				27	27	Y	Y	Y	Y	Y	Y	Y
2022	27+				27	27	Y	Y	Y	Y	Y	Y	Y
2023	27+	Y		Some	27	27	Y	Y	Y	Y	Y	Y	Y
2024	27+	Y	Some		27	27	Y	Y	Y	Y	Y	Y	Y
2025	27+	Y	Some		27	27	Y	Y	Y	Y	Y	Y	Y

PAF – AAMs

Type	IR		IIR	SARH			ASM			ARM
Year	AIM 9L/P	U-Darter	PL10	Super 530	PL12	PL15	CM400 AKG	AGM-65	Raptor	Mar-01
2018	Y	Y		Y	Y			Y	Y	Y
2020	Y	Y		Y	Y			Y	Y	Y
2021	Y	Y		Y	Y			Y	Y	Y
2022	Y	Y		Y	Y			Y	Y	Y
2023	Y	Y	Y	Y	Y	Y		Y	Y	Y
2024	Y	Y	Y	Y	Y	Y		Y	Y	Y
2025	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

Date	Recipient	Equipment	Type	Quantity	Contractor	Deliveries
2018	Angola	K-8W Karakorum	Training aircraft	12	Hongdu Aviation Industry Group (HAIG)	2020
	Pakistan	JF-17B Thunder Block II	FGA aircraft	26+	PAC; CAC	2019–ongoing
	Nigeria	JF-17 Thunder Block III	FGA aircraft	23+	PAC	2021–ongoing
	Bangladesh	JF-17 Thunder Block II	FGA aircraft	3+	HAIG	2020
Jun	Indonesia	K-8W Karakorum	Training aircraft	7	HAIG	2020
		CH-4B	Heavy CISR UAV	6	Aerospace CH UAV	2019–20
2020	Pakistan	Wing Loong II	Heavy CISR UAV	n.k.	CAC	c. 2021
	Myanmar	FTC-2000G	FGA aircraft	6+	Guizhou Aircraft Industry Corporation (GAIC)	2022
2021	Nigeria	CH-4B	Heavy CISR UAV	4	Aerospace CH UAV	2022
	Nigeria	Wing Loong II	Heavy CISR UAV	5	CAC	2021–23
	Pakistan	CH-4	Heavy CISR UAV	4+	Aerospace CH UAV	2021
	Algeria	Wing Loong II	Heavy CISR UAV	24	CAC	c. 2023
Feb	Saudi Arabia	TB-001	Heavy CISR UAV	n.k.	Sichuan Tengden Technology Company	n.k.
Jun	Pakistan	J-10CE Firebird	FGA aircraft	20+	CAC	2022–ongoing
Dec	Algeria	WJ-700	Heavy CISR UAV	4	China Aerospace Science and Industry Corporation (CASIC)	Pending
2022	Algeria	CH-5	Heavy CISR UAV	€6	Aerospace CH UAV	Pending
	Morocco	Wing Loong II	Heavy CISR UAV	n.k.	CAC	2023
2023	Iraq	CH-5	Heavy CISR UAV	n.k.	Aerospace CH UAV	2024
	Laos	K-8W Karakorum	Training aircraft	4	HAIG	2024
	Saudi Arabia	Wing Loong-10B	Heavy CISR UAV	n.k.	CAC	Pending
Feb	UAE	L-15	Training aircraft	12	HAIG	2023–ongoing
2024	Azerbaijan	JF-17 Thunder Block III	FGA aircraft	n.k.	PAC	n.k.

CISR = combat intelligence, surveillance and reconnaissance; FGA = fighter ground-attack
Source: IISS, Military Balance+, milbalplus.iiss.org

Figure 3: Selected PRC's fixed-wing combat-aircraft exports since 2018

(Source: IISS, Military Balance 2025¹²)

The following facts emerge from the above tables and statements of PAF Spokesperson AVM Aurangzeb¹³ which demonstrate that PAF was not ready before 2024. It was in fact during the period from 22 April to 06 May 2025, that China had to provide PAF with "combat enhanced version" of PL15 BVRAAM on an emergent basis-

- PAF expected IAF to use Rafale aircraft. Hence, they required LR SAMs of HQ9 variety minimum which the Pakistan Army's AD received in 2023-24 to defend their extremely vulnerable areas and points. However, Chinese sources themselves admit that HQ9 has good air defence capability against aircrafts but limited capability against ballistic missiles¹⁴. Global Times statement is reproduced below: -

"HQ-19 can generally be described as a dedicated anti-ballistic missile system, while the HQ-9 and the HQ-22, which are Chinese surface-to-air missile systems previously announced to be in service with the PLA, focus more on anti-aircraft missions and have less range in anti-ballistic missile missions."

- Despite PAF having larger number of SAMs, the provision of 27 HQ9 LR-SAMs and LY80 (export version of HQ16, presumably six batteries at least) to Pakistan Army's AD clearly indicates that the limited LR SAMs and even MR-SAMs may either have not been deployed to protect PAF bases or would not have been effectively integrated between PAK and Pak Army AD. LR SAMs with Pakistan Army may have been particularly deployed to protect more vulnerable areas like Pakistan Army HQ etc.
- In order to conduct retaliatory strikes and overcome Indian AD systems comprising Russian S-400, indigenous MR-SAM, Akash SR-SAM etc duly integrated under Akashteer and Integrated Air Command and Control Centre (IACCS)¹⁵, PAF needed advanced Air to Surface Missiles (ASM) with longer stand-off ranges. Chinese provided PAF with CM-400 AKG in 2023-2024.

When AVM Aurangzeb claimed firing of a hypersonic missile, he was most probably referring to this missile¹⁶. While the original manufacturer AVIC claims hypersonic speed of 5 Mach, CM-400AKG may actually be a high supersonic missile reaching a speed of 4 Mach¹⁷.

- For the aerial battle, PAF procured PL-12 AAMs first with the commencement of joint production of JF17. However, with the induction of J10CE from 2022-23, PAF also inducted PL15 BVR AAM at the same time. More importantly, the normal Pakistan specific export version did not have adequate reach and reliability. Chinese netizens claim that China provided PAF with "combat enhanced version", post 22 April 2025 in the last week April 2025¹⁸. A comparative table of PL15 AAM inducted with PLA and the normal export model PL15E provided to PAF, is given below at the table.

Table 2: Comparison- Key Characteristics of PLA’s PL-15 AAM vs PAF’s PL15E

(Source-Author’s Research from Multiple Sources¹⁹)

Parameter	PLA’s PL15 AAM	PAF’s PL15E AAM
Main Characteristic	Tailored for internal carriage, initially in J-20, & has distinctive cropped fins to reduce its dimensions Two-way datalink provides guidance updates to missile & the launching aircraft and the seeker uses active electronically scanned array (AESA) technology, with active and passive modes better resistance to countermeasures	Chinese claims- all-weather use, BVR launch, fire-and-forget; precise strikes on targets such as manned & unmanned aircraft & cruise missiles; adopts a combination of strapdown inertial navigation and satellite guidance, two-way data link correction, & terminal radar guidance
Basic Development	Developed in 2011; test missile carried by J-11B in 2013; Main weapons bay of J-20 2013 onwards; Operational service in late 2016 with J10C & J-16	1st export model PL15E for PAF JF-17 Block III & J-10C fighters with different propellant or changes to the motor. Block III variant enhances BVR capabilities with AESA KLJ-7A radar & PL-15E missile integration.
Range	124 miles (200 km)	90 miles (145 km)
Claimed speed	~5 Mach	
Power & guidance	Dual-pulse rocket motor, capable of burnout speed	Two-way data link allows missile to receive target

	>Mach 5; During terminal phase, second pulse of its motor ignites, providing additional energy & speed to increase kill probability at long distances	correction information from mother aircraft J-10CE, during flight, improving anti-interference capability. In low-altitude penetration scenarios, PL-15E can transmit seeker signal to mother aircraft in real time through the data link for processing; PL-15E seeker (diameter~180mm, is equipped with 192 AESA units, operates in X/Ku band; At 20 km, can have good signal-to-noise ratio for a 1 m ² target, improve the detection capability through 64 times of signal coherence accumulation
Price	Not Known	6-7 million yuan (0.829-0.967 mn USD)

- As per the statement of PAF AVM Aurangzeb, PAF had prepared for IAF's employment of Rafales since Balakot Strikes. Thus, PAF pilots had practiced with Qatari Rafales in joint exercises with Qatar Air Force. PAF Pilots on secondment have also flown the Qatari Rafale's extensively.²⁰ M Matheswaran identified common features between Qatar and the Indian Rafale fighters as *"RBE 2-AA AESA radar, SPECTRA self-protection suite, the IFF (Identification, Friend or Foe) system, Elbit's TARGO-II Helmet Mounted Display System, and weapons such as the Meteor BVRAAM, Mica air-to-air missile, and SCALP air-to-ground long-range cruise missile. Anyone who flies the aircraft will obviously become familiar with its performance and operational envelope of systems and weapons."*²¹
- **EW.** AVM Aurangzeb had claimed that PAF could generate electronic identity of every IAF aircraft. There is no doubt that PAF had enhanced its ELINT capabilities which is elucidated below at Table based on data from IISS's Military Balance editions. However, Chinese space-based ELINT capabilities are noteworthy in this regard and cannot be overlooked. A sample ELINT coverage profile of PRC's ELINT constellations, military, government and commercial, over Pahalgam and Adampur areas is graphically displayed with the assistance of PulseScope! website prepared by Mr Prit Chovatiya.

Thus, with addition of two more Saab 2000 Erieye in 2024 and significant enhancements of PLA's space-based ELINT capabilities in 2023-2024, PAF may have assumed an EW advantage.

Table 3: PAF's Build-up of ELINT and AEW&C – 2018-2025

(Source- Military Balance Editions 2018-2025)

Year	ELINT	Falcon 20F	AEW&C	Saab 2000 Erieye	ZDK03
2018	2	2	7	3	4
2020	2	2	10	6	4
2021	2	2	10	6	4
2022	2	2	10	6	4
2023	2	2	10	6	4
2024	2	2	10	6	4
2025	2	2	12	8	4



Figure 4: Sample Chinese Satellites' Coverage of Pahalgam Area from 1200 hours on 16 May 2025 to 1200 hours on 17 May 2025 which may have assisted the terrorists to evade with knowledge of Indian security establishments (Data Source- Mr Prit Chovatiya, PulseScope! at <https://scope.pulseorbital.com/>)



Figure 5: Sample Chinese ELINT Coverage of Adampur Area from 0600 hours on 17 May 2025 to 0600 hours on 18 May 2025

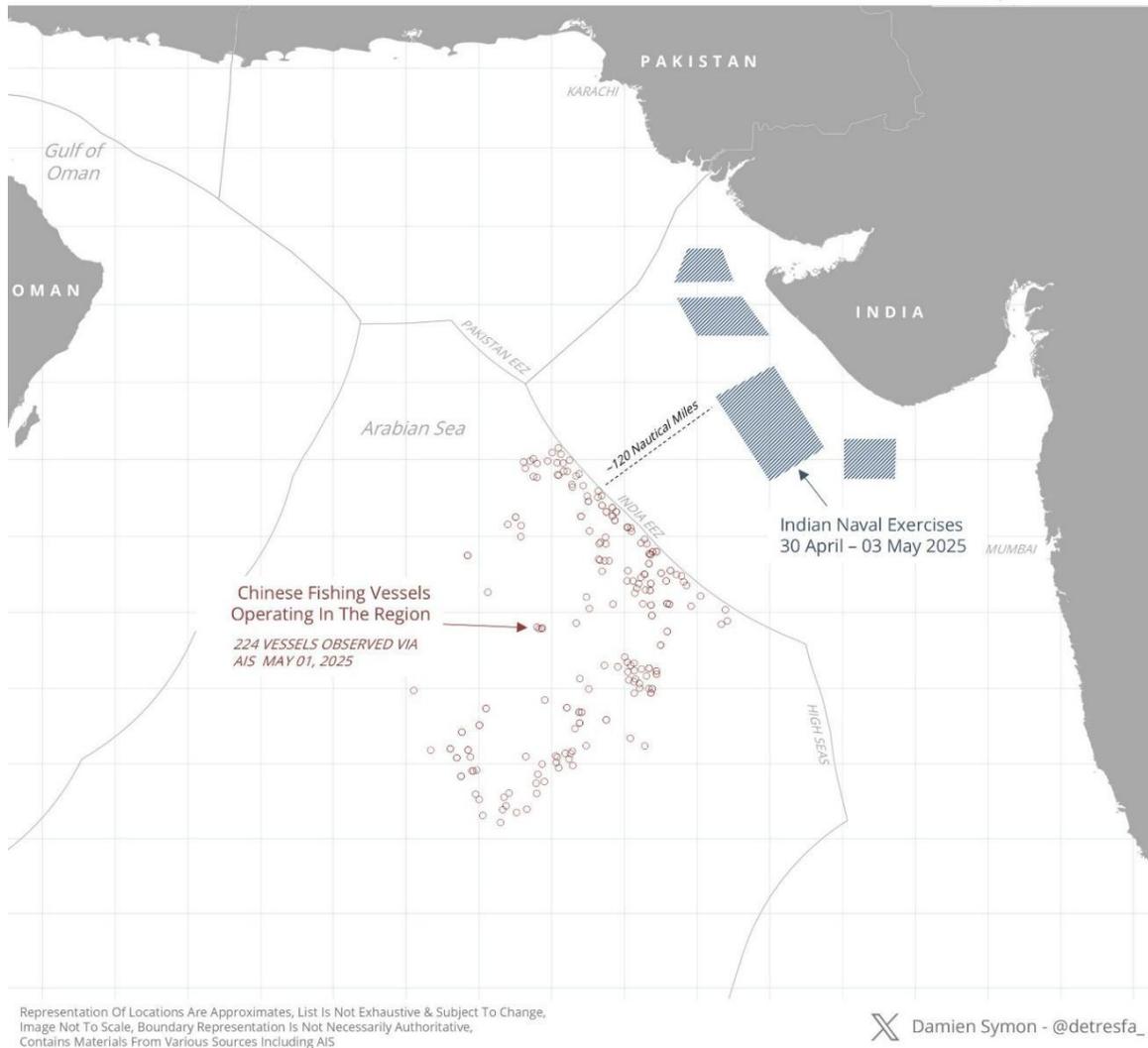
(Data Source- Mr Prit Chovatiya, PulseScope! at <https://scope.pulseorbital.com/>)

Surveillance of Indian Coastline by Chinese Maritime Militia. Numerous AIS data has confirmed presence of Chinese Militia Fishing vessels from March to May 2025 in Arabian Sea near Indian EEZ. While the numbers started rising in April 2025, they peaked from 01 to 05 May 2025 (refer Map in X-post by Damien Symon), very near the NOTAM area of Indian Naval exercises and touching the EEZ in numbers varying from 100 to 200 plus. Damien Symon, elucidates the role of this Maritime Fleet also called Distant Water Fishing Fleet as²²

“These vessels may double up as listening posts, tracking deployment rhythms & response patterns, feeding early warning, naval intel to their sponsors”

CHINA'S FISHING FLEET ARABIAN SEA FOOTPRINT

CHINA'S FISHING FLEET NEAR INDIAN WATERS MAY BE CASTING MORE THAN LINES
BEYOND TRAWLING, VESSELS COULD ACT AS FORWARD LISTENING POSTS ASSESSING NAVAL PATTERNS



Map 1: PRC's Maritime Fishing Fleet in the Arabian Sea in May 2025

(Source- Damien Symon - @detresfa_²³)

Ryan Martinson, in a recent report dated 23 April 2025 for China Maritime Studies Institute, highlighted the repeated employment of PRC's fishing fleet as intelligence boats²⁴: -

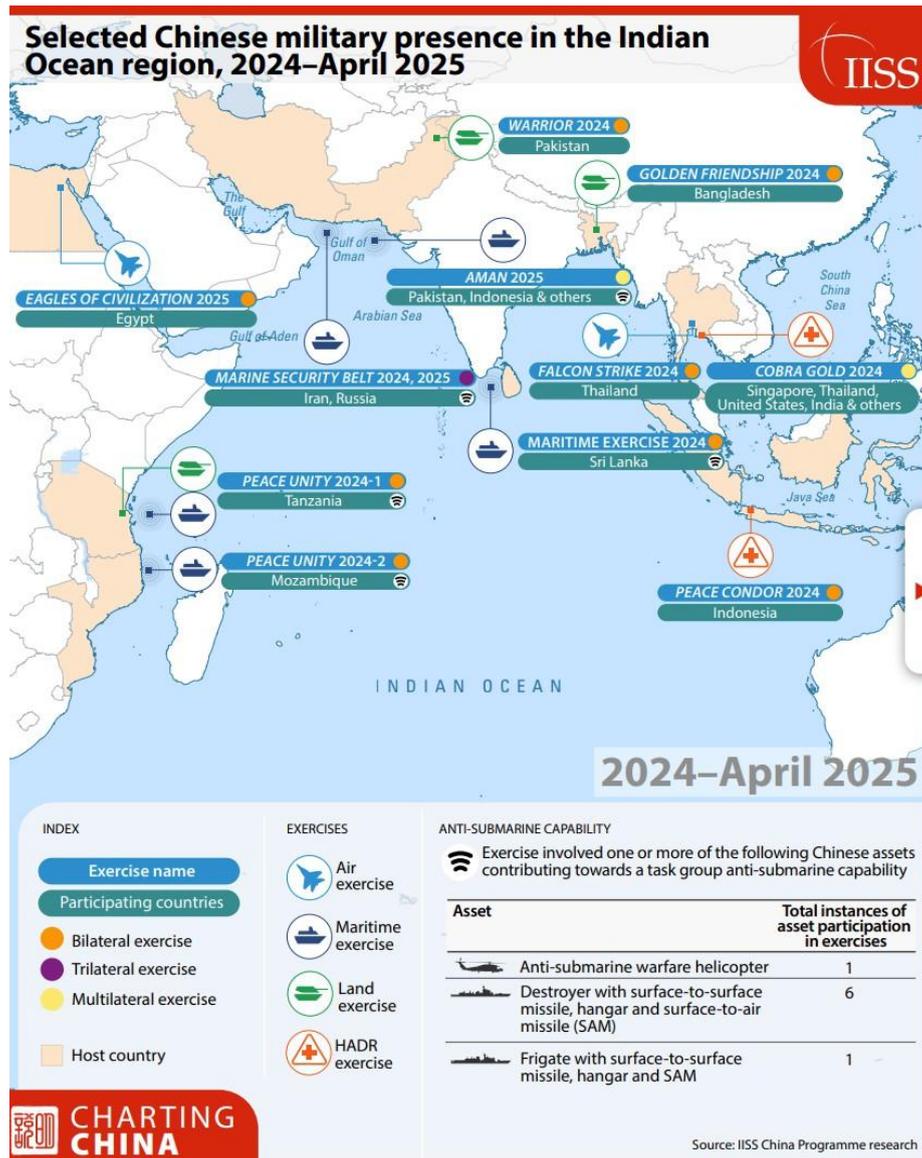
“Collecting and reporting maritime intelligence is a core mission of China’s maritime militia. Militia forces help fill in “blind spots” (补盲) for the PLA and enhance its situational awareness. They are widely dispersed in the waters of greatest strategic and operational importance to Beijing, available in large numbers, extremely familiar with the

operating environment, and, the PLA believes, less provocative than other military instruments.”

Movement of Chinese Fishing Fleet near India’s Andaman and Nicobar Islands would not have raised so much concerns but the fleet’s temporal and spatial disposition in the Arabian Sea indicated coordination between the Pakistan Military, their terrorist outfits and Chinese PLA. Analysis of Chinese movement of its Maritime Militia based Distant Water Fishing Fleet, from March to May 2025, lead to the following possibilities:

- Activity was planned and approved by PRC’s CMC since the exact matching of timing and location of the fishing fleet cannot be all coincidental.
- PLA anticipated an Indian naval response this time since the responses last two times during Uri and Pulwama terrorist attacks were by Indian Army and Air Force respectively.
- PLA wanted to gain in-depth knowledge of Indian Navy’s Western Naval Command dispositions to prepare for a Taiwan contingency.

Chinese military presence through various joint exercises had already been on a very high intensity in 2024 and 2025, especially in Arabian Sea, as highlighted by International Institute of Strategic Studies (IISS) in its latest report on 22 May 2025.²⁵



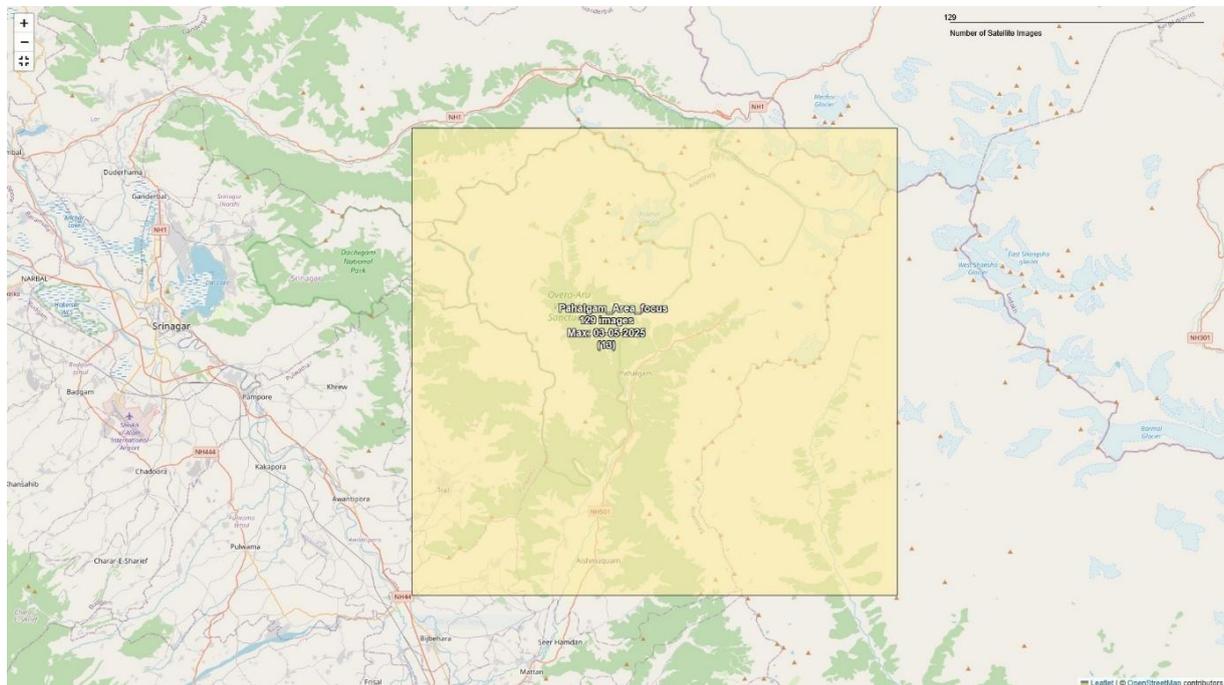
Map: Chinese Exercises in Indian Ocean Region- 2024-April 2025

(Source- Darshana Baruah, IISS)

Pahalgam Space-based Surveillance. Soumya Pillai in her recent article for ThePrint²⁶ states that

“Maxar Technologies began receiving orders for high-resolution satellite images of Pahalgam in June 2024, just months after a Pakistani geospatial firm indicted by the US became a partner...Between 2 and 22 February 2025, at least 12 orders—double the usual number—were placed with Maxar Technologies, whose roster of clients includes government and defence agencies across the world.”

The Maxar data currently shows that they imaged Pahalgam area 10 times between 2 and 22 February 2025. More importantly, Maxar was only one Geospatial Intelligence (GEOINT) resource. China’s civil satellites provided 129 out of the total 183 images taken of Pahalgam area from 01 January 2025 onwards. Turkey imaged 25 times. All possible resources were exploited to the fullest as per data found out by Mr Adithya Kothandapani, an independent GEOINT expert. Detailed imaging of Pahalgam area (Map 1) from multiple sources in 2025- Chinese (only civil satellites data available, military satellites would have been in addition), Türkiye, Maxar and other sources is elaborated below at Table 4. The breakup of Türkiye constellation wise could not be accessed. A graph of host country wise of the commercial space entities, which imaged Pahalgam area, is elucidated at Figure 6 below. Similarly, constellation wise graph is at Figure 7. This by no ways mean that these commercial satellite companies sold the images to any Pakistani or Pakistan-sponsored entity. These details would need further investigation by concerned agencies.



Map 2: Pahalgam Area of Imaging by Various Known Constellations

(Data Source- Mr Adithya Kothandapani)

Table 4: Daily Imaging of Pahalgam Area– January To April 2025

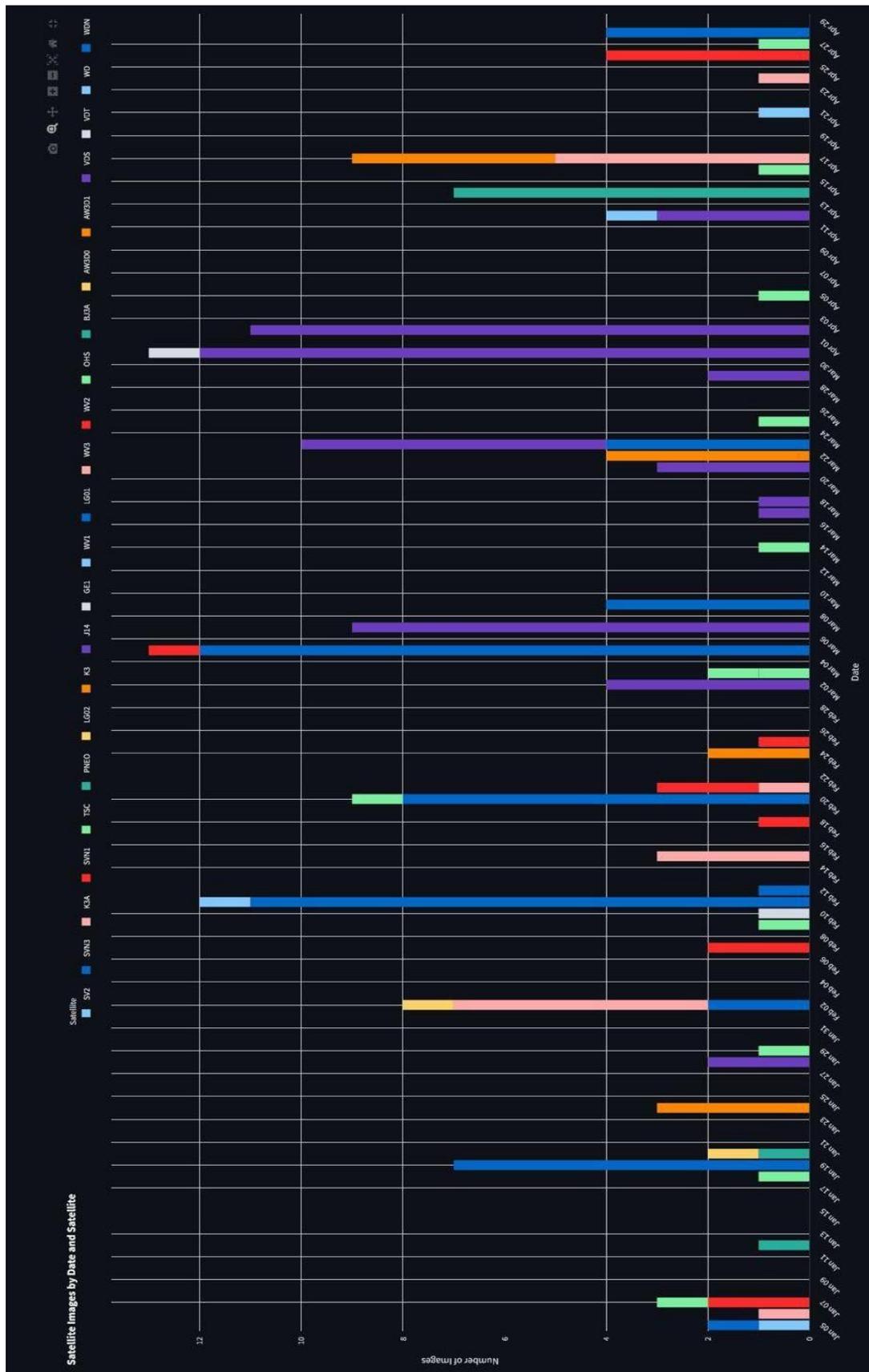
(Data Source- Mr Adithya Kothandapani)

Date	Chinese Civil Satellites (Military satellites will be additional)	Maxar (some data already cleaned)	Non-Maxar Non- Chinese (including Turkey)	Total
01 Jan	2			2
06 Jan			1	1
07 Jan	2		1	3
12 Jan			1	1
18 Jan			1	1
19 Jan	7			7
20 Jan	1	1	2	4
24 Jan			3	3
28 Jan	2			2
29 Jan			1	1
02 Feb	3	1	6	10
07 Feb	2			2
09 Feb			1	1
10 Feb			1	1
11 Feb	11	1		12
12 Feb	1	1	1	3
15 Feb		3		3
18 Feb		1		1
20 Feb	8			8
21 Feb		3		3
24 Feb			2	2
25 Feb	1			1
02 Mar	4			4
03 Mar	1		1	2
05 Mar	13			13
07 Mar	9			9
09 Mar	4			4
14 Mar			1	1
17 Mar	1			1
18 Mar	1			1
21 Mar	3			3
22 Mar			4	4
23 Mar	10			10
29 Mar	2			2
31 Mar	12		1	13
02 Apr	11			11
05 Apr			1	1
12 Apr	3	1		4
14 Apr	7			7
16 Apr			1	1
17 Apr			9	9
21 Apr		1		1

24 Apr		1		1
26 Apr	4			4
27 Apr			1	1
28 Apr	4			4
Total Jan-Apr	129	14	40	183



Figure 6: Country wise Commercial Entities’ Imaging of Pahalgam Area in 2025
 (Source- Mr Aditya Kothandapani)



Study of the images sought of Pahalgam area prove the following: -

- Pakistani terrorist groups imaged the Pahalgam area very regularly since June 2024 and of very high intensity since January 2025.
- Without Pahalgam being the area of interest of PLA's Western Theatre Command, Chinese civil satellite constellation companies, under effective control of PLA's Aerospace Force, imaged Pahalgam area at an abnormal high intensity. This can't be coincidental or without the explicit knowledge of the CPC, CMC or PLA.
- A study of the orbital patterns of both Chinese military and civilian satellites reveals that the Chinese capabilities available are much more. The imaging capabilities of key military and civil constellations for one sample day over Pahalgam area is elucidated in Figure below. It's very possible that these additional capabilities would have been utilized to comprehensively study the area of operation, locations of all Indian military, paramilitary and state police locations to select the location for cowardly terrorist attack on civilians.

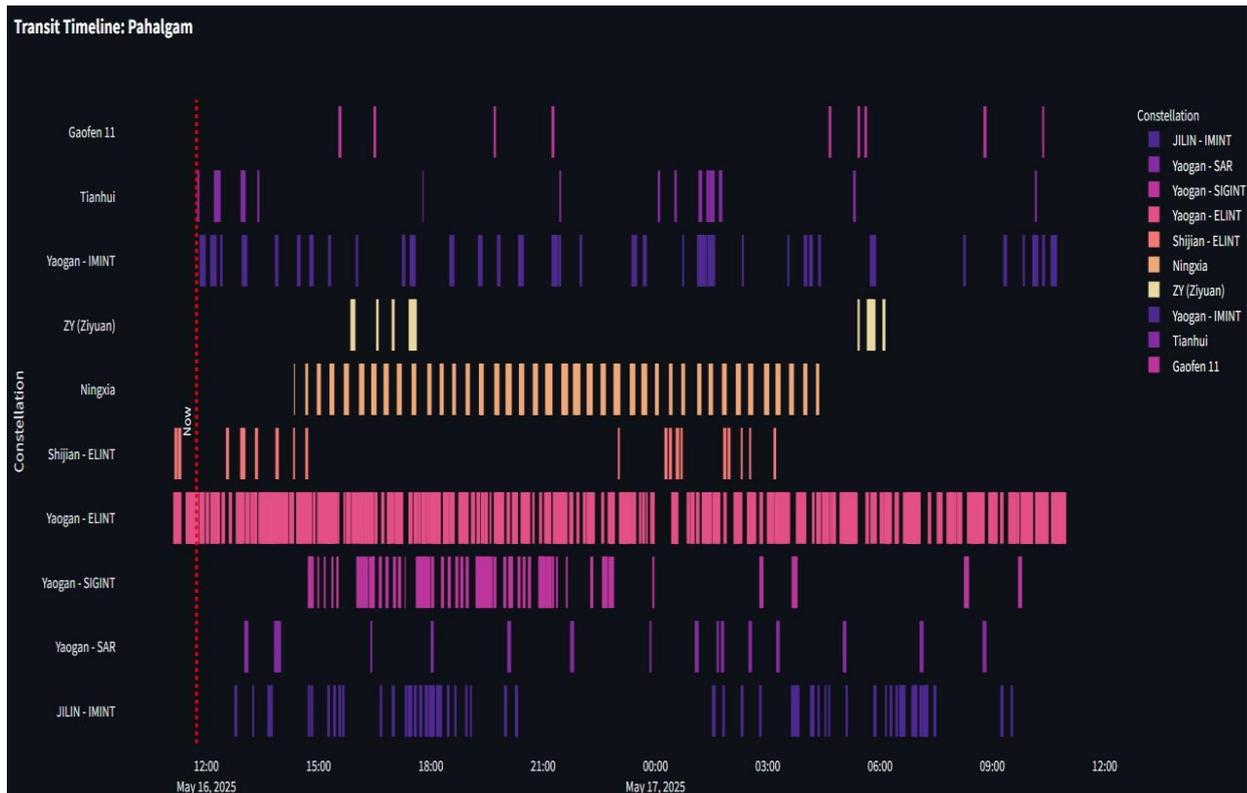


Figure 8: Transit Timeline of China’s Key Civil and Military Constellations Over Pahalgam for a sample 24 hours period from 16 to 17 May 2025 which may have been used in addition to the confirmed imaging record at Table 4 and assisted Terrorists through their ultra sets to evade Indian Military

(Data Source- Mr Prit Chovatiya, PulseScope! at <https://scope.pulseorbital.com/>)

- However, why a Pakistani geospatial firm, Business Systems International Pvt Ltd (BSI) obtained images of Pahalgam from the US satellite company Maxar Technologies, is not understood. This indicates that either Chinese did not provide complete images undertaken or Chinese images provided were not of good quality or the Pakistani establishment wanted to exploit the best possible resolution of Maxar (probably MGP Pro) as another option.

Satellite-Based ISR of Indian Military. China was providing the Pakistan military with regular pictures of Indian military installations. A Pakistani blogger ghazi 52 and X-handle, very proudly claimed the existence of high-resolution images and posted one such image (Figure below). With negligible Space capabilities (that too with Chinese assistance) as elucidated at Table 4 below, their claim (exactly reproduced below) of LEO satellites-based monitoring could have been possible only with Chinese support: -

“Pakistan is closely monitoring Indian military assets via LEO sats. This satellite image shows Rafale jets at an undisclosed IAF base. Surveillance and readiness go hand in hand.”²⁷



Figure 9: High Resolution Satellite Image of Indian Rafale

(Image Source-Ghazi 52 on Pakistan Defence Forum²⁸)

Table 4: Pakistan’s Satellite Capabilities

(Data Source- Mr Adithya Kothandapani)

Satellite	Payload	Launch Date	Orbit	Orbit details	Manufacturer
PRSS	PAN @0.98m	Jul 2018 Long March 2C	SSO, frozen	10:15 AM/PM 4-day revisit	CAST/ CASC
	MS @2.89m				
PakTES-1A	PAN @2.4m		SSO	02:30 AM/PM	SAC (RSA)
	MS @4.8m				
PRSC EO1 repl. PRSS	PAN @0.98m?	Jan 2025 Long March 2D	SSO	10:15 AM/PM	SUPARCO?
	MS @2.89m?				

PAUSAT-1	HySI @? m	Jan 2025 SpaceX T-12	SSO	10:45 AM/PM	Istanbul Tech. Univ. (Turk)
PakSat-1	30x C, 4x Ku	Acq. 2002-11	Drifting	3,000kg (3.7kW)	Boeing/ Hughes
PakSat-MM1	28x C, 20x Ku	Acq. 2018-22	38.2E (147.5E)	4,137kg (9.6kW)	Hughes
PakSat-1R [DFH-4 bus]	Transponders: 18x Ku, 12x C	Aug 2011 Long March 3B	37.9E	5,115kg (10.5kW)	CGWIC/ CAST
PakSat-MM1R	48x Transponders: C, Ku, Ka, L (SBAS)	May 2025 Long March 3B	38.2E	5,400kg (? kW)	CGWIC/ CAST

Provision of Ultra Communication Sets

Chinese telecom equipment, 'Ultra Set,' initially meant for the Pakistan Army, has most probably found its way into the hands of terrorists. An article in the Economics times highlighted that²⁹

“Ultra Set’ devices operate on radio waves for message transmission and reception, each linked to a control station across the border. The messages are compressed and transmitted via Chinese satellites to a master server in Pakistan.”

Operation SINDOOR and Chinese Failures

“The strikes by the Indian Air Force against targets in Pakistan offer a powerful lesson in restraint, and Operation Sindoor adds a new approach to India's strategic toolbox... pilots operated under strict rules of engagement that prohibited initiating attacks on Pakistani aircraft or pre-emptively suppressing air defence systems. This decision – to accept heightened operational risk in order to confine the conflict strictly to terrorist-linked infrastructure – is telling... The mere fact that the Indian Air Force could strike targets under

defended conditions and undertake follow-on attacks demonstrates its capacity for coercive precision operations.”

-Dr Walter Ladwig, RUSI³⁰

The above quote is from a British Think-Tank exactly two weeks after India struck Pakistan in retaliation against a barbaric terrorist strike. As the truth overcomes false narrative and propaganda, the world is realising as to what India did and achieved. India's Operation SINDOOR turned out to be a resounding success despite Chinese and Turkish assistance to Pakistan. Operation SINDOOR proved that the PLAs famously claimed Anti-Access Area-Denial (A2AD) bubble is penetrable. The quality of Chinese technology, even in its own weapons and armament, remains doubtful on many accounts. In fact, a Russian private drone company owner aptly described problems of Chinese weapon systems in a YouTube video "Why This Russian Drone Developer Isn't Impressed by US Tech" that **due to lack of adequate battle experience, Chinese defence industry is mainly producing toys which do not perform well in battle**, despite having technology which is nearly as advanced as that of America.³¹

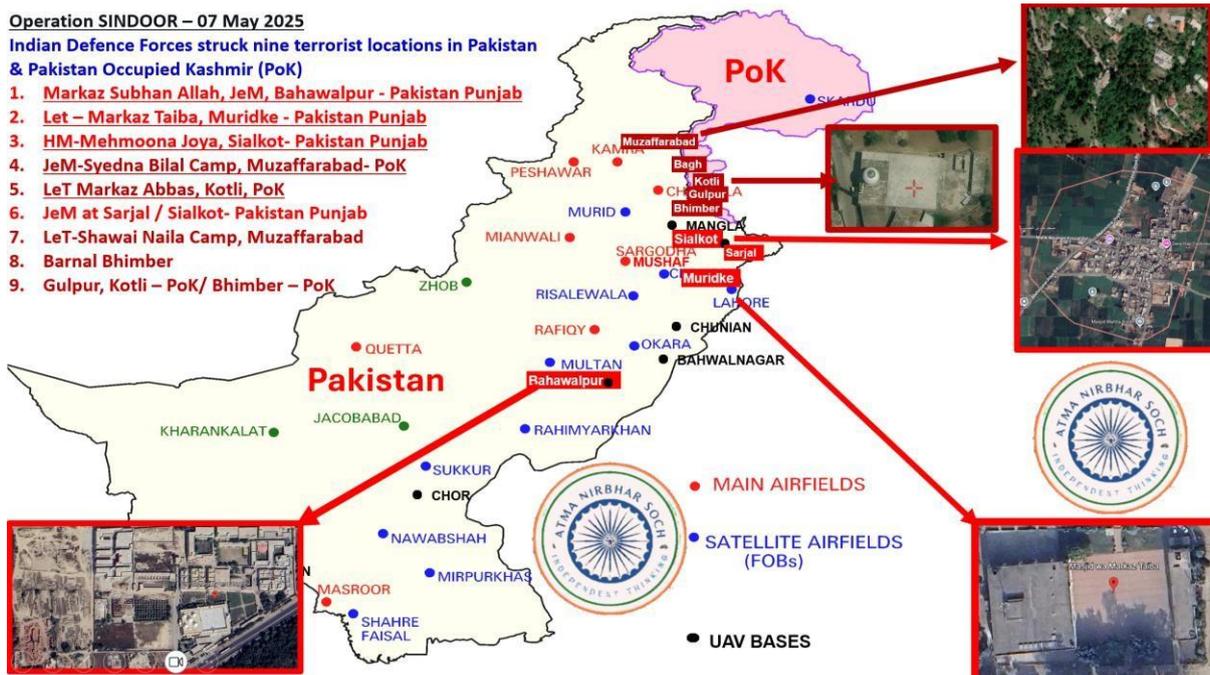
Chinese assistance to Pakistan has proved successful on few accounts but simultaneously also has failed on many. The key failures and possibly Pakistan's lack of confidence on Chinese equipment, during the conduct of the Operation SINDOOR are discussed in succeeding paragraphs.

Operation SINDOOR Strikes – 07 May 2025. After the terrorist strike, India took a wide variety of punitive actions spanning the DIME domain against Pakistan. The Indian Prime Minister promised to retaliate at an appropriate time. After detailed planning and filtering 21 terrorist camps across LOC in Pakistan, the Indian military decimated 9 of them precisely inside Pakistan Occupied Kashmir and Pakistan Punjab on the night of 06 / 07 May 2025 in a punitive and calibrated response to Pahalgam terrorist attack on innocent civilians on 22 April 2025.³² The selected targets were mainly at a distance of 9 to 30 km from IB except Markaz Subhan Allah which was 100 km from IB as shown in map below.

Operation SINDOOR – 07 May 2025

Indian Defence Forces struck nine terrorist locations in Pakistan & Pakistan Occupied Kashmir (PoK)

1. **Markaz Subhan Allah, JeM, Bahawalpur - Pakistan Punjab**
2. **Let – Markaz Taiba, Muridke - Pakistan Punjab**
3. **HM-Mehmoona Joya, Sialkot- Pakistan Punjab**
4. **JeM-Syedna Bilal Camp, Muzaffarabad- PoK**
5. **LeT Markaz Abbas, Kotli, PoK**
6. **JeM at Sarjal / Sialkot- Pakistan Punjab**
7. **LeT-Shawai Naila Camp, Muzaffarabad**
8. **Barnal Bhimber**
9. **Gulpur, Kotli – PoK/ Bhimber – PoK**



Map 3: Locations of Indian Precision Strikes on Pakistani Terrorist Camps

Operation SINDOOR

(Map Courtesy – Atma Nirbhar Soch)

Pakistan’s DG ISPR accepted that India had struck six locations. The acceptance of six successful strikes (if we accept for argument’s sake that the other three were not successful and give full credit to false claims) itself highlights following failures: -

- **Inadequate HQ9 Coverage.** Despite 14 days being available to Pakistan to guard all its critical assets from 22 April to 06 May 2025, Pakistan could not guard the terrorist camps, terrorist leaders and their families. The Jaish-e-Mohammad terrorist camp was located just 5 km away from main Bahawalpur Cantonment and 9 km from International Airport (with a PAF Base right near). The Pakistan Army’s Bahawalpur Cantonment by itself is located just 136 km from the IB as can be seen in Map below. Thus, HQ9 coverage, whether a battery was located near any of these six locations or not located, despite a claimed range of 150km plus, could not prevent any of the targets being hit. Chinese media outlet Global Times itself described HQ-9 as focusing on anti-aircraft missions and having less range in anti-ballistic missile missions³³. Hence, it is abundantly clear that HQ9 could not succeed against any kind of stand-off missiles fired on terrorist camps.



Map 4: General Area Bahawalpur – JeM Terrorist Camp

(Source – Google Earth)

- **Low AD Coverage**. One of the major lessons which PLA picked up from the Russo-Ukraine War is that the low-altitude battlefield cannot be ignored. PLA defines it as the ‘junction’ connecting airspace and the land area from 100 to 1,000 metres³⁴. The Pakistani bloggers on Pakistan Defence Forum accept that Pakistan did not have adequate low altitude AD cover. The Pakistan Defence Minister accepted that Pakistan Military did not engage Loitering Munition. Whatever be the Pakistani excuse, Indian military strikes by Indian Army and Navy on targets closer to the LOC in Pakistan Occupied Kashmir had hit the intended targets precisely and easily penetrated Pakistan’s low altitude air space.

The basic principle of Air Defence is not to shoot down all aerial enemies whether on own side or across IB, but most importantly it has to protect high-value friendly units. Neither PAF nor Pakistan Army’s AD could protect the nine terrorist camps stuck (even if DG ISPR claims six struck). This means the much-acclaimed (by PAF AVM Aurangzeb) Pakistani Air Defence Ground Environment (AGES) System was not functional. The possible reasons could be: -

- Pakistan either had inadequate number of AD assets or simply decided not to protect terrorist camps.
- Inadequate integration between AD networks of PAF and Pakistan Army. The holding of key LR and MR-SAMs with Pakistan Army and not PAF, itself depicts an anomaly in any modern military and Pakistan Army's lack of trust in PAF.
- Conscientious decision not to engage low-cost drones, particularly those threatening terrorist camps, conserving the costly HQ16 MR-SAM and HQ9 LR-SAMs for high-value targets like Indian aircraft.
- Jamming of Pakistan radar network by Indian military making their radars ineffective.

Internet and online talks of Pakistan military assessing Turkish AD platforms, if true, will surely indicate that Chinese AD platforms failed the Pakistan military.

Recovery of PL-15 AAM. A recovery of an almost fully intact PL-15 AAM, in its original form on Indian soil, will be a big setback for PRC's Aviation industry since Indian DRDO will be able to accurately assess the complete features and composition of the missile. It has surely generated interests amongst various Western and PRC's neighbouring countries too. PLAAF would have to seriously think over the malfunctioning of its much-claimed advanced PL-15 and PL-17 BVRAAM series.

Funeral Ceremony. The presence of Pakistan Army seniors like Corps Commander 4 Corps, Lieutenant General Fayyaz Hussain Shah, GOC 10 Infantry Division, Major General Rao, Brigadier Mohammad Furqan Shabir, Dr Usman Anwar Inspector General Pakistan Punjab Police, Mr Malik Shoaib Ahmed Bherth (Member of Pakistan Punjab's Provincial Assembly) along with LeT Commander Abdul Rauf (US designated international terrorist) at Muridke confirmed Pakistan government's support to the terrorist camps on their soil.



Figure 10: Funeral Ceremony at Lashkar-e-Taiba (LeT) Camp at Muridke

(Photo Courtesy – India Today³⁵)

The Pakistani Dawn paper states further about the events at Bahawalpur “High-level visits were conducted by Corps Commander Bahawalpur Lt Gen Aqeel (31 Corps), Divisional Commissioner Musarrat Jabeen and Punjab Health Minister Khawaja Salman Rafique, who met with the injured at Bahawal Victoria Hospital on directives from the Punjab chief minister.”³⁶

Pakistan’s Retaliatory Strikes from 07-10 May 2025: Operation Bunyan Marsoos

After the retaliatory strike against Indian Balakot operation in 2019, Pakistan launched another retaliatory strike codenamed ‘Marg Bar Sarmachar’ on 18 January 2024 targeting claimed terrorist hideouts in Iran’s Sistan and Baluchistan province. Pakistan retaliated with its own air-missile-drones strike within 48 hours of Iranian strike on 16 January 2024 on Pakistani territory. As always, numerous Chinese and Pakistani claims cite employment of different types of assets, ranging from the Sino-Pak jointly produced JF 17 equipped with GIDS B-REK (Boosted Range Extension Kit) with a claimed range of 170 km, J-10C fighters, AEW, and EW assets, Chinese Wing Loong II drones using precision-guided munitions, few loitering munitions from ground and air drones, American F-16s employing precision-guided bombs, and Chinese provided A-100 MLRS artillery rockets. The JF-17 Thunder fighter jets belonged to the 2nd Multirole Squadron, located at the PAF Base Masroor in Karachi,

under the 39th Tactical Wing of the PAF's Southern Air Command. Since the Iranian Air Force maintained a passive stance by not engaging the PAF during the operation³⁷, the operation eliminated several Baluchistan's freedom fighters. While Pakistan has been striking various locations in Afghanistan regularly, PAF has neither witnessed any strong AD nor any strong response. However, it was a completely different story from 7th to 10th May 2025.

On the night of 07 / 08 May 2025, Pakistan military tried to employ joint missiles-drones strike tactics by laying Suppression of Enemy Air Defence (SEAD) trap for Indian EW and AD assets. Pakistan attempted to engage a number of military targets in Northern and Western India, including Awantipura, Srinagar, Jammu, Pathankot, Amritsar, Kapurthala, Jalandhar, Ludhiana, Adampur, Bhatinda, Chandigarh, Nal, Phalodi, Uttarlai, and Bhuj, using drones.

On 08 May 2025, Indian military stations at Jammu, Pathankot and Udhampur were targeted by Pakistani-origin drones and missiles. From 09 to 10 May 2025, Pakistani Drones were sighted at 26 to 36 locations from Leh and Baramulla (North India) to Sir Creek / Bhuj (South portion along Pakistan-India border)-Baramulla, Srinagar, Avantipora, Nagrota, Jammu, Ferozpur, Pathankot, Fazilka, Lalgarh Jatta, Jaisalmer, Barmer, Bhuj, Kuarbet and Lakhi Nala. The drones were mostly Turkish Asisguard Songer, Yiha III, decoys, few armed varieties but were mostly surveillance variety. An armed drone targeted civilian area in Ferozpur³⁸. While Pakistan Army resorted to heavy artillery shelling employing Chinese exported SH15 Self-Propelled Howitzers (PLA PCL181 equivalent) at more than 7 locations in Jammu and Kashmir, PAF used civil airlines Airbus 320 as a shield from Damman to Lahore. **Pakistan military indiscriminately targeted few religious and many civil locations** again and even attempted to target Golden Temple at Amritsar³⁹, striking Gurudwara and Madarsa at Poonch, hitting Medicare centre at Srinagar and schools in Awantipura and Udhampur.



Figure 11: An Indian Sikh's residence hit by Pakistan Military at Wadala Bhitewadh village near Amritsar, India, on 10 May 2025

(Source- Al Jazeera⁴⁰)

Efficacy of CM-400AKG. AVM Aurangzeb claimed striking Indian targets using a hypersonic missile. The so-called hypersonic missile is most probably the Chinese exported CM-400AKG to PAF in 2023-24. Chinese and Pakistani media also went gaga over successful employment of CM-400AKG⁴¹. However, despite being fired at decent standoff range from most likely JF17, no important Indian target could be struck. No Chinese or Pakistani media or military or satellite imaging company has been able to provide any visible proof of a successful strike. Hence, it appears that it was successfully intercepted by Indian AD either S400, Akash or Barak 8. The probable reasons for failure would be malfunctioning; failure of claimed double data link; extremely strong Indian training and S400 / indigenous AD interception technologies; inadequate training of PAF pilots or errors by PAF pilots in firing the missile. In any of the cases, the Chinese R&D agencies, PLA and PAF would surely need to go back to the drawing board.

Claimed Fatah Strike. Chinese official news outlet Xinhuanet claimed that the Pakistani Army had successfully tested the independently developed "Fatah-1" guided multiple launch rocket system (MLRS) twice before Operation SINDOOR in August 2021 and on 05 May 2025 at a range of 120 km. They have earlier successfully tested the 400 km version "Fatah-2" weapon system in December 2023 and May 2024. Pakistan had also claimed the successful test launch of the Abdali surface-to-surface ballistic missile (SSM) with a range of 450 km on 03 May 2025⁴². A lot of Pakistani videos were circulated of successful Pakistani Fatah MLRS based missile strike. AVM Aurangzeb even went on to claim striking Delhi. While strike on Delhi may have been attempted, it was very successfully intercepted at Sirsa. No proof of successful targeting was provided. It's possible that Pakistan's Fatah-2 may have used some of the technology incorporated in PLA's PHL191 MLRS.

The key highlights of Pakistani response are discussed below. A separate article shall cover the employment of Turkish drones.

- Pakistan military with assistance of Chinese 50 cent Army (wu mao jun) of fake media generators had to resort to fake videos and images of success despite significant failures. With impressive high-resolution imaging satellite capabilities of Chinese Jilin and Super View satellite constellations and even access to global satellite constellations like Maxar or Planet, Chinese or Pakistani media still could not produce even single original image of successful strike.
- Pakistan military employed dozens of Turkish Asisguard Songer, Yiha III drones and few dummies together, totalling approximately 300 to 400 per day⁴³, to reach 80-100 km across LAC/IB activating Indian EW & AD continuously.
- The Pakistan military sought to lay a Chinese "Wei qi" style trap. The second and fourth traditional Chinese stratagems "Besiege Wei to rescue Zhao" and "Wait at ease for the exhausted enemy" aptly describe these tactics. They wanted to identify and acquire Indian EW and AD grid layout through their recce drones, duly supported by PLA space based EO and ELINT, wear them

down and keep Indian military guessing on the main target location, thereby wearing them down.

- With some drones most probably using LIDAR payload, they attempted to map the complete area so that they could even function in Global Navigation Satellite System (GNSS) denied environment.
- Pakistani air strikes failed to cause much damage on Indian targets as claimed. Damien Symon, an OSINT expert, has shared many images on his numerous X-posts to assess the damage caused by both sides. Images of IAF bases targeted are reproduced below: -



Figure 12: Naliya Air Base (Courtesy Damien Symon)

Assessment by Damien Symon- “A new image of Naliya Airbase in India, dated 12 May 2025 is being circulated highlighting the darkening of soil around the runway as damage, however verification of the image reveals a shadow of a cloud overhead as the reason behind this apparent discoloration on ground”⁴⁴

- Pakistan’s military attempts to copy the Russia-Ukraine or Iran-Israel joint simultaneous missile-air-drones-rockets-artillery strikes could not significantly damage Indian military establishments but caused significant damage on Indian civilians. Despite quality ISR provision, Pakistan’s military strikes failed

on numerous accounts of which poor quality of Chinese equipment had surely failed them once more.

- Chinese equipment failure also gets confirmed by much delayed induction of VT4 tanks into Pakistan Army. Pakistan military's tanks upgradation plan has already got inordinately delayed with failure of Chinese VT4 tanks during trials. Pakistan has managed to procure only one VT4 tanks battalion, as elucidated in table below, in last decade and is forced to keep its obsolete T69 / T59 tanks still running despite few even being night blind. The absence of credible ground combat capability of Pakistan Army, as amply evident in its current tanks' profile, may also have resulted in Pakistan's request to reach an early understanding to cease firing.

Table 5: Pakistan Army's Tank Profile 2022-2025

(Source- Military Balance Editions 2022-2025)

Year	Total	AK	AK1	T80UD	AZ	T69	T85IAP	VT4	ZTZ59
2022	2487	300	100	315	500	400	268	4	600
2023	2537	300	110	315	500	400	268	44	600
2024	2537	300	110	315	500	400	268	44	600
2025	2537	300	110	315	500	400	268	44	600

Punitive IAF Strikes – 10 May 2025

Responding to Pakistani multi-domain escalations including cyber-attacks as claimed by DG ISPR, IAF targeted 11 Pakistan military installations including Nur Khan / Skardu, Murid (UAV shelter), Pasrur (Radar site), Sargodha (Runway), Gujranwala (Radar Site), Lahore (Radar Site), Chunian (Radar Site), Rafiqui, Rahim Yar Khan (Runway and other areas), Jacobabad (Hangar site), Sukkur (Radar site and UAV runway), Bholari (Hangar site), and Malir Cantt Karachi (Radar site). The Sargodha and Bholari airbases were holding F-16 and JF-17 fighter jets which were effectively targeted. The effectiveness of precise targeting was amply proved by high-resolution Maxar images provided by Kawa Space to the author and posted by Vishnu Som on

NDTV's website⁴⁵. These images are reproduced below: -



Figure 13: Before and After strike Maxar images of PAF Base Nur Khan
Ex Chak Lala Base, situated between Rawalpindi and Islamabad, 1.5 kms from PAF Air Defence Command (Image Courtesy – Vishnu Som, NDTV⁴⁶)

This base hosts PAF's 35th Composite Air Transport Wing comprising No.6 Air Transport squadron with C130B/E, and No.10 Multi-Role Tanker Transport squadron with IL-78 as per Scramble website⁴⁷



Figure 14: High resolution (HR) image of damage on PAF Base Nur Khan

(Courtesy – Vishnu Som, NDTV⁴⁸)

Spadex OSINT X-handle @spadex_716i, assesses that probably two PAF Next Gen Mobile Mission Control Centres, built with Turkish assistance, were damaged.⁴⁹



Figure 15: Satellogic Image of Damage of PAF Base Nur Khan

Image Courtesy- Brady Africk⁵⁰



Figure 16: Before and After strike Maxar images of PAF Base Rahim Yar Khan located 200 km south of Bahawalpur (Courtesy – Vishnu Som, NDTV⁵¹)



Figure 17: HR image of runway damage on PAF Base Rahim Yar Khan

(Courtesy – Vishnu Som, NDTV⁵²)



Figure 18: Damage to runway & other structures at PAF Base Rahim Yar Khan

(Source-NDTV⁵³)

Initially closed till 4:59 am on 18 May 2025, Pakistan Civil Aviation Authority had to extend the closure of the sole runway this airbase till 06 June 2025



Figure 19: Before and After strike Maxar images of PAF Base Sukkur

Damaged PAF hangar clearly visible
 (Courtesy – Vishnu Som, NDTV⁵⁴)



Figure 20: HR image of damage on PAF Base Begum Nusrat Bhutto / Sukkur

(Courtesy – Vishnu Som, NDTV⁵⁵)



Figure 21: Maxar post-strike damage assessment image of PAF Base Sargodha

Two craters noticed on runway (one is clearly visible in this image and the second crater is visible in the image below)

(Courtesy – Kawa Space)



Figure 22: Maxar runway damage image of PAF Base Sargodha / Mushaf–
(Courtesy – Vishnu Som, NDTV⁵⁶)

This base hosts 38th Wing comprising No.9 Multi-Role squadron with F-16A/B and No.24 Electronic Warfare squadron with Falcon 20 and PAF Airpower Centre of Excellence with Combat Commanders School, JF17 squadron as per Scramble site⁵⁷

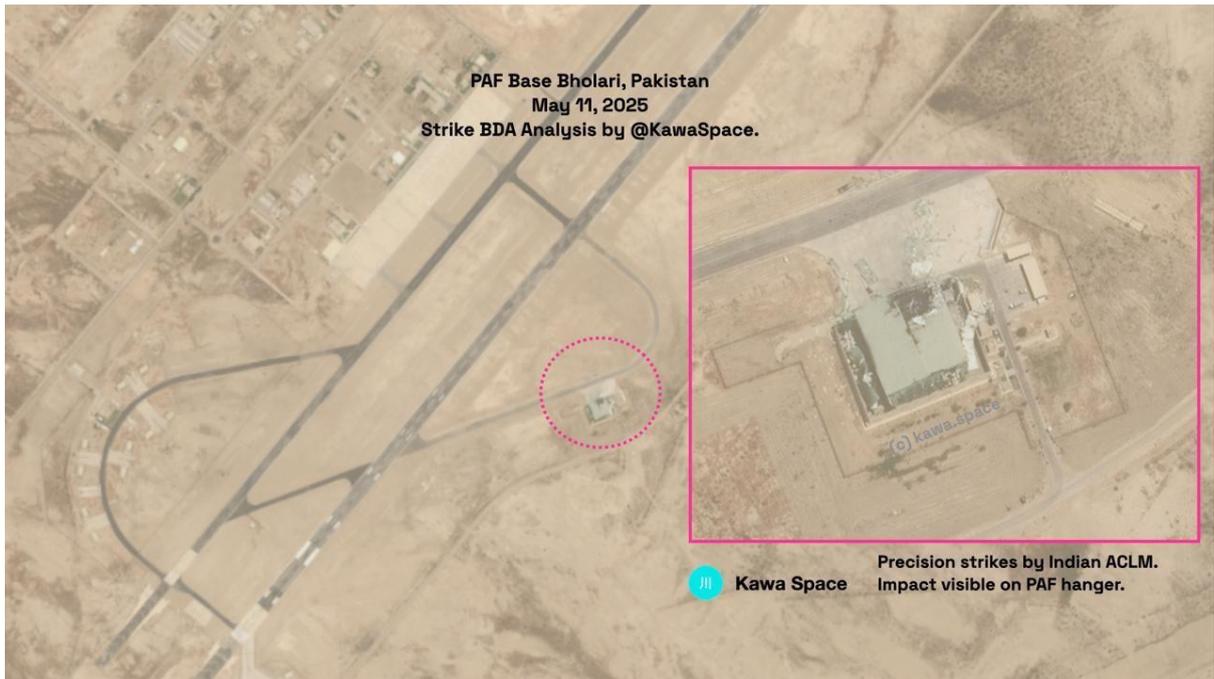


Figure 23: Maxar post-strike damage assessment image of PAF Base Bholari –

Damaged PAF hangar is clearly visible in this image

(Courtesy – Kawa Space)

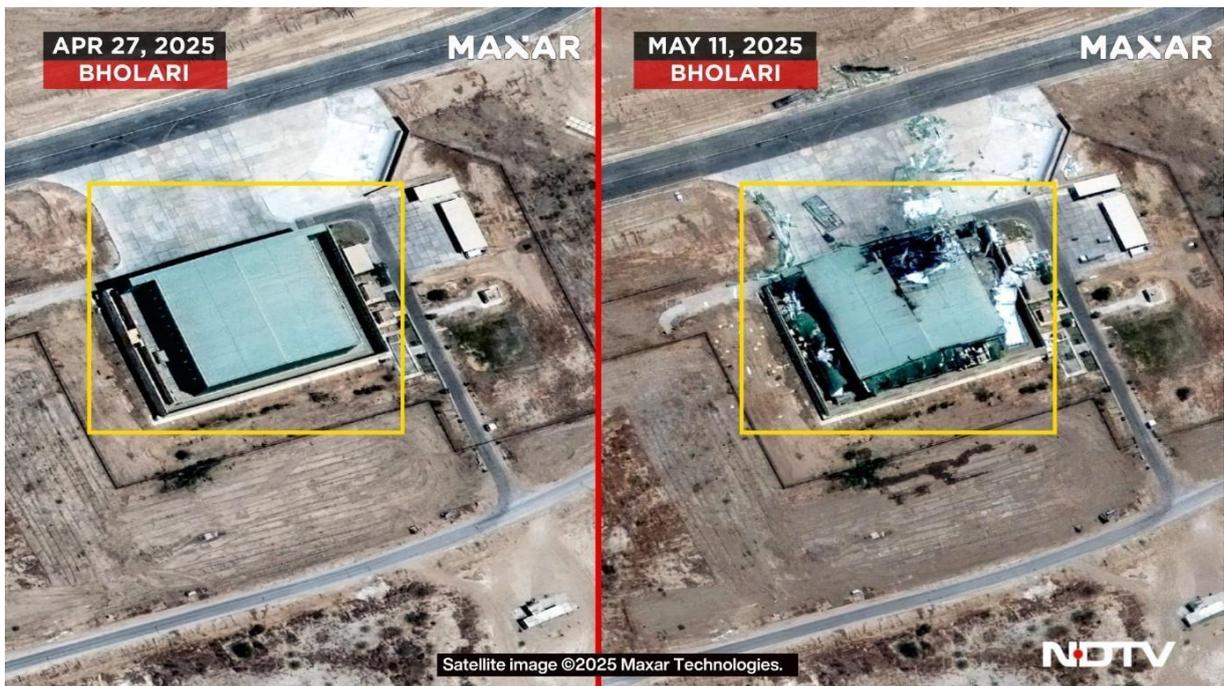


Figure 24: Before and After strike Maxar images of PAF Base Bholari

Damaged PAF hangar clearly visible

(Courtesy – Vishnu Som, NDTV⁵⁸)



Figure 25: HR image of damage on PAF Base Bholari

(Courtesy – Vishnu Som, NDTV⁵⁹)

This base hosts 41st Wing comprising No.18 Operational Conversion Unit squadron with JF-17B, No.19 Operational Conversion Unit squadron with F-16A/B and No.53 Airborne Early Warning Squadron with Saab 2000AEW as per Scramble site⁶⁰



Figure 26: Maxar post-strike damage assessment image of PAF Base Shahbaz Jacobabad

(Courtesy – Kawa Space)



Figure 27: Maxar before and after images of PAF Base Shahbaz Jacobabad
 (Courtesy – Vishnu Som, NDTV⁶¹)



Figure 28: High resolution image of damage on PAF Base Shahbaz Jacobabad
 (Courtesy – Vishnu Som, NDTV⁶²)

This base hosts 39th Wing comprising No.5 Multi-Role squadron ex with F-16C/D, No.11 Multi-Role squadron with F-16A/B as per Scramble ORBAT site⁶³

False Propaganda / Information Warfare Narrative

Pakistan military, including their DGISPR, probably with assistance of Chinese 50-cent Army, flooded both international media and Chinese Weibo and other social media sites claiming outright Pakistan victory as shown in Figure 29 below. On the other side, Indian military and official media of Indian government adopted a very matured and understated approach and based their claims only post authentication of credible proof. This delay did cause India loss of some cognitive space to Pakistan in initial stages, but maintained their credibility to the world. Regular fact checks press release statements had to be issued by Indian Press Information Bureau (PIB) to negate the false Pakistani narrative. On many occasions, Chinese satellite images (like MizarVision were also released to strengthen the Pakistani disinformation campaign but were effectively countered as elucidated at figure below. Since, Pakistan's populace was not exposed to outside media, they were carried away by the false narrative building of "Notion of Victory". It must be accepted here that Pakistan Army internally achieved the aim of regaining the support of its population by fooling them but at an extremely high cost of defeat, loss of men and material, and failure of its nuclear bluff.



Figure 29: Disinformation Spread by Chinese Satellite Images Corrected by Damien Symon⁶⁴

Damien Symon's assessment- "*Imagery released by a Chinese firm suggests damage at a structure within India's Adampur Airbase - a site targeted by Pakistan, however when cross-referenced with older imagery the damage predates current incidents & is visible in March 2025 as well.*"

Lieutenant General Lt Gen Shokin Chauhan Retired aptly highlights pre-planned Pakistan and Chinese collusive actions in the cognitive domain⁶⁵: -

- 25 interviews across major Western outlets within 48 hours of the Pahalgam attack by three Pakistani cabinet ministers and PPP chief Bilawal Bhutto highlighting the planned narrative “The root cause is Kashmir, not terrorism.”
- Pakistan ISPR’s five-phase disinformation campaign- fabricating victories; AI-based cognitive manipulation (art mastered by PLA under Chinese Three Warfare Strategy); credential laundering through Western senior veterans to endorse their claims; institutional reinforcements mimicking NATO strike assessment formats; and most importantly grassroots amplification through an Army of over 12,000 bot accounts to encompass the infosphere comprising the social media and internet bogs.
- Chinese state, semi-official and private media all became the mouthpiece of Pakistan’s information warfare narrative.
- Pakistan’s weaponization of human rights discourse through instantaneous filing of complaints with the UN Human Rights Council highlighting “India’s disproportionate force”.

Reuters, once an extremely reputable and trustworthy media house from western perspective, also had to learn the lessons the hard way. On 09 May 2025, Reuters released catchy headline article “Exclusive: Pakistan's Chinese-made jet brought down two Indian fighter aircraft, US officials say” which was written by two Pakistani authors Saeed Shah and Idrees Ali⁶⁶. Five days later, Reuters Fact Check Team itself had to release article claiming titled “Fact Check: 2024 Indian jet crash image falsely shared as Pakistan-downed Indian jet in May 2025“. Reuters fact check team stated⁶⁷

“A low-quality image of an Indian fighter jet engulfed in flames after crashing in September 2024 has been falsely claimed online to

show an Indian jet downed amid escalated tensions between India and Pakistan in May 2025.”



Figure 30: Reuters Acceptance on 14 May 2025 of Miscaptioned Image released on 09 May 2025 ⁶⁸

Overall Assessment

While India outrightly achieved its aim of punishing the terrorists, Pakistan Army has delayed Kashmir's normalisation and regained the support of its own populace although temporarily that too using wrong facts and propaganda. Indian victory was facilitated in great deal by many of its indigenous platforms highlighting the urgent need to pursue indigenisation with greater vigour than before. The overall assessment is summarised in succeeding paragraphs.

Pakistan's Aim. Pakistan's Army's aim of regaining a wave of popularity amongst the Pakistani populace, although maybe only temporarily⁶⁹, was apparently achieved temporarily due to false narrative and is now waning with each passing day.

It however, came at a very high cost (maximum could even reach 7.63 billion dollars as estimated by Indian Wing Commander Retired Satyam Khushwaha). Al Jazeera elucidates:

“A Gallup Pakistan survey conducted between May 11 and 15 showed that 96 percent of more than 500 respondents believed Pakistan had won the conflict. Initial data and survey trends shared exclusively with Al Jazeera showed 82 percent rated the military’s performance as “very good”, with fewer than 1 percent expressing disapproval. Most significantly, 92 percent said their opinion of the military improved as a result of the conflict. After the ceasefire was announced, Pakistan’s government declared May 10 as “The Day of Righteous Battle”. This was a stark contrast to May 9, 2023, which the government had described as a “Black Day”, because of the violence unleashed by Khan’s supporters against public and private infrastructure.”



Figure 31: Pakistani Rallies in Support of Pakistan Army
(Photo Courtesy-Abid Hussain, Al Jazeera)

However, most analysts including Pakistani scholars believe that this wave of support is short-lived as the truth surfaces gradually and reality dawns on the populace. The misplaced fact-based narrative to claim a victory from a decisive loss by Pakistan is bursting like an air bubble.

Collusive Actions. Every nation has the right to choose its friends and that too when they stand by each other in difficult times. Hence, the “sweeter than honey,

higher than mountains” friendship may appear justifiable between Pakistan and China. Then, what is Collusivity? Is there any Sino-Pak Collusivity? Is it justifiable? Oxford dictionary defines the word collusive as “*involving secret or unlawful cooperation aimed at deceiving or gaining an advantage over others.*” A list of historical China-Pakistan critical cooperation areas which have facilitated gaining advantage over India are tabulated below: -

Table 6: Historical Sino-Pakistan Cooperation 1962-2019

(Source- Author’s research for his book China’s Strategic Deterrence)

Period	Event	Remarks
May-December 1962	Secret border negotiations to resolve 523 km border	1. Transfer of 1942 square km in Oprang Valley to Pakistan. 2. 3/4 th of Mount K2 and 6 out of 7 Karakoram passes with Pakistan.
March 1963	Sino-Pak boundary agreement in Beijing between foreign ministers Chen Yi and ZA Bhutto	
August 1963	Regular Pakistan International Airlines (PIA) from Dacca (then in Pakistan) to Shanghai and Guangzhou	
February 1964	Chinese declare support to Pakistan over Kashmir, Commencement of regular Sino-Pakistan barter trade agreements	
1966	Release of initial Sino-Pak communique signaling a provisional border agreement	On the eve of Indo-Pak Tashkent talks
February 1972	Pakistan’s facilitation of US President Nixon’s historic visit to China and normalisation of Sino-US relations	
Late 70s	Introduction of Karakoram Highway (KKH)	Construction from 1959, Completion in 1978 and open to civil and third country access in 1982.
1980s-90s	1. Chinese covert nuclear support including suspected test of Pakistan’s first nuclear device on Chinese soil at Lop Nor in May 1990. 2. Sale of M-11 SRBM to Pakistan.	Three critical ZA Bhutto’s visit to China in 1972, 1974 and 1976.
1999	Pakistan’s Kargil misadventure - Chinese impartiality upset Pakistan	China’s missile transfer to Pakistan continued
2002	Construction of Gwadar port with Chinese assistance	Operation in 2008
November 2003	Joint declaration for bilateral cooperation	Opposing three issues- Separatism, Terrorism and

		Extremism.
2005	Pakistan's admission as observer in SCO "Treaty of Friendship, Cooperation and Good-neighbourly Relations"	legal foundation for the strategic partnership
2010	3 MoUs to enhance Pak's capabilities to fight terror	\$ 280 mn to Pak for capacity building of law enforcement agencies; \$ 470 million in CT activities between June 2009 & May 2010; CPC signed party level MoUs with Pak's Jamiat-e-Ulema-e-Islam & Jel
2013	Establishment of CPEC	
2016	CPEC becomes partly operational	
2018	Pakistan's admission as a permanent member in SCO; China sold MIRV technology to Pakistan	
2019	China stood beside Pakistan during Pakistan sponsored killing of 40 Indian soldiers in Pulwama China vetoed international efforts to blacklist Masood Azhar for the fourth time	

The actions preceding 22 April 2025 terrorist strike indicate significant number of collusive actions between Pakistan and China.

- Provision of GEOINT of IAF bases by PRC to PAF may appear justifiable to some as an ally. However, Chinese civilian commercial constellations provided large quantum of images of Pahalgam civilian area which should have irked the high CPC / CMC / PLA officials but it did not. Even if they were not aware that Pakistan was not planning a terrorist strike, a strong condemnation of the attack, after 22 April 2025, would have proved that China is not guilty. However, the Chinese foreign ministry spokesperson became a mouthpiece of DG ISPR by replaying his audio during a press brief when questioned about India-Pakistan situation.
- Ultra sets, with the terrorists of barbaric Pahalgam attack on 22 April 2025, belonged to China which were for Pakistan Army. After the killing of 26 innocent tourists including one Nepali, an aspirational global power like PRC, should have traced those terrorists on their own and provided necessary data

to Indian military. Even after one month, the terrorists are not traceable. Hence, they have been provided continuous support, both communication and positioning accuracy, by Chinese satellites. Pakistan does not have any such capacity.

- The rising presence of Chinese fishing fleet, in the Arabian Sea if innocent, should have automatically declined from a responsible neighbour post 22 April 2025. However, their activities only magnified and they came as close as possible to the Indian naval exercises' location.
- Assisting Pakistan at UN Security Council (UNSC) from blocking any reference to TRF, Pakistan based front-end of banned LeT, which had claimed responsibility for the terrorist attack on 22 April 2025.

Hence, Pakistan and China did collude in the case of Pahalgam incident. Let's now analyse Chinese other open assistance for Pakistan military as a so-called ally. There is adequate proof of overt support as well as failures of Chinese weapon and systems employed during the four days long standoff as elucidated at table below.

Table 7: Assessment of Chinese Support to Pakistan Military

(Source- Author's Research and Analysis)

Parameter	Chinese Success	Chinese Failure	Remarks / Caution
ISR	Selection of terrorist strike location & time was very well planned ensuring delayed response	Surprisingly, Pakistani agencies had to procure satellite images from Maxar & maybe even other commercial entities too	OSINT-GEOINT indicators must be adopted as battle indicators by Indian military
Communication	Chinese Ultra sets provided to Pakistan Army further handed over to terrorists were useful to them		Indian military and security agencies need to find a solution
India's Retaliation	Gained access to complete tactics	- Complete failure to block any of the strikes.	Low altitude AD cover failure

Strike – 07 May 2025	and would have updated their data library of IAF	<p>Questions even the limited capability of HQ9 system to intercept missiles</p> <ul style="list-style-type: none"> - Recovery of fully intact PL15 AAM shows that Chinese missiles are malfunctioning - Failure of Pakistani EW grid to spoof / intercept Indian loitering munitions / drones, if assisted by Chinese systems, is surely a failure of Chinese EW 	<p>should be attributed to Pakistan Military.</p> <ul style="list-style-type: none"> - Gives Indian R&D establishments unique opportunity to study claimed advanced Chinese BVR AAMs. Most Western & Chinese neighbours will be interested in knowledge gained
PAF's strikes on Indian Bases		<p>Chinese Air-to-Ground missiles did not succeed in hitting the bases as claimed. Chinese netizens have claimed the use of CM-400AKG⁷⁰ missiles which were not able to hit the desired targets and were intercepted by Indian AD network</p>	<p>Despite use of JF17 & J10CE, PAF could not strike which is a matter of grave concern</p>
Pakistan's reliance on Turkish drones		<p>Pakistan's employment of Türkiye's Songer & Yiha III series drones evidently validates the claims of failure of Chinese drones in various Pakistani trials. While the Pakistani military did use WL-II series against Iran, they did not replicate their use against India.</p>	<p>Both the Ukrainian & Russians shifted away from DJI series to their own versions / Iranian modifies Shahed series. While Chinese DJI may hold 70% of civil drones market with even military drones relying on Chinese components, Chinese military drones have not proven battlefield worthy till now</p>

Lessons Learnt

Every incident provides many lessons in the hindsight which must not be forgotten. The major lessons learnt are elaborated below. Many more shall be discussed in the forthcoming publications.

Nuclear vs Full-Spectrum Deterrence. Nuclear deterrence cannot prevent occurrence of standoffs, low-intensity conflicts or even long drawn wars, whether the adversary is a nuclear or a non-nuclear state. Nuclear Russia attacked non-nuclear Ukraine while Ukraine has struck Moscow at will despite Russian nuclear threats. There is no doubt that Ukraine has been at a disadvantage on the negotiating table without possession of nuclear weapons but Western support has neutralised the difference to great extent. Near Nuclear Iran conducted two long range strikes on Nuclear Israel in 2024 and Israel responded immediately both times. Nuclear China and Nuclear India have had two major standoffs in this decade Doka La and East Ladakh with latter for four years plus. Nuclear Pakistan has sponsored three major terrorist strikes on Nuclear India in Uri 2016, Pulwama 2019 and Pahalgam 2025. India has responded with three precision strikes within few days with increasing intensity of violence every time. Two issues stand out that Deterrence in the conventional thought and as a concept has failed more often particularly Nuclear Deterrence. However, **Indigenous Full-Spectrum Deterrence is much more relevant today** spanning the nuclear, conventional military (Space, Cyber, Air, Land, Sea, Electromagnetic and Cognitive Domains), Diplomatic, Informational, and economic dimensions. Reliance on any outside country for any of these dimensions is extremely dangerous. **Pakistan would not have survived even a single day without Turkish and Chinese assistance but finally had to request to cease fire despite their assistance.**

Escalation Ladder. The stark differences between Indian and Pakistani actions from 22 April to 07 May 2025 clearly highlight Indian intentions to control the escalation ladder with appreciable strategic and geo-political clarity of an intent of conflict avoidance and destroying the terrorist ecosystem. A specific look at the various actions highlights the complete escalation sequence at table below. However, while

only 9 out of 21 targets have been engaged, India would have to cater for a new step along the escalation ladder since key retaliation measure of abeyance of Indus Water Treaty and major depth terrorist strikes have already been utilized.

Table 8: India-Pakistan Escalation Matrix April-May 2025

Date	Pakistan's Actions	Indian Response
15 April 2025	COAS's provocative speech at Islamabad with derogatory remarks against Hindus and inciting Kashmiris against India	
22 April 2025	Pakistan sponsored terrorist strike at Pahalgam killing 26 tourists; LeT's "The Resistance Front" claims responsibility but backtracks one day later	<ul style="list-style-type: none"> - Indus Waters Treaty is held in abeyance - Attari Check Post closed with immediate effect - Ban on travel of Pakistani nationals to India under the SAARC Visa Exemption Scheme - Military Advisors in the Pakistani High Commission declared Persona Non Grata - Strength of the High Commissions brought down to 30 from the earlier 55
22 April-07 May 2025	Pakistan continues to import military equipment from China and Türkiye and initiates no action against the terrorist infrastructures	<u>Operation SINDOOR.</u> India strikes 9 terrorist camps out of 21 filtered targets on 07 May.
07-10 May 2025	Pakistan undertakes missile-drones-air strikes to hit military, civil and religious sites; False propaganda of fake videos	India strikes selected Pakistan's military infrastructure on 10 May 2025; Evidence of each successful strike provided to the whole world
10 May 2025	Pakistan's DGMO's request to cease firing	Understanding reached for cease firing

PRC has clearly specified its escalation ladder comprising eight steps in the Science of Military Strategy, as illustrated at Figure below. Chinese eight step of Warning Strikes is divided further into two types- Medium Density indicating limited and indirect strikes as executed against Taiwan on 04 August 2022; and High Density Strikes denoting limited and direct strikes. India executed the same variety against

Pakistan on 07 May 2025. India's long range strike capabilities were more than adequate for the depth of Pakistan and Pakistan fell short in its capabilities in quality, quantity but more importantly in range. With US bases and its allies as key targets, China is transforming the capabilities of its Rocket Force (PLARF) to Long Range with induction of DF17 and DF26. In case of India and China, PRC has adequate spatial depth and Tibet and Xinjiang wouldn't be appropriate targets. The spatial conventional reach required for China is different and must be catered by Indian military within the concept of Credible Full-Spectrum Deterrence.

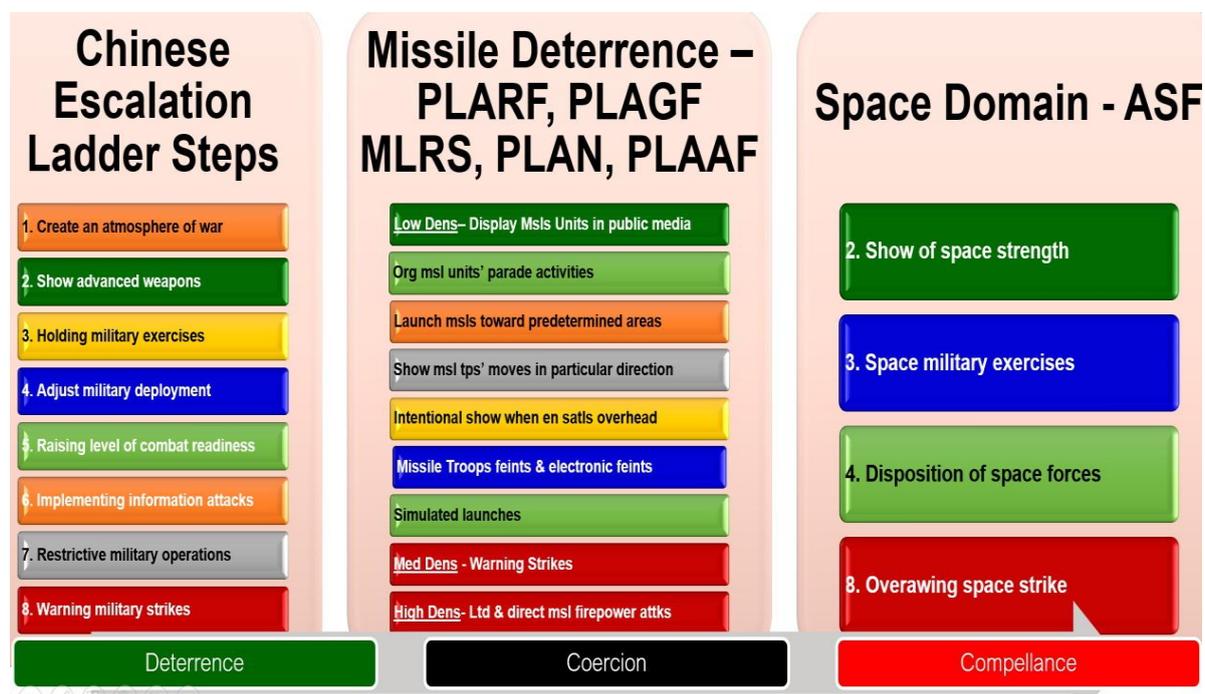


Figure 32: Chinese Escalation Ladder

(Data Source- PLA's Science of Military Strategy 2020)

While PLA's first step of missile deterrence of 'Low Density' purely aims at deterring its adversary through display of its capabilities, the medium and high-density strikes are violent actions undertaken to coerce and compel the weaker adversary to accept PRC's demands during any crisis.

Space-Based ISR. Chinese global-domination of space based ISR capabilities is an accepted fact. Our strategic assets are liable to be detected both in static and dynamic modes. DG ISPR pointed towards engagement of BrahMos base at Beas on few occasions which means Indian strategic asset locations are identifiable from space. A X handle @tinfoil_globe, with assistance of few Pakistani X-handles,

identified most BrahMos bases and had placed them on his X-posts. It's extremely important that such assets are underground, concealed and avoid standard patterns which can be easily identified. Hans M. Kristensen et al, in the 2024 versions of updates on Indian Nuclear Forces highlight that the extreme secrecy of Indian strategic forces is overcome by simple OSINT and GEOINT efforts.

“The research of opensource analysts, such as @tinfoil_globe on the social media platform X (formerly Twitter), has proven to be highly valuable in analysing Indian military bases using satellite imagery. In certain cases, useful imagery about nuclear systems can also be obtained through social media posts—both from military and civilian accounts —and can be used in conjunction with satellite imagery for more concrete analysis.”⁷¹

The India-China asymmetry in the space domain is only widening daily. Pakistan has the advantage of easy access to Western and Chinese satellites both despite having negligible indigenous capabilities. India only has access to Western satellites that too with many host government restrictions. Reliance on few foreign private companies must be avoided. India needs to revise its Space Based Surveillance (SBS-III) implementation schedule and clearly define the must essentials of Multi-Domain Precision Strikes against a peer or stronger adversary in future. There is a definite need to increase the number of satellites in planned constellations. The orbital race for Near-Space and Very Low Earth Orbit is significantly pacing up and India must not miss out on the strategic opportunity.

Record of Satellite Images. As per Indian laws, no private individual can get any satellite imagery. A similar provision needs to be strengthened to restrict foreign firms operating in India. Any Indian or foreign firm, found providing satellite data to terrorists, must be legally challenged and banned. India must also pursue the same for an international space law banning the provision of satellite images to any terrorist organisation by any entity whether government, military or private firm.

Chinese Ultra Sets. The provision of Star link terminals has been the major asymmetry in Ukraine's favour against Russia. Similarly, Chinese Ultra Sets provide distinct advantage to Pakistan-sponsored terrorists. Indian security agencies have to

find ways and means for all possible solutions to obviate the use of Ultra sets on Indian soil.

Air Power. Air power can be very precisely exercised as an instrument of deterrence but with supersonic / hypersonic standoff missiles and mostly in cross frontier operations. The two AFs in conflict, IAF and PAF, were forced to fly aircrafts on own side of IB / LOC and employ long range standoff weapons for strikes. Trans-border aerial operations are going to be extremely difficult with good AD as seen in Russo-Ukraine war also. Superior stealth aircrafts can infiltrate only if adversary AD is weak or caught off guard or deliberately blinded / deceived.

Longer Stand-Off Ranges. While an arsenal of longer standoff range weapons is essential at strategic and operational level, low-cost fibre enabled or EW resistant variety platforms are also a must at congested and contested tactical battlespace. PLA's SAMs can be out-ranged at each level by longer stand-off range or faster speed. At the lowest level HQ17A SAM (range 15 km) can be out-ranged by Spike NLOS on IAF / IA's helicopters. Thus, the strike packages must be tailored to penetrate PLA's A2AD.

Manned-Unmanned Teaming. A separate comprehensive article is planned for this subject. However, one of the most important lessons is that the application of air power in modern wars has to be a delicate balance of Manned and Unmanned assets with a gradual shift from human-machine interaction to more machine-machine interaction. While First Person View (FPV) Drones, Robots and Centralised Swarms were not the highlights in this India-Pakistan standoff of May 2025, they may be the star performers in the next such incident.

Three major consequences of commercialisation and miniaturisation of drones and space industry are: -

- Big isn't beautiful anymore. The larger the asset, it will be that much more costly and will give that much more multi-domain signatures.
- If you are "still" and in "open", you are bound to be detected. If you are detected, you are bound to be engaged and thus you are bound to be hit.

- Quantity has a quality of its own to saturate defences as Pakistanis attempted. However, Quality cannot be forgotten. Indian AD, comprising S-400, Barak 8, MR-SAM, Akash, etc were qualitatively superior to Pakistan's AD network comprising HQ-9 and LY80 (HQ16).

Low Altitude. Low altitude air defence requires significant coordination amongst various services and needs to be streamlined. In fact, there is a need to gradually transform to Indianized Rocket, Artillery, Air, Missile, Drones (RAAMD) matching the requirements of high altitude along Northern borders. Incorporation of an integrated RAAMD wall can no longer be neglected. It should be the first priority for Indian military. Whether theaterisation happens soon or a bit later, development of an integrated RAAMD wall must progress structurally, organisationally, doctrinally including R&D and infrastructure development.

Matching Cost Effectiveness. Pakistani armed forces were critically short of costly HQ16 and HQ9 SAMs. Thus, they chose to target only high threat aircrafts on Indian territory and allowed loitering munitions to penetrate. Of course, Chinese HQ9 and HQ16 have limited and negligible BMD capability. Hence, a four days standoff may have been sustained by the current stocks. However, cost effectiveness of every AD weapon needs to be matched with every incoming threat in the very short timeframe of detection, tracking and engagement.

PLA's A2AD Bubble. Two weapon systems of PLA's A2AD bubble were penetrated by Indian strikes. However, the inadequate numbers, poor integration and inadequate training resulted in complete failure. The complete package of PLA's A2AD grid will have many more times dense AD network than encountered this time but surely will not be impenetrable.

Multi-Domain Operations. PAF AVM Aurangzeb was very eloquent in his words of claiming the concept of Multi-Domain Operations (MDO). However, from Pakistanis' blogs itself, vast differences exist between PAF and Pak Army. Only MDO achieved was by Pakistan military was integration of EM domain (ELINT from China) with Air domain most probably within PAF only. Every advanced military needs to plan and

execute joint all-domain operations since all domains are important and none can be left out due to lack of integration.

Joint Military Exercises. PAF had adequate knowledge of characteristics of Rafale through exercises with Qatar Air Force. India needs to be extremely cautious of foreign military exercises involving China and Pakistan and drive hard agreements with foreign OEMs that their equipment does not get fielded with our adversarial nations.

Civil Aircraft Shield. PAF deliberately rerouted its civil aircrafts to shield its military aircraft movements as confirmed from official PAF statements and Indian media interactions too. Indian AD assets would have to work out a methodology to identify such illegitimate ruse and not get stuck in the ethical dilemma again and work out ways and means of striking enemy aircrafts with near zero collateral damage.

Collaboration. In any war, collaboration is survival. Indian military, R&D establishments, government and civil military responded collectively adopting a whole-of-nation approach. However, sustained, much deeper collaboration and comprehensive civil-military fusion is essential to prepare against a collusive adversary.

Combat Sustenance. An ideal missile-drone combination requires minimum 100 plus missiles and 300-400 drones to overcome strong AD today. Thus, India needs to enhance its combat sustenance for sustained operations. It's absolutely essential to validate the surge capacities of indigenous defence ammunition production before deciding the scales of ammunition particularly in case of missiles and rockets.

Conclusion

Operation SINDOOR has brought about significant lessons on the Indian subcontinent. While studying Russia-Ukraine and Israel-Iran battles, non-contact standoffs in the form of missile-drones-air-artillery-rocket strikes may have seemed a

faraway visualisation particularly between two nuclear states to some military thinkers. Indian military has now successfully executed its own indigenous form of strikes against a weaker adversary having significant support from other stronger nations. However, four days standoff only indicates the requirement of the surge capacities required for longer standoffs and long attrition wars. There are many lessons in the drones and counter-drones domain which shall be covered in a separate article.

In the internal IW domain within Pakistan, its Army may have achieved its self-proclaimed aim by winning the battle of regaining public support on false propaganda, however, both PLA and Pakistan military will be on their drawing board preparing for the next confrontation which may happen sooner than later. Indian military needs to pursue modernisation rigorously through 100% indigenisation as much as possible. The progressive growth needs to be ensured not only within the platforms, weapons and systems but also in the organisational structuring, HR reforms facilitating domain specialisation, and joint doctrinal development, and most importantly combat logistics sustenance for longer standoffs and wars. “Mission Mode” working and “out of box solutions” are the way forward. “Product” has to be given precedence over the “Process.”

India needs to prepare for a stronger adversary at a fast space. Critical areas which merit immediate attention are: - longer range strike capabilities at strategic level with a shift to Medium and Intermediate Range Ballistic and Cruise Missiles with longer range Pinaka right up to 500 km at operation level; rapid pace development of Space based military capabilities with much greater indigenous commercialisation facilitating a transformation from just earth observation to Quantum AI enabled brain; capabilities for cyber reconnaissance, attribution for attacks on own infrastructure; Multi-Domain Resilience through RAAMD wall including critical civilian areas and religious sites; pre-planned information narrative for all types of contingencies with greater transparency to fill up the information vacuum faster than the adversary; key human resource reforms within Indian military catering for advanced unmanned platforms and domain specialisation / super-specialisation, and most importantly greater collaboration amongst Indian military, academia and civil industry for dual purpose technology development. A next crisis will occur soon wherein Operation SINDOOR has just had a pause. Team BHARAT needs to be combat ready for full-

spectrum response with greater innovation and surprise to overcome stronger adversary next time.

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