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February 2016

This report is the product of collaboration between the Naval Postgraduate School (NPS) Center on Contemporary Conflict (CCC) and the Project on Advanced Systems and Concepts for Countering WMD (PASCC) at NPS, funded by the Defense Threat Reduction Agency.

The views expressed herein are those of the authors and do not necessarily reflect the official policy or position of the Naval Postgraduate School, the Defense Threat Reduction Agency, the Department of Defense, or the United States Government.

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U.S. Naval Postgraduate School (NPS) Center on Contemporary Conflict (CCC) Project on Advanced Systems and Concepts for Countering WMD (PASCC)

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Acronyms

AD – air defense ALCM - air-launched cruise missile AMB – ambassador AWACS - Airborne Warning and Control System BAI - battlefield air interdiction BAS – battlefield air strike (similar to US DoD definition of close air support) BAT – Border Action Team BJP – Bharatiya Janata Party BMD – ballistic missile defense C2 – command and control CAO - counter-air operation CAP – combat air patrol CBM - confidence building measures COAS - Chief of Army Staff CTF – Combined Task Force DGMO – Director General Military Operations (PK) ELINT – electronic signals intelligence F-INSAS – Future Infantry Soldier as a System GDP – gross domestic product IAF – Indian Air Force IB – international border IBG – Integrated Battle Group (IN) ICBM – intercontinental ballistic missile ICJ – International Court of Justice IRBM – intermediate range ballistic missile ISPR – Inter Services Public Relations (PK) ISR - intelligence, surveillance, and reconnaissance LACM – land attack cruise missile LeT – Lashkar-e-Taiba

LoC – Line of Control MEA – Ministry of External Affairs (IN) MEZ – Maritime Exclusion Zone MFA – Ministry of Foreign Affairs (PK) MDA – maritime domain awareness MPA – maritime patrol aircraft MRBM – medium range ballistic missile NCA – national command authority NFU – no first use (India's declared nuclear doctrine) NM – nautical mile NOTAM - Notice to Airmen OIC - Organization of Islamic Countries ORBAT – order of battle P5 – "Permanent 5" of the UNSC, referring to USA, UK, France, Russia, and China. PAF – Pakistan Air Force PM – Prime Minister SAM – surface-to-air missile SFC – Strategic Forces Command (PK) SLCM – sea-launched cruise missile SLOC – sea lines of communication SOP – standard operating procedure SPD – Strategic Plans Division (PK) SSBN – nuclear-powered ballistic missile submarine SSGN – nuclear-powered guided missile submarine SSK – diesel-electric submarine TNW – tactical nuclear weapon TTP – Tehrik-e Taliban Pakistan UAV – unmanned aerial vehicle UNSC – United Nations Security Council

Executive Summary

South Asian Stability Workshop 2.0 was a crisis simulation tabletop exercise (TTX) held in Kuala Lumpur in February 2015. This tabletop exercise engaged top security experts and scholars from the United States, India, and Pakistan to explore dynamics revealed in a previous iteration of this workshop that demanded further testing. Examining the implications of strategic crisis emanating in South Asia, this exercise attempted to study the cascading effects of military crises and avenues for inadvertent escalation on air, sea, and land. Furthermore, this TTX explored shifting geopolitical tensions, trigger events that warrant military responses, escalation thresholds, and avenues for diffusion and de-escalation of the crisis.

Background

This project builds upon the findings from a previous PASCC-funded event, *South Asian Stability Workshop 1.0* tabletop exercise (TTX) in Colombo, March 2013. This exercise, set in year 2018, simulated escalation dynamics resulting from a terrorist attack in India, traced to a Pakistani terrorist group. The Indian Team responded with a "limited" punitive operation against Pakistan, but despite India's limited intent, the conflict rapidly escalated into a full-scale war over the course of nine in-game days. By the end of the exercise, Pakistan faced immense pressure for nuclear weapon deployment and possible employment. Both countries had no intention of getting into a full-scale war. However, neither team was able to terminate the war on its own terms and was prepared to fight through, including possible nuclear exchanges.

Four key conclusions were drawn from the *South Asian Stability Workshop 1.0* simulation, which illuminate the strategic dilemma between India and Pakistan and illustrate the difficulty of escalation control during a "limited war:"

- 1. Entrenched threat perceptions on the subcontinent increase the likelihood of rapid reaction and use of force in the event of an acute crisis, such as a terror attack.
- 2. India's conventional force advantage incentivizes maximal employment of military forces in order to achieve a quick, impressive victory before international intervention forces a cessation of hostilities.
- 3. Limited war for India is a full-scale war for Pakistan. Pakistan considers India's growing conventional force advantage an existential threat and keeps "all options" open to defend itself.
- 4. As a limited war escalates horizontally and vertically, pressure to lower the nuclear threshold is high. During this time, signaling resolve and showcasing nuclear capability could lead to inadvertent escalation and culminate in a nuclear exchange. War termination also becomes difficult, as neither side wants to back down and appear as a "nation of wimps."

Game Summary

Set in year 2020, the Kuala Lumpur TTX simulated the escalation dynamics of a crisis resulting from the shootdown of a Pakistani maritime surveillance aircraft over the disputed territory of Sir Creek. This incident occurred against a backdrop of an increasingly tense relationship and a series of incidents, including terrorist attacks in both countries, over the previous five years. This

echoes the real world: endemic tensions are the basis for accumulation of grievances in India and Pakistan, which contributes to a tinderbox strategic environment in the region. Both states are adjusting to the ongoing systematic geopolitical shifts, regional tensions and domestic disturbances. This TTX was designed to extend the progressive deterioration of relations into a future crisis where a simulated scenario necessitated military responses. The exercise tested assumptions on escalation dominance; sought reactions and courses of action in the event of nuclear detonation; and solicited avenues for diffusion and de-escalation of the crisis.

Findings and Conclusions

In order to test the reliability of the *SASW 1.0* findings, new players were invited and a different trigger event was developed for *SASW 2.0.*¹ As the game unfolded, it became clear that the four conclusions drawn from the earlier TTX continued to hold true. In both simulations, India's limited authorization for punitive action rapidly escalated into a full-scale war that neither side could de-escalate or terminate.

Indeed, the *SASW 2.0* TTX clearly revealed that military missions in both countries rapidly evolve from simple punitive strikes or limited retribution to full-fledged war. Despite limitations imposed by the control team in the political guidance—India was instructed to keep military operations below the perceived Pakistani nuclear threshold, while Pakistan was instructed to keep the nuclear threshold high—the momentum generated by military operations overwhelmed the political limitations. By the time war termination was sought, three out of the four declared Pakistani thresholds were certainly crossed.²

Beyond the reinforcement of the first iteration's findings, four additional conclusions were reached as a result of *SASW 2.0*:

- 1. Home Alone Syndrome: When given some leeway for a punitive military campaign, Indian military planners are predisposed to use maximum force in the limited window for operations, and resist any political oversight for the duration. The authors term this "Home Alone Syndrome."³
- 2. Nuclear Signaling was Ineffective: Pakistan's attempts to establish intra-war deterrence via threats of possible nuclear use were ineffective. What signaling attempts were made failed to induce caution in India.

¹ In the *SASW 1.0* TTX, the trigger event involved a terrorist attack in India that was traced to a Pakistan-based terrorist group. India responded with "limited" punitive operation against Pakistan (aka Cold Start). In this iteration, ongoing terrorist attacks formed the contextual backdrop for the trigger event, which was the shootdown of a Pakistani P-3 *Orion* surveillance aircraft.

² In 2002, Pakistan declared that any of four criteria would be grounds for nuclear employment: spatial incursion; physical destruction; economic strangulation; and fomentation of domestic instability. While the actual thresholds were deliberately kept ambiguous, it was clear in this exercise that the level of destruction of air and naval assets combined with the imposition of economic hardship via naval blockade and the incursion of Indian land forces in the later stages of the conflict strongly suggests that the first three nuclear thresholds were crossed.

³ "Home alone syndrome" describes the behavior of the Indian military when Indian political leadership gives the armed forces a period of time to conduct military operations as a punitive response to Pakistani provocation. Operating under the presumption that political oversight is absent for the duration, the Indian military engages in an inter-service competition to inflict the hardest hit against its nemesis.

- **3.** Ambiguous Nuclear Thresholds Lack Credibility: Despite Pakistan's so-called four red lines for nuclear use, the Pakistan Team did not threaten nuclear use when confronted with the dramatic degradation of their air force and navy. As the crisis deepened, Pakistan's assertions regarding its willingness to use tactical nuclear weapons went unheeded.
- 4. Non-Military Options and Political Solutions Remain Elusive: Neither side effectively incorporated diplomatic, economic, or informational elements into a comprehensive strategy. Both states lack strategies to terminate war. International intervention was the only avenue for de-escalation put forth. In attempting to reach war termination, it became clear that the two sides' bargaining positions were mutually exclusive. When confronted with a nuclear detonation, neither side saw the non-military dimensions of the crisis; they were unable to articulate plans for consequence management, and both sides believed they would and could continue to fight.

Acknowledgements

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Introduction and Game Overview

South Asian Stability Workshop 2.0 was a crisis simulation tabletop exercise (TTX) held in Kuala Lumpur in February 2015. This tabletop exercise engaged top security experts and scholars from the United States, India, and Pakistan to explore dynamics revealed in a previous iteration of this workshop that demanded further testing. Examining the implications of strategic crisis emanating in South Asia, this exercise attempted to study the cascading effects of military crises and avenues for inadvertent escalation on air, sea, and land. Furthermore, this TTX explored shifting geopolitical tensions, trigger events that warrant military responses, escalation thresholds, and avenues for diffusion and de-escalation of the crisis.

This project builds upon the findings from a previous PASCC-funded event, *South Asian Stability Workshop 1.0* tabletop exercise (TTX) in Colombo, March 2013. This exercise, set in year 2018, simulated escalation dynamics resulting from a terrorist attack in India, traced to a Pakistani terrorist group. The Indian Team responded with a "limited" punitive operation against Pakistan, but despite India's limited intent, the conflict rapidly escalated into a full-scale war over the course of nine in-game days. By the end of the exercise, Pakistan faced immense pressure for nuclear weapon deployment and possible employment. Both countries had no intention of getting into a full-scale war. However, neither team was able to terminate the war on its own terms and was prepared to fight through, including possible nuclear exchanges.

Four key conclusions were drawn from the first *South Asian Stability Workshop 1.0* simulation, which illuminate the strategic dilemma between India and Pakistan and illustrate the difficulty of escalation control during a "limited war:"

- 1. Entrenched threat perceptions on the subcontinent increase the likelihood of rapid reaction and use of force in the event of an acute crisis, such as a terror attack.
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Set in year 2020, the Kuala Lumpur TTX simulated escalation dynamics of a crisis resulting from the shootdown of a Pakistani maritime surveillance aircraft over the disputed territory of Sir Creek. This incident occurred against a backdrop of an increasingly tense relationship and a series of incidents, including terrorist attacks in both countries, over the previous five years. This echoes the real world: endemic tensions are the basis for accumulation of grievances in India and Pakistan, which contributes to a tinderbox strategic environment in the region. Both states are adjusting to the ongoing systematic geopolitical shifts, regional tensions and domestic

disturbances. This TTX was designed to extend the progressive deterioration of relations into a future crisis where a simulated scenario necessitated military responses. The exercise tested assumptions on escalation dominance; sought reactions and course of actions in the event of nuclear detonation; and solicited avenues for diffusion and de-escalation of the crisis.

Objectives

- 1. Seek practical and conceptual clarity to reinforce our theoretical understanding of strategic stability in South Asia.
- 2. Understand the implications of current and evolving doctrines, the impact of technological maturation, and the intersection of the two drivers.
- 3. Study the cascading effects of military crises and escalation between India and Pakistan.
- 4. Explore avenues and mechanisms for de-escalation.

Participants

The Indian and Pakistani teams were composed of eight participants from each country representing the diplomatic, academic, and military communities. Some of the participants had participated in the previous *SASW 1.0* exercise held in Colombo, Sri Lanka in March 2013, but many participants were new to the experience. While the previous exercise included mostly retired military participants, this exercise sought to diversify the teams with a mix of military and civilian members representing different generations.

Background	India Team	Pakistan Team
Army	Lieutenant General Indian Army, Ret.	Lieutenant General Pakistan Army, Ret.
Army	Brigadier General Indian Army, Ret.	Brigadier General Pakistan Army, Ret.
Navy	Rear Admiral Indian Navy, Ret.	Vice Admiral Pakistan Navy, Ret.
Air Force	Air Vice Marshal Indian Air Force, Ret.	Air Commodore Pakistan Air Force, Ret.
Diplomats	Ambassador Indian MEA, Ret.	Ambassador Pakistan MFA, Ret.
	Center For Air Power Studies New Delhi, India	Quaid-i-Azam University Islamabad, Pakistan
Academics	National Inst. of Advanced Studies Bangalore, India	Quaid-i-Azam University Islamabad, Pakistan
	National Maritime Foundation New Delhi, India	Quaid-i-Azam University Islamabad, Pakistan

Game Mechanics

The tabletop exercise consisted of two opposing Country Teams using the full instruments of national power to achieve a favorable resolution of a future crisis situation. A third team, the Control Team, represented the National Command Authority for both teams, enforced game rules, and adjudicated game play.

Beginning with the pre-game briefings, game play consisted of campaign planning, moves one through four, and two vignette discussions. Following each move, the Country Teams briefed their plans separately to control. Control then adjudicated the move in a closed session and briefed the players on the results in an open session. Each Country Team then conducted their planning for the next move, and the cycle repeated for moves one through three. For move four, the Country Teams and Control conducted "open

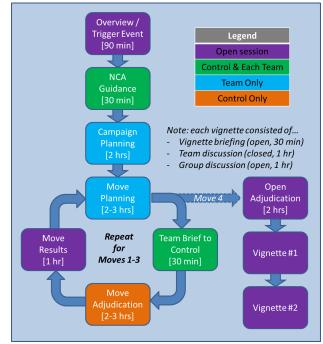


Figure 1: Game flow overview

adjudication" in which the players briefed their moves in an open session and all three teams discussed the results together. After move four, Control facilitated two vignette discussions.

Game Rules

The following rules remained in effect throughout game play:

- **Chatham House Rules governs game play.** All comments were treated as "not for attribution." Participants were advised that the results of game play could be discussed or published but not in such a way as to be attributable to any specific player. No recording or photography was allowed.
- *Control maintains final decision-making authority.* The outcome of each move is not biased, scripted, or pre-determined in any way, but players should accept the game narrative and the results of Control adjudication as much as possible. In addition to its adjudication responsibility, Control represents the political authority of both Country Teams.
- *Control Team has global access.* Control members were allowed to enter the planning rooms at any time to ask questions or to observe decision-making dynamics.
- *Country Teams have limited access.* Country teams were not allowed to enter the planning rooms of the opposing team or the Control Team unless invited. Both Country Teams were assigned their own planning rooms as well as representatives from the Control Team to provide guidance and facilitate game play.

Game Materials

Two weeks prior to the exercise, Control distributed copies of the Scenario Brief and the Order of Battle (ORBAT) to the players so that they could review both strategic setting and tactical capabilities available to them in the 2020 scenario. On day one of game play, Control reviewed the game rules, scenario, and order of battle and presented the players with the trigger event that would initiate their crisis planning. In separate briefings, Control issued NCA guidance to both teams as a source of planning parameters and strategic objectives to facilitate campaign planning.

Game Mat	Game Materials			
Item	Function	Description		
Scenario Brief	Create the strategic and operational setting	Security environment of 2020 based on present trends and future hypotheticals. Includes global, regional, and domestic settings for participant countries as well as the United States, China, and Afghanistan.		
Order of Battle (ORBAT)	Provide tactical capabilities	Detailed listing of military forces of the participant countries in the 2020 environment at BDE/SQDN/Combatant level and above. Based on open source resources including <i>Jane's Defense Weekly</i> . See Appendix A for summary.		
Game Overview Brief	Establish game rules	Review of game rules, game play, team responsibilities, and administrative concerns.		
Trigger Event	Define start point of game play	Crisis event requiring a national response from each Country Team.		
NCA Guidance	Provide planning guidance	List of purpose, method, end state, planning considerations, and strategic objectives for each team. Each team received similar NCA guidance to punish the other team in order to deter future aggressive actions.		

Campaign Planning

After receiving the trigger event and NCA guidance, each Country Team prepared a campaign plan to achieve the end state and strategic objectives set by their NCA (see Appendix C). The campaign plan template required the players to identify supporting objectives using the levers of national power defined by the acronym DIME: diplomatic, informational, military, and economic. For example, for a given "Strategic Objective X," the players were tasked with identifying sub-objectives across the DIME spectrum. Additionally, each team prepared a reaction hypothesis of the "high/low" response for the opposite team, "high" being the most dangerous or maximal response and "low" being the most likely or minimal response. Following campaign planning, the Country Teams briefed their concepts to control separately.

Move Planning and Adjudication

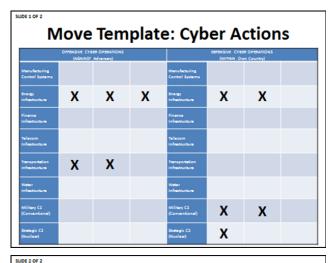
For each of the four moves, the players planned their actions across the DIME spectrum for the next 72 hours. Control asked players to complete nine move sheets in which they defined the *who, what, when, where,* and *how* for each action. The diplomatic, information, and economic aspects had one move sheet each, while the military portion included four move sheets: Army, Navy, Air Force, and Strategic Forces. Control also provided the players with laminated maps of India and Pakistan in order to allow them to sketch actions when appropriate.

Each team briefed the Control Team separately. The Control Team then reviewed each team's completed move templates and identified when to end the move in game time. While each team planned actions for 72 hours, Control typically stopped game time within 48 hours in order to allow the teams to initiate a new decision cycle in response to a critical action by one of the teams. Move 4 was adjudicated in an open discussion with both Country Teams present. Similarly, the vignette results were briefed in an open plenary session. The campaign plans were not adjudicated; rather, they were expected to serve as a roadmap for the teams as the crisis unfolded.

Cyber Play and Adjudication

To provide players with another method of achieving their objectives, Control integrated offensive and defensive cyber actions into the game play in order to better understand player perceptions on priorities, risks, and potential rewards.

For each move, the teams were given five offensive and five defensive "cyber points" to distribute among eight categories, with no more than three points allocated to any category per move. The categories were manufacturing control systems, energy infrastructure, finance infrastructure, telecom infrastructure, transportation infrastructure, water infrastructure, military C2 (conventional), and strategic C2 (nuclear). For any offensive cyber action, the teams identified the desired effect on the adversary's systems as well as timing, attribution (whether overt or covert), and escalation concerns. Defensive actions did not require additional elaboration.



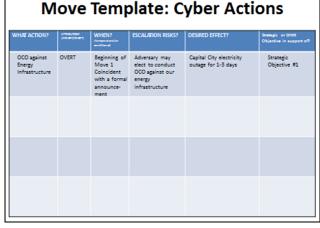


Figure 2 – Sample cyber move sheets. The text on the move sheets is for demonstration purposes only and does not reflect any specific team moves.

Geopolitical Setting: 2015 to 2020

By 2020, technological and doctrinal modernizations have begun to affect the tenuous nuclear stability in South Asia. The pursuit of different nuclear technologies has driven security concerns and internal balancing through a growing arms race between India and Pakistan. Moreover, both nations are advocating for so-called fourth generation warfare, implying that even in the absence of open conflict, India and Pakistan will continue to target each other through proxies and in the cyber, diplomatic, economic, and information domains. Non-state actors remain an acute problem throughout the subcontinent. Overall, the likelihood has increased for a sudden crisis between Pakistan and India to rapidly escalate due to accumulated grievances and renewed allegations over several issues: geopolitical tensions, Kashmir antagonisms, and a maritime build up.

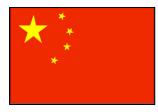
Global Context

The U.S. rebalance to Asia remains highly visible in 2020 with robust political, economic, and military coordination between the United States and India, Japan, Australia, and the nations of Southeast Asia. The global economy is stable, but India and China are experiencing slowdowns. The United States desires cooperative engagement with China, but the pivot is aggravating Beijing's strategic anxieties, and Beijing continues to increase its military spending. Two regional hotspots are drawing international attention: Ukraine and the Spratly Islands. Russia has consolidated its control of the Crimea, and separatist movements continue to plague Ukraine. In the South China Sea, China has renewed its claims to the Spratly Islands in the face of increasing resistance from regional players. At present, world powers and institutions are not actively focused on conflict resolution in South Asia.

U.S. policy seeks to maintain stability in Asia in order to ensure uninterrupted trade flows. To this end, the United States is working to combat regional extremist forces, prevent nuclear proliferation, and engage in cooperative interaction with China without allowing for territorial revisionism. The U.S. has diminished its Afghan footprint to approximately 5,000 troops focused on counterterrorism and Afghan



military training but infrastructure remains for a rapid force buildup in the event of a crisis. The U.S.-India strategic relationship remains important for the U.S. rebalance to the Asia-Pacific region. The United States has expanded cooperation with India to include joint initiatives to secure the Indian Ocean's sea lanes as well as eased export controls for civil nuclear components. The U.S. continues to pressure Pakistan to eliminate anti-India elements on Pakistani territory. The U.S.-Pakistan defense relationship has diminished as Pakistan's supply routes are less critical for resupply of U.S. forces in Afghanistan, but military engagement and cooperating in the Gulf of Aden, and SOF and joint military exercises continue. While the U.S. and Pakistan have no nuclear deal comparable to the U.S. deal with India, the United States has ignored growing Sino-Pakistani energy cooperation.



Despite slowing GDP growth, China has increased defense spending to counter U.S. efforts at "containment," respond to India's forward deployment in Arunachal Pradesh, and address unrest in Tibet and Xinjiang. China believes that the U.S. pivot has encouraged regional players to intensify their claims in the South China Sea, and multiple Chinese dam sites on the upper Brahmaputra River are elevating

tensions with India. At home, the East Turkestan Islamic Movement is on the rise in Xinjiang, and a new and more vocal Dalai Lama seems to be contributing to demonstrations in Tibet. China has significantly developed its west and southwest military regions, deploying troops to Tiber and Xinjiang to quell the unrest. Technologically, China has operationalized its fifth-generation J-20 fighter, developed new missiles and nuclear delivery systems (including a seabased deterrent), and added a second aircraft carrier to its fleet, though these carriers have not yet deployed to the Indian Ocean region. China has increased its cooperation with Pakistan, expanding the Pakistan-China (Karakoram) highway, staging military exercises, and conducting regular port calls.

Regional Context

The persistent hostility surrounding India and Pakistan's foray into the nuclear age has spurred an ever-rising level of regional violence. In an effort to establish stability on their own terms, senior political and military leaders from both India and Pakistan have called for more proactive methods of responding to perceived provocations and have adopted "offensive-defense" policies designed to execute preemptive strikes against potential threats. These policies have led to an expansion of covert fourth generation warfare. Rather than face the nuclear consequences of direct conventional engagement, each side has turned to its respective methods of punishing the other: proxy conflict, cyber and economic warfare, and diplomatic isolation. India and Pakistan openly allege that the other's intelligence agencies are conducting covert operations through their respective proxies. At the same time, both countries have honed their military doctrines for speed and lethality, and nationalist rhetoric is on the rise.



India continues to be concerned about China, Pakistan, and Sino-Pakistani cooperation. The rivalry between India and China has shifted to the maritime realm to control sea lanes, despite growing trade between the two countries. India is concerned about China's large military presence along its disputed borders and complains that Chinese dams on the Brahmaputra River have lowered water levels in Arunachal

Pradesh. India views Pakistani military policy as a part of China's broader defense strategy and notes the military implications of the Pakistan-China (Karakoram) highway from Xinjiang to Gwadar. India also complains that Pakistan uses sub-conventional actors as proxies to fight an asymmetric war with India. Kashmir and the Sir Creek dispute remain open sores in relations between the two nations. The current Indian PM has promised to integrate Kashmir, enforce India's borders, ensure maritime security, and build economic and military partnerships that fortify India's growing position in the world order.

The Indian military has continued to modernize and advance new doctrinal concepts. The Indian Army has four IBGs that can mobilize and respond within 24 hours. The Indian strike corps can reach battle areas within 96-120 hours. Air bases along the Pakistani border remain activated in

anticipation of any sudden contingencies. At sea, the Indian Navy is able to project power in the Asia-Pacific region. India's nuclear forces remain in de-alert status, but SOPs are in place to alert and operationalize these forces on short notice.

In foreign relations, Pakistan has increased cooperation with China while maintaining a neutral relationship with Afghanistan. China and Pakistan have been conducting joint military exercises in northern Pakistan and Xinjiang, and China has invested heavily in Pakistan's transportation and communications sectors to support the Gwadar Port, managed by a Chinese firm primarily as an oil port. The Chinese navy makes at least two

port calls per year at Gwadar. Military-to-military relations vis-à-vis Afghanistan have improved but the border dispute along the Durand Line remains unresolved. Pakistan worries that the Afghan military orientation toward its southeastern areas has implications beyond counterinsurgency operations.

Poor governance and internal security have hampered economic growth in Pakistan. As attempts to improve political relations with India have failed, the new government has reached out to China and Saudi Arabia for economic development. The TTP and other extremist groups remain the biggest obstacles to regional peace and domestic stability. Meanwhile, the Baluchi insurgency and other sectarian violence continue with the alleged encouragement of India via Afghanistan. The Pakistani military continues to be engaged in COIN operations in FATA and Baluchistan while remaining vigilant against India. Pakistan has reinforced garrisons with counter-IBG brigades located opposite of Indian IBGs, and the Pakistan Air Force remains in a high state of readiness in anticipation of any sudden strike from the IAF. At sea, Pakistan's SLCM *Agosta*-class submarine regularly conducts deterrent patrols. Pakistan's nuclear forces remain in de-alert status, but SOPs have been developed to integrate these forces with conventional forces on the battlefield.

In the wake of reduced U.S. support and despite frequent crises with warlords and the Taliban, Afghanistan has pursued a neutral foreign policy direction that seeks a balance of favor from neighbors and strategic partners, including China and Saudi Arabia. In response to the Afghan strategic balancing act, both Indian and Pakistani intelligence agencies retain pockets of support within Afghanistan to influence Afghan

developments to their advantage. Afghan politics continue to be in flux as the country determines its future without a robust U.S. backstop. The Afghan military stands at approximately 175 thousand troops. The Afghan Air Force has a negligible offensive capability, focusing mostly on air support to domestic counter-terror operations.





Timeline of Events: 2015-2020

2015: Resentment builds

- Summer: Kashmiri separatist violence leads to LoC exchanges.

2016: Major military exercises

- Spring: The Indian Army launches huge military exercise in Rajasthan desert, dubbed "Brasstacks II"⁴ by the Pakistani media.
- Summer: LoC incidents on the rise Indian troops allege major Pak infiltration across LoC.
- Fall: Pakistan Army exercise in Sindh simulates the integration of tactical nuclear weapons with conventional forces. The Indian media labeled this exercise "Zarb-i-Momin II."⁵

2017: China asserts itself over Spratlys

- Spring: New US president reaffirms the Pacific Pivot, promising to strengthen ties with India.
- Late spring: China begins periodically challenging commercial shipping traveling through the South China Sea.
- Summer: U.S.-India naval exercise tests India's maritime domain awareness (MDA) capabilities. India begins to confront Pakistani fisherman, alleging possible terror attacks.
- Summer: Continued Kashmiri insurgency draws larger numbers of Indian troops.

2018: Increased Sino-Pakistani cooperation

- Spring: Sino-Pakistani joint maritime exercise showcased anti-piracy and MDA capabilities.
- Spring: New Pakistani PM pledges cooperation with China and Saudi Arabia and no compromise on core issues (i.e., Kashmir and nuclear weapons).
- Summer: Sino-Pakistani counterterrorism operations against Uighurs. India places its forces in Jammu and Kashmir on high alert.
- Fall: The new (15th) Dalai Lama supports greater Tibetan autonomy, bringing widespread revolt and more Chinese troops.
- Fall: Indian election rhetoric calls for a hardline approach towards Kashmiri separatists, prompting LoC exchanges.

2019: Indo-Pakistani maritime tension

- Spring: Pakistan takes leadership of CTF-151. India reserves the right to carry out its own anti-piracy operations independent of the CTF.
- Spring: Indian PM calls for increased resistance to Sino-Pakistani collusion, repeal of Article 370,⁶ and swift response to any Pakistani provocation.
- Summer: Chinese port calls at Pak ports.
- Fall: Pakistan sinks Indian fishing boat allegedly carrying supplies to terrorists. India places its navy on high alert.

⁴ In 1986-7, India launched the Operation Brasstacks in Rajastan. Ostensibly a training exercise, Brasstacks nonetheless set off a crisis with Pakistan as the latter feared that the operation posed a threat to its security.

⁵ In 1989, Pakistan responded to Brasstacks by launching its own large-scale training exercise, Operation Zarb-e-Momin. Exercises by this name continue to the present day.

⁶ Passed in 1952, Article 370 governs the inclusion of the State of Jammu and Kashmir into the Indian union. The Article contains special provisions that preserve some degree of Kashmiri autonomy. For the complete text, see http://www.satp.org/satporgtp/countries/india /states/jandk/documents/actsandordinances/article 370constitutionindia.htm.

2020: Relations become severely strained...

- <u>March</u>: Indian attempts to modify Article 370 bring protests in Jammu and Kashmir, forcing India to deploy more troops to restore order. During the protests, a Muslim woman from Baramulla accused an Indian soldier of rape. Widespread rioting and elevated border tensions follow the accusation; India alleges Pakistani involvement.
- <u>April:</u> Pakistan expresses concerns when Afghan military forces moved to the border areas, ostensibly to meet a local Taliban threat. Islamabad alleges an Indian hand.
- <u>May:</u> Baluchi insurgents attack the Pakistan Navy base at Ormara, causing minor damage to the P-3 *Orion* aircraft and support facilities on the base. ISPR announces that the insurgents were acting on behalf of Indian agents operating in Kandahar. India angrily dismisses these allegations.
- <u>May:</u> The Indian investigation of the Baramulla rape case determines that the charge was baseless, but protestors call for justice. Extremist organizations in Pakistan promised to defend "our sisters in Kashmir." The issue polarizes Indian politics, with Hindu parties accusing Muslim groups of being Pak proxies.
- <u>May:</u> Militants ambush Indian troops and raid ammunition dumps in Kashmir. India alleges that these attacks were carried out by Hizb'ul-mujahideen who claimed to have taken revenge for the alleged Baramulla rape victim.
- <u>June:</u> Pakistani air defenses shoot down an Indian surveillance UAV over the

Neelum Valley near a Chineseconstructed hydroelectric plant. ISPR warns India against future violations; India maintains that the aircraft was actively pursuing terrorists.

- <u>July:</u> Chinese ships arrive at Gwadar in preparation for a future naval exercise.
- <u>Early August:</u> Communal violence in Muslim areas of Mumbai results in looting and several deaths. Mumbai police accuse Dawood Ibrahim of masterminding the attacks from Karachi with connivance of Pakistani intelligence. India demands extradition but Pakistan dismisses the allegation as baseless.
- <u>Mid-August:</u> Pakistan reports that an Indian fighter jet engaged a Pakistan P-3 *Orion* aircraft operating over the Rann of Kutch/Sir Creek. The aircraft safely returned, but the incident provokes media and political outrage. India warns Pakistan not to violate Indian airspace or face consequences; Pakistan denied that the aircraft crossed the border.
- Late August: India sinks a large Pakistani fishing vessel that allegedly crossed into Indian waters. India claims that the boat was ferrying terrorists with links to Pakistani intelligence and subsequently releases photos of a weapons cache found among the wreckage. Pakistan vociferously denies the allegations, claiming that Indian intelligence planted the weapons among the dead bodies of simple fishermen. An Indo-Pakistani "media war" erupts amid intense political debate.
- <u>September:</u> Border tensions continue in Kashmir and maritime zones (Sir Creek/North Arabian Sea)

Game Play: Plans, Events, and Outcomes

As noted earlier, game play consisted of campaign planning, four moves, and two vignettes. After presenting the trigger event, Control provided each team with National Command Authority guidance that asked them to craft a response to "punish" the opposite team for the string of incidents established in the scenario brief that had culminated in the P-3 border violation (India) / P-3 shootdown (Pakistan). Participants were asked to create both a campaign plan, delineating their desired end state and how they intended to achieve it, as well as their initial Move 1 plan for actions that would occur in the 72 hours following the trigger. Appendices B and C provide both the NCA guidance as well as the teams' campaign plans.

Moves 1-4 span September 6th through 11th 2020 and are presented here as a narrative occurring in real time. These narratives incorporate each side's actions as well as Control's adjudication of the interactions. Control adjudicated Moves 1-3 in a closed session, while Move 4 was adjudicated in an open plenary session with debate between the two teams. Following the four moves, Control asked both teams to consider responses in the event of 1) an accidental detonation of a Pakistani nuclear weapon, and 2) an NCA decision to seek war termination.

Trigger Event and Guidance: September 7, 2020

On the first day of game play, Control briefed the teams on a crisis that was to serve as the trigger event for their campaign planning and subsequent game moves:

At 1800hrs on Sunday, September 6th, 2020, the IAF shot down a Pakistani P-3 Orion on a surveillance mission over Sir Creek [Rann of Kutch region]. It is unclear whether the plane violated Indian airspace, but fishermen found debris of the plane in the disputed area of the Sir Creek region. Pakistan reports that the crew was killed. The IAF claims that the plane intruded into Indian territory and did not heed warnings to return to Pakistani territory. The Pakistani Inter-Service Public Relations (ISPR) alleges that this incident was a deliberate attack on a defenseless plane conducting a routine mission—within Pakistani territorial airspace—and that this incident constitutes the latest Indian attempt to blind Pakistan's "eyes and ears." Pakistan's Foreign Office spokeswoman affirms Pakistan's right to self-defense and announces that the Pakistani National Command Authority has convened an emergency meeting.

Rationale for Trigger

Terrorist attacks in India triggered Indo-Pak crises in 2001 and 2008 as such terrorism has typically served as the trigger event for previous South Asian crisis escalation exercises. Nonetheless, previous exercises and real world events suggest that crisis escalation in South Asia results as much from cumulative perceptions and a desire to inflict retribution for previous wrongs as from a calculated response to a specific event. In addition, India generally perceives Sino-Pakistani collusion as working against India interests. In the Pakistani threat perception, India is a constant existential military threat and belief persists that India will find an excuse to wage war with Pakistan. In this case, Pakistanis were building up perceptions that India was covertly engaged in a blinding campaign to systematically destroy Pakistani ISR capabilities. In general, both nations harken back to grievances accumulated since partition in 1947. This exercise sought to test whether a different trigger would incite a different response.

This trigger event recreated an actual event that occurred in the wake of the Kargil conflict. On August 10th, 1999, IAF fighters from Naliya Air Base shot down a Pakistani *Atlantique* surveillance aircraft in the Rann of Kutch region, a disputed area.⁷ The incident contributed to the already tense environment and resulted in heightened alert levels but did not escalate toward a military confrontation at the time.

For the projected 2020 environment, however, this type of incident offered four advantages for analysis as compared to a terrorist attack. First, the players were unlikely to expect such an event, given the focus on terrorism in the international media and in policy and academic circles. Second, the incident was a clearly attributable military event that aligned more closely with traditional military planning scenarios and concepts, and could thus be used to test standing doctrine rather than emergent strategies. Third, the proximity to the Arabian Sea and Indian Ocean Region created a naval dimension to the crisis. Finally, the incident switched the antagonist-protagonist roles. Rather than have India respond to an allegedly Pakistan-sponsored terror attack, this incident put Pakistan in the position of retaliating against an overt Indian military action.

Campaign Plans

Each team received unique but similar guidance from their respective NCAs in separate briefings by Control. The Indian and Pakistani NCAs asked their planners to "employ diplomatic, information, military, and economic elements of national power in a decisive, coordinated and supporting fashion" to punish the other team for long-term grievances and deter such actions in the future. For India, the primary grievance remained terrorism, and for Pakistan, the primary grievance was the "negative effects of India's blinding campaign" against Pakistan. The Indian and Pakistani Teams were tasked to avoid nuclear or conventional war and "deter opportunism" from China and Afghanistan respectively.

Acting as the Indian and Pakistani NCAs, Control issued additional guidance during Move 3 and Move 4 planning. During Move 3 planning, Control tasked the teams with transitioning to war termination, and Control informed the Indian Team that their NCA had denied the plan to conduct a cross-international border offensive into Pakistan during Move 2. During Move 4 planning, Control informed the Indian Team that their NCA would approve a cross-border operation provided that it "contribute to meeting our strategic objectives," including war termination.

The Indian Team predicted that Pakistan would react to the destruction of its maritime patrol aircraft in one of three ways. Pakistan's maximal response would be to attack naval assets and facilities in the vicinity of the Sir Creek area. At a minimum, Pakistan would limit its response to the LoC or use the "asymmetric option," meaning some form of terror attack. In the meantime, India would implement a diplomatic, informational, and economic campaign to isolate Pakistan, explain India's reaction as purely defensive in nature, and characterize the Pakistani border violation as part and parcel to Pakistan's long-term campaign against India, including the

⁷ For contemporary coverage of the August 10th, 1999 shoot-down, see the following news articles from *The Independent* and *BBC News*: http://www.independent.co.uk/news/16-dead-as-india-shoots-down -pakistani-naval-plane-1112052.html; http://news.bbc.co.uk/2/hi/south asia/416233.stm.

"persistent terror problem." To deter and respond to Pakistan's retaliation, India would prepare its military for future action and "adopt an offensive posture against Pakistan."

The Pakistan Team planned to "conduct a befitting military response" and adopt a strong defensive posture to deter or defend against an Indian counterattack. On the diplomatic and information fronts, Pakistan would support this attack by "portraying India as the aggressor," explaining Pakistan's need to respond, and requesting that the international community "use its influence to limit escalation." Additionally, Pakistan would take measures to "safeguard against shocks to our economy."

The Pakistan Team expected that India would "respond in kind" to any Pakistani retaliatory action because India believed that it was within its rights to shoot down the Pakistani P-3 *Orion* that had, in India's assessment, violated the border. The Pakistan Team anticipated two possible Indian responses to a retaliatory attack. At a minimum, India would conduct a limited "tit-for-tat" response, mobilize its pivot corps, and otherwise dismiss Pakistani diplomatic and informational campaign. As a maximal response, however, India would actively contest Pakistan's diplomatic and informational initiatives with a diplomatic offensive and "media blitz" that "portray Pakistan as aggressive following the retaliatory strike." India would also attack multiple Pakistani military targets, take action along the LoC, announce a naval blockade, and mobilize its IBGs as well as pivot corps. The Pakistan Team chose to strike Naliya Airbase in an effort to limit escalation to the Indian low option by targeting only the base from which the Indian air attack came.

Move 1 – Trigger Event (T) to T+29 hours

Sunday, September 6 (1800hrs) to Monday, September 7, 2020 (2100hrs)

Immediately following the convening of the Pakistani NCA, the Pakistani Ministry of Foreign Affairs (MFA) releases a statement condemning Indian aggression and declaring Pakistan's right to respond "appropriately and effectively." The Pakistan government also directs all its agencies to take stock of critical materials in light of the current situation. The media in both countries quickly jump to cover the crisis. The Indian media cites the border violation as the latest in Pakistan's "pattern of aggressive intent and provocation" against India over the past five years. Pakistani media outlets begin 24/7 coverage, describing the Indian shootdown as "unprovoked" and speculating about the possibility of escalation to all-out war. Pakistan activates the DGMO hotline, seeking clarification on the P-3 incident. Both sides reiterate their interpretation of events but agree to remain in contact.

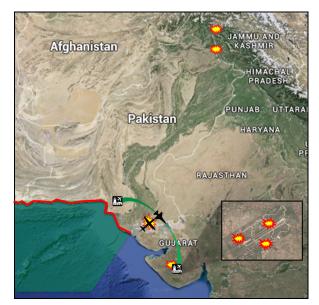


Figure 3 – Move 1 Military Actions. India shoots down Pakistani P-3 *Orion*. Pak Navy increases patrolling in EEZ. India initiates LoC firefights. Pakistan attacks Naliya air base.

During the early morning hours of September 7th, India and Pakistan place their militaries on high alert and ready their forces for contingencies. Along the Indo-Pakistani border, land forces prepare defensive positions while air units activate their forward operating bases and increase activity all along the Indo-Pakistani border. India mobilizes its IBGs and rebalances its air forces westward while also increasing surveillance in the eastern and northeastern sectors. Both countries initiate pre-deployment activity in naval ports. The Pakistan Navy announces the recall of all forces attached to CTF-151 and increases patrolling within Pakistan's EEZ. By mid-day, firing breaks out along the LoC as Indian forces conduct aggressive patrolling supported by mortar fire and heavy machine guns.

Across the globe, diplomats from India and Pakistan explain their countries' respective positions on the P-3 incident. From India's perspective, Pakistan violated the 1991 CBM under which no military were allowed within 10km of the border, and the incident constitutes just the latest example of Pakistan's pattern of aggression. In the Pakistani view, India ruthlessly shot down an unarmed surveillance aircraft operating legally within Pakistani territory, and Pakistan reserves the right to respond appropriately. Both countries deliver public warnings to their opposite's ambassador and dispatch special emissaries to the P5 nations (the United States, United Kingdom, France, Russia, and China). Pakistan sends an emissary to Afghanistan while India sends emissaries to Germany, Iran, the UAE, and Saudi Arabia.

Government spokesmen from the United States and China weigh in on the growing crisis. The US spokesman expresses concern and condemns the recent spate of terrorist attacks and violence in the region, saying that India and Pakistan need to resolve their disputes peacefully. A Chinese spokesman indicates that China values peace

Summary of Move 1 Military Actions

Sun, 6 Sept (1800hrs) to Mon, 7 Sept (2100hrs)

<u>1800, 6 Sept – trigger event:</u> Indian aircraft from Naliya Air Base shoots down PK P-3 Orion over Sir Creek area

<u>2100, 6 Sept – game starts:</u> Indian and Pakistani NCA convene to determine appropriate response

Beginning AM, 7 Sept: Indian Army increases firing across LoC

Beginning AM, 7 Sept: Pak Navy patrolling EEZ and enforcing territorial waters

1800, 7 Sept: Pak Air Force raids Naliya Air Base

- Indian losses include: (3) Su-30s, (1) Hanger, (1) C2 Node, (1) SAM site struck
- Pak losses include: (3) JF-17; (1) damaged;
 (1) crashed in Pak territory (pilot ejected);
 (1) crashed in Indian territory (pilot status unknown)

and calm in regions near international shipping routes and calls on India to cease its aggressive actions that could result in further escalation.

Both India and Pakistan request action from international institutions. At the UN, Pakistan's ambassador calls for an emergency meeting of the United Nations Security Council (UNSC) to condemn India's actions, while his Indian counterpart consults with American, British, and French representatives. The UNSC convenes in the late afternoon and receives briefings from the Pakistani and Indian ambassadors, but the meeting adjourns without a statement. Meanwhile, Indian intelligence officials call a meeting with the station heads of SAARC countries, presenting them with dossiers outlining Pakistani financial support to terrorism in violation of SAARC protocol. Times of India cites an anonymous source saying that India demanded "prompt action"

against Pakistan. Additionally, India announces its intention to file a petition at the International Court of Justice regarding Pakistan's violation of India's Air Defense Identification Zone.

Media coverage of the incident continues throughout the day. The Indian External Affairs Minister and National Security Advisor co-author an article in *Times of India* describing Pakistan's aggressive behavior, blaming the recent unrest in Kashmir on Pakistani provocateurs and recalling the August interdiction of the Pakistani "terror boat." The article includes a warning that while India remains committed to peace, it will defend itself vigorously if attacked. Multiple Indian officials echo these same talking points in media interviews. Reuters quotes a senior Saudi official who stated that Saudi Arabia rejected India's request to cease fuel deliveries to Pakistan. The official went on to condemn India's attack on the Pakistani aircraft. The Associated Press quotes a senior Russian official as saying that as a result of a request from India, Russia is reevaluating pending deliveries of lethal goods to Pakistan, but the review process would likely last "a couple of weeks."

At 1800hrs on Monday, September 7th, a Pakistani JF-17 squadron from Masroor Air Base in Karachi attacks India's Naliya Air Base, destroying three aircraft on the ground and damaging some of the base's facilities. The JF-17 squadron loses three aircraft during the attack: one damaged aircraft returns to base; one crashes in Pakistani territory after the pilot safely ejected; and one crashes in Indian territory with the pilot's fate unknown. Immediately following the airstrike, Inter-Services Public Relations releases a statement: "We were forced to take this retaliation against Indian aggression. We confined our actions to the incident in question. We do not want war or escalation, but we reserve our right to take necessary steps to defend ourselves."

Move 2 – T+29 hours to T+60 hours

Monday, September 7 (2100hrs) to Wednesday, September 9 (0600hrs)

Within hours of the attack on Naliva, India initiates a major naval and air campaign against Pakistan. At 2300hrs on September 7th, India declares a Maritime Exclusion Zone (MEZ) extending 100nm from the Pakistani coast and issues a Notice to Mariners (NOTAM) and airmen to keep clear of the conflict area. Shortly after the declaration, the Indian Western Fleet begins attacking Pakistani shipping and ports, and the Eastern Fleet sets sail from the Bay of Bengal to assist in enforcing the MEZ. At 0600hrs on September 8th, the Indian Air Force begins a large-scale offensive against Pakistani Air Bases, transportation infrastructure, military supply depots, and the Pakistan Army HQ. The Indian MEA

announces shortly after dawn that: "In response to a purely defensive act by India, Pakistan initiated hostilities by attacking our air base at Naliya. India will respond with all its might."

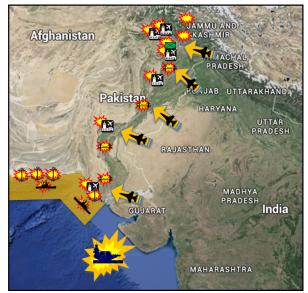


Figure 4: Move 2 Military Actions. India declares a MEZ. Firing increases along LoC. India strikes Pakistani air bases, bridges, infrastructure, and Army HQ. Pakistan severely damages INS *Vikramaditya*.

Concurrent with this statement, the government of Pakistan issues a press release saying:

The Pakistani NCA has convened to review the preparation and posture of our strategic forces. Indian aggression and the crisis on the eastern border have adversely affected our ability to prosecute the war on extremism. We remain concerned about strategic escalation. We do not want war but we will ensure that all our capabilities are employed to defend Pakistan's territorial integrity and security.

Throughout the morning, Pakistani diplomats are active at the OIC and the UN. The Pakistani Foreign Office publicly calls for an emergency meeting of the OIC, asking the organization to pass a resolution condemning Indian aggression. The OIC's permanent secretariat in Saudi Arabia meets in the afternoon and issues a resolution condemning India's broad-based aggression against Pakistan. At the UN, Pakistan's representative presses for a vote on a resolution condemning India's aggression. Two draft resolutions circulate: one drafted by the U.S. supported by the UK and France, and another drafted by China supported by the United Arab Emirates, currently a rotating member on the UNSC. By early afternoon, the UNSC issues a presidency statement condemning the violence, calling on both sides to cease military actions and to negotiate a return to the status quo ante. The UN Secretary General calls on both sides to halt military activities, noting that a large-scale war would risk the eventual use of nuclear

Summary of Move 2 Military Actions

Mon, 7 Sept (2100hrs) to Wed, 9 Sept (0600hrs)

2100, 7 Sept onward: Heavy combat along the LoC.

2300, 7 Sept: India declares MEZ (yellow) 100nm from Pakistani coast. Sustained naval combat begins; India strikes multiple Pakistani naval bases.

<u>0600, 8 Sept:</u> India initiates airstrikes against Pakistani air bases and infrastructure

By 0600, 9 Sept:

- IAF strikes bridges along the Indus.
- IAF strikes military HQs in Islamabad.
- Movement of Pak Army forces to eastern border delayed by IAF air activity.
- Pak Navy inflicts a mission-kill on the Indian aircraft carrier INS *Vikramaditya*, that returns to port.

Approximate Degradation Levels		
Asset	Pakistan	India
Air Force	15 - 20%	2 - 5%
Navy	15 - 20%	3 - 5%
Army	UNK	None

weapons.

At mid-day on September 8th, the Indian MEA conducts briefings with all ambassadors in New Delhi as well as with the media to explain the justification for and objectives of India's military campaign against Pakistan. Photos of battle damage in Pakistan accompany the joint MEA and MOD press briefings to demonstrate India's "preparedness and resolve to see the hostilities through to their end," though officials are unwilling to precisely qualify the meaning of the word "end." The Prime Minister's Office activates hotlines with major world leaders to explain that Pakistan's continued misadventures have compelled India's response.

The conflict takes a heavy economic toll by mid-afternoon on September 8th. Trading halts at the Karachi stock exchange after a 25 percent drop-off, and the Mumbai stock exchange also closes after a massive sell-off. In Pakistan, the physical movement of all goods has ceased due to Indian naval and air activity, and all airports are closed. Insurance premiums for commercial shipping are skyrocketing, even for ships

arriving or departing from Indian ports. Merchant ships have either turned back to the Persian Gulf or been diverted toward other ports in the region.

Among the growing frenzy of media reports, the news outlets in both countries report evidence of cyber-attacks. Pakistan's Water and Power Development Authority (WAPDA) states that the 50 percent decrease in normal electricity levels in Islamabad and Lahore will likely continue for the next 48-72 hours. Evidence suggests possible cyber penetration of the electrical grid's control networks. GEO News reports that the Lahore Area Control Center at Allama Iqbal International Airport was subjected to Indian cyber-attacks earlier in the day, but the source stated that the attack did not disrupt services, which continued until the eventual forced shutdown. An article on Dawn's website quotes an unnamed source from Pakistan's Askari Bank Ltd. that its networks have been heavily probed over the past 24 hours from IP addresses originating in India, but so far no loss or breach of client data or financial assets has occurred. IBN reports that the Indian MEA website has been hacked and plastered with Pakistani flags, though the source of the attack remains unidentified.

The United States and China express grave concern over the new developments in the P-3 crisis. By early evening, the White House spokeswoman announces that the Deputy Secretaries of State, Defense, and the Deputy National Security Advisor for South Asia will be attempting to travel to New Delhi and Islamabad in the next 24-48 hours. In the meanwhile, the President has called the Prime Ministers of India and Pakistan to express her concern about the hostilities and the risk of escalation. The State Department orders a non-combatant evacuation operation for U.S citizens in Pakistan and draws down embassy personnel in India while strongly recommending that U.S citizens leave India. A senior Chinese government spokesman calls on India to halt its aggression. During the afternoon, the Chinese ambassador to New Delhi delivers a note from the Chinese government expressing its very strong concern at the scope of India's military actions and warning India against any threats or actions against Chinese security and economic interests.

Naval and air combat is continuous, and hostilities significantly increase along the LoC during the evening hours. At 2200hrs, a Pakistan Navy submarine scores four torpedo hits against the Indian carrier INS *Vikramaditya*, which can no longer launch aircraft. *Vikramaditya* returns to port significantly damaged. After having been subjected to air and artillery strikes throughout the day, Pakistani forces along the LoC discover that Indian Special Forces are operating in Pakistani rear areas along the Neelum Valley. Combat continues at sea, in the air, and on land throughout the night.

By 0600hrs on Wednesday, September 9th, Pakistan's air and naval forces have suffered losses but its ground forces remain largely intact. The Pakistan Navy is approximately 80 percent operational. Several ports, including Karachi and Gwadar, have been damaged by Indian attacks but all remain operational. Pakistan's naval losses include two frigates, one *Qing*-class submarine, and various other minor combatants as well as two additional P-3 *Orions* and two *Atlantiques*. The Pakistan Air Force is also 80 percent operational. Though many air bases have suffered damage from Indian air strikes, they remain operational at varying levels of diminished capacity. Pakistan lost 60 aircraft on the ground and another 35 in counter-air operations. The Indian Air Force struck a variety of Pakistan Army command and control nodes in and around Islamabad and Rawalpindi, but losses are unknown at this time. The Pakistan Army's 11th and 12th Corps arrival on the eastern border is delayed by 48 hours. Nonetheless, Pakistan's counter-IBG brigades are fully deployed forward in anticipation of an Indian attack.

The Indian Army has raised an additional six IBGs from existing forces. The strike corps are now moving to reinforce the IBGs along the international border. Full military mobilization continues apace. The Indian Air Force has suffered 35 aircraft lost, and with the exception of *Vikramaditya*, the Indian Navy has lost only minor combatants in the preceding day's combat.

Move 3 – T+60 hours to T+108 hours

Wednesday, September 9 (0600hrs) to Friday, September 11 (0600hrs)

As dawn breaks on Wednesday, September 9th, both India and Pakistan launch limited offensives across the LoC. India attacks with two divisions north of Kargil, seeking a penetration of 4-6km to destroy the logistical support node for Siachen-based Pakistani troops. Simultaneously, a Pakistani brigade attacks into the Neelum Valley, and Pakistani troops are making concerted efforts to kill or capture the Indian Special Forces operating in their rear areas. At 0700hrs, Pakistan declares a MEZ extending 125nm from the Indian west coast as naval combat continues in the Arabian Sea and beyond. Meanwhile, India raises the alert level of its strategic forces, begins dispersal of its MRBMs and deploys its SSBN submarines to wartime patrol stations. Air combat intensifies during the morning hours and continues through the next day. As the Indian Air Force continues to strike Pakistani air bases, the Pakistan Air Force attacks Indian forces, military forces, and transportation infrastructure in and around Pathankot, successfully destroying the bridge over the Ravi River and inflicting significant damage on Indian Air Station Pathankot. A PAF strike against Indian air fields in Gujarat, however, is interdicted by the IAF and forced to return with heavy casualties. As the day's news cycle begins, the Indian government issues the following statement that government officials and pundits echo on political talk shows throughout the day:

Pakistan's military has brought upon the nation and its people unwarranted and irreparable damage and loss of life and property. India has no hostile intent, but its forces are ready to take adequate counter-action. Pakistan should realize the consequences of further escalation and desist from venturing into it.

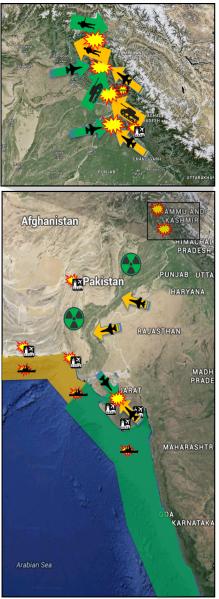


Figure 5: Move 3 Military Actions. Both countries attack across LoC. IAF strikes multiple PAF airfields, but PAF strikes in Gujarat are thwarted. Pakistan declares MEZ. Pakistan announces: "de-mated status has been removed."

Note: nuclear symbols are only intended to convey elevated readiness. They do not denote specific locations On the diplomatic front, Pakistan intensifies its efforts to get an immediate decision from the UNSC condemning Indian aggression. Pakistan's UN Ambassador makes an impassioned speech calling upon India to desist from further acts of aggression "which may lead to the use of nuclear weapons." Meanwhile, Pakistan's envoys to the P5 members are requesting that these countries pressure India to cease its hostilities as these actions may lead to nuclear exchanges. ISPR issues a public warning to India to desist from further acts of aggression, and Pakistan recalls its ambassador from India.

Around noon on September 9th, the Prime Ministers in both countries address their nations. The Indian Prime Minister's Office releases the following statement:

India has no intention to seek a military objective other than putting an end to Pakistan's pattern of provocative actions including terrorism directed against India. Indian forces will continue operations until such time as Pakistan terminates its military action which it started with the intrusion of the P-3 Orion and the attack on Naliya AFS. India cautions Pakistan to desist from even thinking of any disastrous escalation.

Summary of Move 3 Military Actions

Wed, 9 Sept (0600hrs) to Fri, 11 Sept (0600hrs)

Ground actions:

- India and Pakistan launch nearsimultaneous offensives in different sectors along the LoC.
- Pak launches an offensive east of Sialkot to sever Hwy 1-a, supported by air & artillery strikes

Air actions:

- IAF strikes multiple PAF airfields.
- PAF airstrike in Gujarat thwarted by IAF.

Naval actions:

- Pak declares MEZ 125nm off Indian west coast.
- Naval combat continues with heavy Pak losses and moderate Indian losses.

Strategic forces:

- Prior to PM's national address, Pakistan announces that "de-mated status has been removed."

Degradation Levels		
Asset	Pakistan	India
Air Force	- 50%	- 10%
Navy	- 60%	- 10%
Army	UNK	UNK

Around the same time, Pakistan's ISPR announces that "the NCA has removed demated status for Pakistan's strategic forces and directed some assets to disperse." Shortly thereafter, Pakistan's Prime Minister addresses the nation from the floor of parliament:

The Pakistani state is fully resolved to defeat Indian aggression. The society is united behind this effort. The full military capabilities of the state will be leveraged in the interest of national defense. The international community has a responsibility to prevent escalation to another dimension of warfare.

At 1800hrs, Pakistan launches a major ground offensive in the Sialkot sector across the border with the aim of cutting off Highway 1a at Samba. ISPR characterizes the offensive as an act of proactive self-defense intended to preempt an imminent Indian offensive. Over the next 12 hours, the Pakistani thrust achieves an eight-kilometer penetration into Indian territory before Indian forces regroup and counterattack around 0600hrs on Thursday, September 10th. Both sides attempt to commit reinforcements as the air battle rages overhead, but refugee flows are inhibiting operations.

The Indian and Pakistani media continue to report the latest developments. GEO News and

other Pakistani news stations begin 24/7 news coverage entitled: "PAKISTAN UNDER ASSAULT." An article appears on the Al Jazeera website with grisly photos of two Indian Special Forces soldiers who were killed in the Neelum Valley. Citing an unnamed senior MOD official, CNN-IBN reports that a large number of Indian landing ships are being loaded with supplies and troops in Porbandar, portending a potential Indian amphibious invasion of Pakistan. The MEA website is temporarily taken offline following hacking and defacement.

Late in the evening on September 10th, the UN Security Council passed a unanimous resolution calling on both India and Pakistan to cease hostilities. China initially opposed the resolution but joined the consensus shortly after Pakistan launched its ground offensive into India. American and Chinese diplomats are active in the region. The Chinese ambassadors in Islamabad and New Delhi deliver private messages to the Indian and Pakistani governments informing them that the conflict needs to end before it threatens wider interests. Two groups of U.S. envoys arrive in Islamabad and Delhi to facilitate discussions between the U.S. President and the Prime Ministers in both countries and to assist in parallel contacts through military and diplomatic channels.

By morning on Friday, September 11th, the economic consequences of the on-going crisis continue to mount. No civilian or commercial aviation or shipping is moving in or out of Pakistan, and most air carriers have ceased operation into and within India. Insurance premiums remain extremely high for commercial shipping in both India and Pakistan, though some ships have continued to approach India's southern and eastern coasts. The price of oil has jumped 5 percent in reaction to shipping disruptions. The Karachi and Mumbai stock exchanges remain closed. Islamabad and Lahore continue to experience electricity distribution challenges but grid control networks appear to be broadly functional. Pakistani cities begin to experience unrest due to the scarcity and rising cost of petroleum products as the Pakistani oil reserves held near naval facilities have been destroyed. The Mumbai Air Traffic Control Center has been experiencing network anomalies causing degradation in handling volume. Since the initial investigations revealed unusual network activity linked to IP addresses in Pakistan, the Indian media is speculating that the anomalies are the result of an offensive cyber-attack against Indian air traffic control. As a result, some analysts are questioning the safety of air travel in India.

At 0600hrs on Friday, September 11th, the military situation remains tense. Massive armor formations are locked in heavy combat at the site of Pakistani penetration opposite Sialkot, and intense combat continues along the LoC. Pakistan has lost 100 tanks, 75 armored personnel carriers, and 8 aircraft and suffered heavy infantry and civilian casualties as a result of the ground offensive. India has lost 50-60 tanks, 20 Casspir mine-protected vehicles and other military vehicles, and has also suffered heavy infantry and civilian casualties. India's strike corps, however, are beginning to take positions in close support of the forward-deployed IBGs. India's air campaign has taken a heavy toll on the Pakistan Air Force, which has been degraded by 50 percent. The air environment is now more permissive for IAF, which can achieve local air superiority at will. At sea, India has shifted its main effort to anti-ship and anti-submarine warfare, but Pakistani counteraction has inflicted losses of two SSKs, two minor combatants, and one merchant vessel sunk on approach to Mumbai harbor. The Pakistan Navy, however, has lost a further six FFGs, two *Agostas*, and several minor combatants. The Pakistan Navy is now only 40 percent operational.

Move 4 (Open Adjudication) -T+108 hours

Friday, September 11 (0600hrs) and beyond

Beginning on Friday, September 11th, India intended to launch a four-pronged offensive against Pakistan. In the north, India would reinforce its cross-LoC operations to isolate Pakistani forces on the Siachen Glacier. At the site of the Pakistani intrusion opposite Sialkot, Indian forces would attack to "restore the sanctity of the international border." All along the international border. Indian forces would attack with the aim of severing Pakistan's north-south lines of communications at the Indus River south of Fort Abbas. Finally, in the far south, India would launch an amphibious landing from Porbandar against the Pakistani coastline as a feint to draw defensive forces away from the international border. To support the operation, India intended to conduct offensive cyber operations against Pakistan's energy and telecom sectors as well as Pakistan's military and strategic command and control systems in order to create chaos, disrupt operations, and discover the locations of Pakistan's nuclear assets. The Indian Navy would continue to blockade the Pakistani coast and attack Pakistani shipping while defending Indian shipping against Pakistani attacks, and the Indian Air Force would continue to support both land and sea operations. The Ministry of Defense would announce that "India's deterrence is in place," deploying forty percent of its IRBM and MRBM strategic forces to operational locations. India's SSBN submarine would remain on patrol.

India would justify its offensive by demonstrating that while India has shown restraint in the face of Pakistan's continued irresponsibility, "India will [now] do whatever it takes to protect its territorial integrity and sovereignty." At the UN, India's representative would tell the UNSC that "Pakistan has threatened the use of nuclear weapons; by launching a cross border offensive [opposite Sialkot, during Move 3], Pakistan has revealed the true purpose of its nuclear weapons: to further

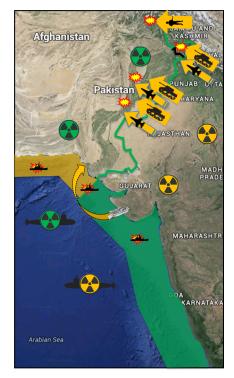


Figure 6: Move 4 Military Actions.

Pakistan consolidates gains and deploys to defend the border. India launches four offensives:

- 1. Push deep across the LoC.
- 2. Expel Pakistani salient and "restore the sanctity of the IB."
- 3. Attack across the IB to cut Pakistan's lines of communication.
- 4. Conduct amphibious landing (feint).

Strategic forces are operational: 40 percent in India; 100 percent in Pakistan; SSBNs at sea.

Note: nuclear symbols are only intended to convey elevated readiness. They do not denote specific location.

militarism." India would convince the United States, France, Russia, and the United Kingdom not to allow the UNSC to "encourage Pakistan's misadventure." The Ministry of External Affairs would inform China's Ambassador to India that "peace and stability are threatened by continued encouragement of Pakistan." The Prime Minister would announce that "India has given Pakistan every opportunity to end this conflict, but Pakistan has chosen to escalate and violate the international boundary. The onus is now on Pakistan to de-escalate." In the media, India would reiterate its consistent restraint, release photos of battle damage in Pakistan, and point out that Pakistan has "brought destruction on its populace under the cloak of proactive self-defense." India would recall its ambassador to Pakistan but nonetheless activate backchannel communication links to maintain some level of contact. Pakistan intended to consolidate its territorial gains and defend Pakistan against further attack, including from amphibious landings in the south. All forces would be deployed in forward battle locations to either defend against attack or launch their own offensive if required. The Pakistan Team noted, however, that the adverse air environment influenced their decision to consolidate rather than expand their bridgehead opposite Sialkot. To complicate an Indian attack, Pakistan intended to conduct offensive cyber operations against India's finance sector and military C2 in

Summary of Move 4 Military Actions

Fri, 11 Sept (0600hrs) onwards

Pakistan consolidates gains and deploys to defend the border.

India launches four offensives:

- 1. Push deep across the LoC.
- 2. Expel Pakistani salient and "restore the sanctity of the IB."
- 3. Attack across the IB to cut Pakistan's lines of communication (offensive planned for four days).
- 4. Conduct amphibious landing on Pak coast (intended as feint).

Both MEZ remain in effect; naval combat continues.

Strategic forces are operational:

- India: 40 percent of MRBMs & RBMs deployed at operational locations.
- Pakistan: all forces deployed in operational mode.
- Both: nuclear-armed submarines

order to create confusion and induce paralysis. Additionally, Pakistan intended to deploy all strategic assets in operational mode, leaving its SSBN submarine out on patrol. Pakistan would announce that its forces have "made sufficient gains against India and taken strong measures against Indian ingresses. Pakistan welcomes the UNSC resolution and expects that India will respect the resolution and cease its offensive actions." At the UN, Pakistan also presses for a resolution of the Kashmir dispute in accordance with the UNSC resolutions of 1948.

The open adjudication session prompted debate on India's interpretation of events, unintentional escalation, and Pakistan's nuclear redlines. First, the Pakistan Team questioned why, throughout the crisis, the Indian Team consistently listed proxy conflict as a reason to take action against Pakistan. The Pakistan Team believed that in the specific instance of the P-3 incident, Pakistan was the aggrieved party and other issues should not be brought into play. Moreover, the Pakistan Team stated that the real issue went beyond proxy conflict to the Kashmir dispute originating in 1947. The Indian Team responded that in the context of the broader scenario, they viewed the P-3 border violation as a "continuation of a series of

crises" involving Pakistani misbehavior, including proxy conflict, as described in the scenario brief. The Indian Team pointedly noted that the NCA guidance specifically tasked them with "punishing Pakistanis...for the cumulative negative effects felt by India from terrorist attacks," and thus they could not avoid bringing the issue to bear. The Indian Team felt that while the trigger event was not a sufficient "Sarajevo event" to realistically provoke all-out war with Pakistan, India would nonetheless pursue a more subtle form of punishment campaign against Pakistan in such a scenario. The Pakistan Team reasoned that the lasting solution was not a punishment campaign but the resolution of the Kashmir dispute, which they had planned to pursue during Move 4.

Next, the teams discussed their efforts to pursue escalation dominance, summarized by the Indian Team as: "we always plan for the worst and then take the appropriate response." During Move 1, the Pakistan Team attempted to control escalation by limiting their retaliatory attack to a "response in kind" against Naliya Air Base. After India's air and naval campaign against Pakistan in Move 2, Pakistan again attempted to respond "in kind" during Move 3 by attacking across the "working boundary" opposite Sialkot (see Figure 5) to put India on the defensive and gain leverage for war termination. The Indian Team, however, viewed this attack as escalatory for four reasons: 1) it crossed the international boundary (see Figure 7); 2) it contradicted Pakistan's demands at the UN: 3) it targeted a "sensitive area," Hwy 1a; and 4) it coincided with China's support for the UNSC resolution. The Indian Team concluded that Pakistan was conducting a major offensive with Chinese endorsement and that India was therefore no longer "constrained" by the international boundary. Thus, during Move 4, India attempted to contain escalation by responding with a punishing attack against the Pakistan Army, which, in their words, "remained unrestrained with aggressive intentions." The Pakistan Team noted that such an attack would most likely lead to "a new generation of warfare," implying the use of strategic forces.

Finally, the teams discussed the potential for escalation into the nuclear domain. The Control Team questioned whether or not India considered Pakistan's nuclear redlines in planning



Figure 7: Indo-Pak border. Red = disputed Green = international boundary Yellow = working boundary Purple = Line of Control India and Pakistan have different interpretations of the border near Sialkot, as shown in the dashed box above.

Note: map not drawn to scale – locations are approximate.

its Move 4 offensive across the international border. The Indian Team made three points. First, they noted that the crossing of Pakistan's "alleged nuclear threshold" had not yet produced a response. Second, they specified that their attack was intended not to take territory but to punish the Pakistan Army. Thus, the territorial threshold would not be crossed. They stated that they would "calibrate [their] response and continually reassess to see about crossing nuclear redlines." Third, they noted that they viewed Pakistan's Hatf-IX *Nasr* battlefield nuclear weapons not as strategic systems but "simply as multiple launch rockets that will be targeted." As noted earlier, the Pakistan Team stated that if India pursued its planned offensive for Move 4, the conflict would mostly likely escalate to the next level.

Vignette 1 – Nuclear Detonation

Control presented the players with the following hypothetical event:

Two hours ago, as Pakistan deploys its nuclear forces, you begin receiving reports of a nuclear detonation in Pakistan in the vicinity of intense Indian aerial bombardment. Bolstering the battlefield reports, an Indian pilot reports a successful PGM attack against what he described as a Pakistani ballistic missile transporter erector launcher (TEL). He reported seeing an exceptionally large post-strike secondary explosion and what he referred to as a "fireball in the shape of a mushroom cloud."

Control asked the players to consider their response to the situation based on the following questions:

- 1. How does this event change your threat perceptions?
- India Team Only: To what extent are you concerned that this event will precipitate ۲ nuclear escalation? Does this constitute first use? What if Indian Special Forces were operating in the area and were killed as a result of the detonation?
- Pakistan Team Only: How will this affect your ongoing deployment operations? Do you **Pakistan** Team Only. How will this affect y and consider this event an impingement on your nuclear redlines?
 - 2. What are your consequence management considerations?
 - 3. How would you determine the exact circumstances (e.g. deliberate use, accidental detonation, or unclear) behind how the nuclear explosion occurred? Does this change how you react?
 - 4. What are your immediate political and military reactions to this event?
 - 5. In the immediate aftermath of this event, what messages would you send to (1) friends/partners/allies, (2) your domestic population, and (3) your adversary?

The nuclear detonation did not seem to affect either team's threat perceptions or initiate an immediate military response. The Indian Team stated that they would "look at cease fire options" only in the event of "unnecessary escalation." India's first reaction would be to inform Pakistan perhaps through direct PM-to-PM communication - that India had "no intention to target Pakistan's strategic assets." For the Pakistan Team, the event "would not alter our deployment patterns" except to require that strategic assets shift to alternate locations and improve security. The Pakistan Team responded favorably to India's suggestion of a direct PM to PM communication. They further noted that Pakistan would determine the true circumstances of the detonation through a direct site inspection. Pakistan's "immediate concern" would be informing its public, after which it would consider how to inform the international community, if it chose to do so. Neither side felt that the detonation has crossed a nuclear threshold at this stage, though the Pakistan Team noted that the results of their investigation could affect their ultimate response.

The teams identified a need for improved consequence management mechanisms beyond the DGMO hotline. Pakistan argued that the incident invoked the 2007 agreement⁸ between India and Pakistan that requires notification of a nuclear accident, but India argued that this agreement

⁸ This agreement refers to the "Agreement On Reducing The Risk From Accidents Relating To Nuclear Weapons" between India and Pakistan, signed in February 2007. See http://www.stimson.org/research -pages/agreement-on-reducing-the-risk-from-accidents-relating-to-nuclear-weapon/.

does not apply to wartime incidents. The Indian Team felt that while the 2007 agreement has proven to be a "skeleton with no flesh," it could "open the door wider" for a more comprehensive agreement between the two countries that could address this type of situation. In the Indian Team's perception, the world does not believe that India and Pakistan can "handle these [nuclear] weapons," so a comprehensive agreement to avoid escalation by communicating accidental nuclear detonations would prove that "we can handle this."

Both teams felt that the example of an accidental detonation was unlikely and unrealistic. The Indian Team stated that in the case of a real event, Pakistan would accuse India of either a deliberate attack or a sabotage mission. The Indian Team reasoned that Pakistan would be motivated to "pin the detonation on its adversary" because an accident would cause "Pakistan to lose credibility in its deterrence." The Pakistan Team dismissed India's reasoning as an "immature" assessment of Pakistani strategic thinking. Both teams felt that accidental nuclear detonations were extremely unlikely because they assess their respective arsenals to be safe from detonation. Both teams engaged in an extensive debate on U.S. standards regarding one-point safety.⁹ Neither team seemed prepared to countenance such an event or to respond to either its physical effects or the political consequences.

Summary of Vignette Responses

Figure 8 (right):		Pakistan	India
Summary of Nuclear Detonation Vignette. Overall, both sides seemed unprepared for accidental detonations. However, both sides agreed that they need to improve bilateral agreements such as the 2007 CBM to handle such contingencies. Neither side wants to be labeled as "irresponsible" by the	Action	 Continue deployment of strategic forces; conduct survivability moves only. Find out what happened through physical inspection, then formulate response May send different messages to different audiences: domestic, int'l, Afghanistan, and India 	Assure PK that act was unintentional: - "No need for unnecessary escalation" - "Look at ceasefire options."
	Perception	<u>Disbelief – can 't happen</u>	<u>Disbelief – can 't happen</u> However, Pakistan would blame Indian sabotage / deliberate attack to maintain the credibility of Pakistan's deterrence.
international community.	Safety Concerns	<u>None – we are 1-pt safe</u>	<u>None – we are 1-pt safe</u>

	Pakistan	India	Figure 9 (left): Summary
Goal	Continue fighting to achieve favorable position for bargaining	Continue fighting to degrade the Pakistan Army	of War Termination Vignette. Overall, the
Conflict termination	Implement UNSC ceasefire	 Determine objectives Agree to UNSC ceasefire if objectives met 	positions are mutually exclusive. India does not consider the ramifications
Concessions	Unknown – use gains for bargaining	None – impose conditions	or consequences of defeating a nuclear-armed
Reduce Future Crises	Seek conflict resolution once and for all (Kashmir, Siachen, etc.)	Defeat and degrade Pakistani armed forces	Pakistan. Pakistan believes that terrorism is
Domestic Populace	Victory regardless: <i>Pakistan stood up against a superior force</i>	 Convince populace that PK has been sufficiently punished / degraded Deny PK claims to victory in any form 	insufficient as a casus belli.

⁹ "One-point safety" means that the likelihood of an accidental nuclear explosion is smaller than one in one million. For a concise definition of one-point safety, see http://www.dawn.com/news/1178617.

Vignette 2 – War Termination

Control asked the players to consider a war termination plan in the event that their respective governments accept the UNSC resolution calling for a cessation of hostilities. Control asked the players to consider the following questions:

- What are the critical military, diplomatic, and informational issues for your country in:

 a) transitioning from combat operations to a ceasefire, and then
 b) negotiating a broader resolution to the crisis?
- 2. What goals/gains would you seek to preserve in any transition to war termination?
- 3. What are areas where you would be willing to provide concessions to the other side in order to facilitate a negotiated settlement?
- 4. What measures would you seek in any settlement that would decrease the chances for future crises?
- 5. How would you 'sell' the cessation of hostilities to your respective domestic audiences?

The Pakistan Team anticipated a UN-mandated ceasefire followed by bilateral negotiations between India and Pakistan. Pakistan would use its territorial gains during the bargaining process to develop a framework that would be mutually agreeable for both countries. To decrease the chances for future crises, Pakistan would seek international mediation on the Kashmir dispute, with all Indian forces withdrawing from Kashmir south of the Beas River. Pakistan would count the ceasefire as a victory because the Pakistan military successfully stood up against the Indian military.

The Indian Team, on the other hand, stated that they would not accept the UN ceasefire unless its terms addressed all of India's war termination objectives. Furthermore, India would not accept any ceasefire with Pakistan unless Pakistan similarly accepted India's ceasefire terms in total. To achieve a victory, India would need "tangible gains," including but not limited to Pakistani concessions concerning the use of proxies or some sort of territorial concessions along the LoC. India would ensure that the Pakistan Army was sufficiently defeated so that Pakistan could not claim a victory in any form.

The teams debated the UN's role in conflict resolution as well as the negotiating process. The Pakistan Team felt that the Indian Team was disregarding the effects of international pressure as well as the UN's ability to enforce a ceasefire under Chapter 7 of the UN Charter.¹⁰ The Indian Team responded that in their view, Indo-Pak conflicts recur because previous wars were never ended decisively. The Indian Team felt that Pakistan "keeps coming back again and again and reinterpreting [past conflicts] to Pakistan's advantage." For India, conflict will only end when Pakistan accepts war termination conditions that do not allow it to revisit the issue. Pakistan argued that "the end of hostilities is a bargaining process, not the imposition of conditions." India responded by saying, "that is where we disagree."

¹⁰ Chapter 7 of the UN Charter governs peace enforcement operations, which can include the use of force under specific rules of engagement. For additional information, see: http://www.un.org/en/documents /charter/chapter7.shtml.

Key Findings

As noted in the Introduction of this report, the 2013 TTX generated four primary conclusions:

- 1. In a crisis, the default for both sides is an assumption of intentional, malicious action. These entrenched threat perceptions increase the likelihood of active conflict.
- 2. India's conventional force advantage creates an incentive to use maximum force quickly to achieve a quick, impressive victory before international intervention forces a cessation of hostilities.
- 3. Limited war for India is a full-scale war for Pakistan. While India argues that it can calibrate an offensive and stop short of redlines, Pakistan cannot trust that India would restrain itself from existential destruction, and thus remains willing to exercise all options.
- 4. As a limited war escalates horizontally and vertically, pressure to lower the nuclear threshold grows, in part as a result of the operational challenges posed by tactical nuclear weapons. War termination also becomes difficult, as both sides seek to consolidate gains and minimize losses so as to improve their post-conflict bargaining position.

These four initial conclusions were tested and ultimately reinforced through the second TTX. It seems the intervening years have done little to ameliorate these dilemmas. This second iteration further illuminated the strategic dilemma between India and Pakistan and illustrated the difficulty of escalation control during a "limited war." *SASW 2.0* added nuance and depth to our understanding of these dynamics. From the *SASW 2.0* game, we add four new major findings.

Home Alone Syndrome

Absent a designated political leader, the Indian Team was inclined toward a heavy-handed military response to the crisis, which we have dubbed "home alone syndrome." During Move 2, for example, the team recommended a major offensive across the international boundary (IB) in response to Pakistan's retaliatory strike against Naliya Air Base during Move 1. The Control Team, representing the National Command Authority (NCA) for both the Indian and Pakistani teams, rejected this option in favor of a more measured response that better simulated Indian civil-military relations. However, following a Pakistani offensive adjacent to Sialkot during Move 3, Control allowed the Indian Team to go ahead with the planned offensive during Move 4. When asked to consider whether this risked crossing Pakistan's stated territorial nuclear redlines, the Indian Team stated that they understood it was a risk, but that they would "calibrate" their offensive and "continually reassess" the situation to prevent the conflict from going nuclear.

These observations lead to two conclusions, one concerning civil-military relations in India and one concerning Indian strategic thinking. Typically, the Indian political authority exercises full control over the military and has historically been unwilling to devolve authority to its generals except in extreme circumstances. We conclude that Indian civil-military relations were not realistically demonstrated within this game, as real-world Indian political leaders would have been unlikely to allow the degree of freedom the military received in-game. Further, during the limited window granted for military operations, there was active inter-service competition for primacy, with only a limited attempt to synergize the three services' efforts. These observations

reinforce the standard narrative about the origins and rationale for India's Cold Start doctrine.¹¹ This problem of the politicians seeking punishment and deterrence of future provocations and the military seeking destruction has been identified in several TTXs.

More ominous, however, was the Indian military's apparent lack of concern for the potential nuclear consequences of their choices. For example, by the fifth in-game day, India had reduced the combat efficiency of Pakistan Air Force and Navy by 50 percent and 60 percent, respectively. Despite this extreme destruction, when political pressure for de-escalation and war termination mounted, the Indian military resisted because the Pakistan Army and Pakistan's nuclear weapons were still intact. There was little consideration of Pakistan's likely red lines, and Indian military players indicated that they would not allow Pakistan's nuclear capability to hamper their military objectives.

Nuclear Signaling was Ineffective

The results of this exercise suggest that mutually assured destruction is insufficient to limit escalation in a war in South Asia. Despite the potential for countervalue strikes or the use of tactical nuclear weapons, India implemented a Cold Start campaign. As the crisis intensified over the course of the game, it became clear that de-escalation was unlikely. Facing what it perceived to be an existential threat, Pakistan needed to signal the risks of continuing military operations in order to establish intra-war deterrence.

Aside from the early deployment of nuclear-armed submarines to unspecified holding areas, both sides kept strategic weapons put away and out of the environment until Move 3. India avoided nuclear signaling because it is incentivized to keep any conflict with Pakistan at a conventional level.

Pakistan kept its nuclear weapons off the battlefield and out of sight in order to signal this was a purely conventional matter with India. By Move 3, however, it became clear that if Pakistan waited much longer, it would be too late to deploy its tactical nuclear weapons for any strategic or operational effect. As noted earlier, Pakistan's dilemmas regarding optimal deployment and employment parameters for TNW are very similar to the challenges NATO faced in fielding nuclear weapons during the Cold War on the Central Front in Germany. The wartime articulation of command and control between the conventional and nuclear domain and the challenge of ensuring field security during conflict is a significantly different problem set than that of managing arsenals in peacetime storage. This is the Goldilocks Dilemma: when is it "just right" to deploy TNW? During this TTX, Pakistan waited a remarkably long time—what some might consider to be too late.

¹¹ For a comprehensive overview of the Cold Start doctrine, see Walter C. Ladwig III, "A Cold Start for Hot Wars? The Indian Army's New Limited War Doctrine," *International Security* 32, no 3 (Winter 2007/2008).

Ambiguous Nuclear Thresholds Lack Credibility

As noted above, the Indian Team did not accept Pakistan's ambiguous nuclear thresholds as credible: Pakistani deterrence failed by Move 2, and in our assessment the Indian Team had crossed three of Pakistan's alleged nuclear redlines by Move 4.¹² By the end of Move 2, Pakistan faced substantial economic hardship as a result of India's maritime exclusion zone (MEZ), attacks against ports and airfields, and cyber-attacks against the Pakistani electricity grid. By the end of Move 3, the Karachi stock exchange had closed, and Pakistani citizens had begun rioting over skyrocketing oil prices. Most significantly, Pakistan's naval and air forces verged upon combat ineffectiveness at over 50 percent degradation. By the end of Move 4, India had captured significant swaths of territory between the international boundary and the Indus River, and the Pakistan Army was locked in an intense defensive fight all along the border.

The Indian Team seemed to believe that Pakistan's nuclear thresholds were associated only with unacceptable territorial gains or destruction of the Pakistan Army, yet they were willing to cross these thresholds in a "calibrated" manner to achieve war termination on their own terms.

The Pakistan Team's actions seemed to confirm these perceptions. Faced with a spiraling economic situation and heavy losses incurred by their navy and air forces, the Pakistan Team showed significant restraint by not deploying nuclear weapons until 100 hours into the unfolding of military operations. Indeed, the nuclear weapons systems were not mated until Move 3, with a public announcement that the "de-mated status [of the weapons] has been removed,"—long after the economic and destructive thresholds had presumably been crossed.

Pakistan continues to pursue a strategy of nuclear ambiguity because this strategy gives them the greatest flexibility and, in their assessment, the greatest amount of deterrence vis-à-vis India. One team member noted that in retrospect, Pakistan would most likely have deployed its strategic systems earlier than Move 4, given the levels of physical and economic destruction and the losses inflicted upon the Pakistani naval and air forces.

Through this exercise, it becomes clear that Pakistan runs the risk of deterrence failure at two levels: prewar deterrence and re-establishing deterrence in the midst of conflict. The breakout of conventional war itself is the first level of deterrence breakdown. We should not read too much into this initial failure, of course; deterrence failure at this level is, in part, an artifact of the game's structure. The objective of the game was to explore conflict escalation dynamics rather than conflict prevention mechanisms, and thus did not offer the players the option of avoiding a militarized response to the initial trigger event.

The real challenge for Pakistan, however, is to establish intra-war deterrence. The Indian Team seemed unconvinced by Pakistan's assertions regarding first use of tactical nuclear weapons, and appeared willing to risk their use. By the time India were to complete its limited war objectives, however, Pakistan's position would be substantially degraded, with little hope that its nuclear weapons could salvage the conflict.

¹² In 2002, the then Pakistani Strategic Plans Division (SPD) Director-General Lt. General Khalid Kidwai listed four general conditions that could elicit a Pakistani nuclear response: territorial occupation; armed forces degradation; economic strangulation; and domestic destabilization. See Interview of Pakistan's former Director-General of the Strategic Plans Division, Khalid Kidwai, by the Landau Network-Centro Volta in February 2002, available at http://www.pugwash.org/september11/pakistan-nuclear.htm.

Non-Military Options and Political Solutions Remain Elusive

South Asian security experts are still exploring the application of new instruments of statecraft. Throughout the conflict, both teams emphasized kinetic military action in their responses to the trigger event and in-game moves. The other elements of national power—diplomatic, informational, and economic—were incorporated as afterthoughts or were meant as support for the military actions. Unsurprisingly, India was more inclined to use soft power tools than Pakistan. There were notable attempts to leverage India's market position to create economic hardship for Pakistan, such as approaching Middle Eastern countries to request an oil embargo against Pakistan. As a smaller, less economically powerful nation, Pakistan is limited in its ability to be proactive by its lesser clout in the system. The Indian Team was also more inclined to apply cyber tools. Neither side developed or exercised new ideas for diplomatic action.

There are several possible reasons for the de-emphasis of so-called soft power tools. The first is simply a lack of familiarity with the options. Previous games have focused solely on military actions, and the introduction of the full DIME spectrum and the additional tasks associated with these new tools may have been overwhelming for the players. It is equally possible, however, that there simply are not many coercive, non-military tools available to India and Pakistan, particularly not in a militarized crisis situation. The rapidity with which conflict escalates complicates traditional diplomatic efforts, which only underscores the need to have conflict de-escalation mechanisms in place before a crisis occurs.

Reliance on External De-escalation

India and Pakistan do not have a strategy for war termination or de-escalation beyond the intervention of external powers. In keeping with historical precedent, Pakistan wanted early international intervention to prevent escalation. Throughout the conflict, the Pakistan Team made it known that international agencies and actors, particularly the United States and the P5, would be sought as intermediaries. Nevertheless, there was a palpable frustration in the Pakistan Team because they believed that they were the aggrieved party but that nobody would understand or take their side, with the notable exception of China. This lack of reliable allies has led Pakistan to believe that they must go it alone—hence the reliance on nuclear threats. Little consideration was given to the possibility that the international community may not have much leverage to convince either side to cease hostilities in the short time before the conflict reaches a nuclear threshold.

Similarly, so long as the Indian Team's punishment campaign was in effect, few options were considered for bilateral communication or negotiation with Pakistan. Once achieved, India desired the international community to convince Pakistan to cease hostilities on terms favorable to India. Here too there was no acknowledgment that the international community may be unable to act quickly and decisively to prevent further escalation.

War Termination Vignette

By Move 4, each side had committed to territorial gains beyond the current LoC and IB. Each side decided that these gains would be bartering leverage for eventual war termination negotiations. However, beyond the return of territory taken during the war, neither side could agree to terms that would satisfy the other. The Indian Team was committed to terminating the

war on terms that would ensure Pakistan understood it was defeated, including significant attrition of ground forces in addition to the existing destruction of the air and naval forces.

Even the return of territory was problematic, especially regarding the changes to the status quo along the LoC. The Indian Team stated its intention to keep any favorable gains along the LoC despite whatever concessions were made to cease hostilities. To the team, this additional land was simply a return of Indian territory to its rightful place, and they were unwilling to forfeit it. Meanwhile, the Pakistan Team was determined that the terms of war termination must be sellable to their domestic audience as either significant gains or at least as a marginal victory—including no change to the status quo along the Line of Control.

Conclusions and Next Steps

Naturally, there are numerous important questions left unanswered by this workshop. What levers does the United States or the P5 have in a conflict of this nature? What is the role of the international community? To what extent are the dynamics seen in *SASW 1.0* and *SASW 2.0* reflective of real policy and doctrine, and to what extent are they player preference? Future iterations of the *South Asian Stability Workshop* series should incorporate additional checks and balances to better reflect Indian civil-military relations, though short of designating a team player to act as Prime Minister, the current mechanism of assigning the Control Team the additional duty of National Command Authority may still be the best option. Another potential avenue is to incorporate the United States and China as player teams. While the Control Team has portrayed these countries as neutral, a real crisis would certainly draw them in, and it would be worth exploring how international involvement affects the India-Pakistan dynamic.

Nevertheless, certain dynamics are unlikely to change, even with the addition of third parties. There is a clear mismatch of doctrines and instruments between Pakistan and India, and there is an unwillingness to take the other party's threats seriously. Both sides have adapted Thomas Schelling's "threat that leaves something to chance" to a South Asian context, and both engage in risk manipulation strategies in order to secure the advantage before international intervention. This process resembles a nuclear game of "chicken" as both sides push each other to the brink.

Both sides seemed concerned with overturning traditional perceptions. For Pakistan, the message was "we're not as crazy as you think we are." They showed remarkable, perhaps incredible, restraint at the conventional and nuclear levels, and sought a tit-for-tat dynamic. For India, the message was "we're not as benign as you think we are." This may have been driven in part by Home Alone syndrome, but may also have been an effort to underscore India's willingness to use punitive force despite the threatened consequences.

The problem today and for the near future is that in order to avoid nuclear catastrophe, both sides must fight a carefully-calibrated plan; however, the only tools available are blunt instruments that are incapable of meeting the demand for strategic precision. Economic, informational, and cyber warfare are poorly understood. This is where the idea of "victory" under the nuclear overhang becomes very risky. So long as it has its strategic forces and army intact, Pakistan is unlikely to accept imposed conditionality from India, and so long as Pakistan's army and strategic forces remain secure, India is unlikely to unilaterally cease hostilities. Both sides would rather fight it out.

Appendix A: Military Modernization Chart

This chart provides a summary of military advances up to 2020 as provided to the players.

	India	Pakistan C
Summary	Restructuring defense establishment and modernizing forces rapidly.	Modernizing forces but at a slower pace than India.
Land	 4 Integrated Battle Groups (IBGs)* within the pivot corps deployed against Pakistan Increased mobility of mechanized and armored forces (T-90s) One infantry division improved with F-INSAS 	 Mechanized forces deployed for rapid mobilization against Indian IBGs
Air	 Improved rotary wing capability: Attack (Apache Longbow) Transport capability (<i>Chinook</i>) Increased number of multi-role fixed-wing aircraft – French <i>Rafale</i> 	 Added 12 JF-17 squadrons Added 2 J-10 squadrons
Sea	 Greater blue water capability One additional aircraft carrier (2 total) 	 Power projection remains limited 1 Agosta submarine with nuclear cruise missile capability (500km)
ISR	Strengthened Army communicationsELINTAWACs	 Real time collection remains limited Improved UAV capability 7 P-3 <i>Orion</i> aircraft (some located at Gwadar Naval Base Enhanced AWACs
Strategic	 Nuclear triad complete with one operational SSBN (Arihant) Increased long-range strategic capability focused on IRBMs and ICBMs. Indigenous BMD point defense capability (additional satellites and 6 interceptor batteries, 3 each in New Delhi and Mumbai) 	 Significant increases in plutonium- based fissile material production Centralized C2 of nuclear forces Improved integration of conventional and nuclear forces Added SRBMs Operational Hatf-9 (<i>Nasr</i>) batteries integrated into Pakistan Army mobilization Increased Hatf-8 Ra'ad (ALCM) and Hatf-7 Babur (LACM) Added Hatf-10 (SLCM)

Figures are 2020 *estimates* and were derived from various open studies, including IHS Jane's, IISS *The Military Balance: 2013*, and other open sources.

Appendix B: National Command Authority (NCA) Guidance

	India	Pakistan 💽
Purpose	Punish Pakistan's military/government apparatus for the cumulative negative effects felt by India from terrorist attacks emanating from Pakistan and compel Pakistan to relinquish use of proxies as an instrument of policy.	Punish India for the cumulative negative effects of India's ISR "blinding" campaign and to deter such action in the future.
Method	Employ diplomatic, information, milit power in a decisive, coordinated and s	ary, and economic elements of national upporting fashion.
Endstate	Pakistan has relinquished use of proxies as an element of national policy by taking significant, visible and measurable steps towards eradicating their military, intelligence and government organizations of this cancer.	India sees that acts of armed aggression against the Pakistani state will not go unpunished and is deterred from future acts of provocation.
Planning Factors	 Strategic deterrence must remain credible Stay below the Pakistani nuclear employment threshold PK provocations will no longer go unanswered Military Response must: be swift and punitive; minimize civilian casualties to the greatest extent possible; seek no permanent change to IB and/or LoC Maintain balance with China to deter opportunism Minimize disruption to global maritime commerce 	 Strategic deterrence must be credible Stay below the Indian nuclear threshold Indian provocation cannot go militarily unanswered Military Response must: be swift (initiate within 72 hours) and punitive, but avoid triggering allout conventional war; minimize civilian casualties to the greatest extent possible; seek no permanent change to IB and/or LoC Maintain balance with Afghanistan to deter opportunism

Strategic Objectives	 Punish and force Pakistan to relinquish use of proxies Portray PK as the instigator, and ensure India is viewed as the aggrieved party Deter PK from undertaking future provocative peacetime military actions and violating India's territorial integrity Deter PK ground counterattack into IN territory Terminate campaign on India's terms once other strategic objectives are accomplished 	 Punish and raise the cost on India for its "blinding" campaign; compel India to cease its efforts to degrade Pakistani ISR Portray India as the instigator, and ensure Pakistan is viewed as the aggrieved party Deter IN from undertaking future provocative and dangerous peacetime military actions Deter and respond to any IN ground counterattacks on PK territory; prevent any seizure of PK territory Terminate campaign once other strategic objectives are accomplished on terms favorable to Pakistan
Additional	NCA Guidance for Move 3	
Specific Guidance	Your recommendation to initiate cross-IB operations has been taken into consideration & will be held in abeyance.	N/A
War Termination Consider- ations	 Given that we did not seek an all-out war but instead sought to punish Pakistan for their actions, for your planning purposes, your NCA is considering an operational pause to de-escalate the crisis. 1. What is your recommendation for an appropriate level of punishment before we direct an operational pause? 2. Determine what additional actions are necessary to reach your recommended level of punishment. 	 Develop a plan (move #3) that will bring about a cessation of hostilities while protecting Pakistan's sovereignty, territorial integrity, and strategic assets. Note: The Pakistan Team answered the new NCA guidance explicitly with a two part plan: Part 1: defend – Pakistan is taking necessary measures to defend itself. Part 2: achieve war termination Launch offensive to force Indian military out of Pakistan to defend Indian territory. Achieve tactical gains (capture territory) for later bargaining.

Additional	Additional NCA Guidance for Move 4			
Country Specific Guidance	Given Pakistan's ground offensive operations into Indian territory, the NCA does not think that now is the time for an operational pause. The NCA is reluctant to allow cross- border operations but is willing to entertain your recommendation as to how a cross-border operation would contribute to meeting our strategic objectives.	Develop a plan (move #4) that will bring about a cessation of hostilities while protecting Pakistan's sovereignty, territorial integrity, and strategic assets.		
Changes to Strategic Objectives	SO4: Deter Defeat PK ground counterattack into IN territory	SO1: Punish and raise the cost on India for its "blinding" campaign; compel India to cease its efforts to degrade Pakistani ISR		