

**EVENT REPORT**



**SVI Outreach**

**Three-Day Capacity Building Workshop 2023**  
**NATIONAL SECURITY DYNAMICS**  
**OF PAKISTAN**

**At Islamabad**  
**November 28th-30th, 2023**

## SVI Three-day Capacity Building Workshop on “National Security Dynamics of Pakistan”

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The workshop was organised by the SVI from November 28-30, 2023 at Islamabad. The workshop was part of SVI outreach program, aimed at increasing general awareness of students and faculty members of relevant departments regarding the dynamics of national security of Pakistan. Executive Director SVI Dr. Naeem A. Salik, Director Research Dr. Nasir Hafeez, Associate Director Ahyousha Khan, Research Officer Shayan Hassan Jamy, and Professor Emeritus Political Science Punjab University Dr. Hassan Askari Rizvi were the speakers. Participants included junior faculty members and students (primarily MS and PhD levels) from universities across Pakistan, including Quaid-i-Azam University, National Defence University, National University of Science and Technology (NUST), National University of Modern Languages (NUML), Punjab University, University of Lahore, University of Peshawar, University of Gujrat, and Bahauddin Zakariya University, Multan.



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## **Executive Summary**

The workshop focused on issues related to national security and nuclear strategy. The proceedings of the workshop began with keynote address by Brigadier Zahir Kazmi (Retired), DG ACDA. In his address, he presented three pivotal arguments concerning evolving naval security alignments and their ramifications. He explained the impact of alliances such as QUAD, AUKUS, INFIRUS, and RUIN, highlighting their role in intensifying strategic instability in the region. Additionally, he underscored Bharat's strategic manoeuvres aimed at undermining Pakistan's stability without instigating direct conflict, employing tactics below Pakistan's threshold. Brigadier Kazmi also emphasised the significance of information warfare, citing instances of Indian media narratives against Pakistan. Moreover, he lamented the diminishing efficacy of arms control diplomacy and international law due to states prioritising strategic interests over compliance with global norms, thereby amplifying nuclear tensions and jeopardizing stability.

Dr. Hasan Askari Rizvi, in the first session, while speaking on “**National Security of Pakistan: Threat Perception and Challenges.**” scrutinised evolution of the concept in historical perspective. He meticulously reviewed historical literature, delineating shifts in Pakistan's security concerns from 1950s to the present day. Dr. Rizvi emphasised three fundamental queries and elucidated six dimensions, explaining the intricate interplay of internal, external, and non-military factors that shape Pakistan's security landscape. While contrasting Pakistan's security approach with India's regional stance, he critically analysed global influences, particularly the impacts of the China-US rivalry on south Asian security dynamics.

In the session “**Development in Military Technology and its Impact on Warfare,**” Dr. Salik elaborated the correlation between military technology and tactical strategies, tracing its progression from rudimentary use of violence to the current sophisticated weapon systems. Dr. Salik elucidated pivotal historical milestones, such as innovations during the Napoleonic Wars and technological breakthroughs in land warfare, highlighting their profound influence on battlefield strategies and communication methods. He also expounded upon the transformation in naval

warfare and the evolution of airpower, including the emergence of drones, showcasing their substantive impact on modern warfare.

Furthermore, Dr. Salik, while addressing the **“Evolution of Nuclear Strategy and Nuclear Deterrence,”** delved into deterrence strategies, drawing a distinction between punishment and denial models. Stressing the challenges associated with nuclear deterrence due to its severe consequences, he emphasized the necessity of rationality for its efficacy. Dr. Salik highlighted the critical role of capability and credibility in deterrence. He explored various deterrence models, including primary, extended, and cross-domain deterrence, exemplifying strategies adopted by nations like the U.S. Furthermore, he meticulously traced the historical use of nuclear weapons, examining their ethical and strategic ramifications. Additionally, he outlined the evolution of U.S. nuclear strategies across different administrations, encompassing diverse approaches from massive retaliation to flexible response, targeted nuclear choices, and nuanced strategies, all tailored to adapt to evolving security landscapes and technological advancements.

In the session titled **“Nuclear Deterrence in South Asia: Challenges and Responses,”** Ms. Ahyousha highlighted the distinctive features of South Asian deterrence, differentiating it from the Cold War era due to regional proximity and territorial conflicts such as Kashmir. She underscored Pakistan's balanced yet reactive approach in navigating challenges despite resource constraints, particularly noting the shift from non-weaponized to weaponized deterrence post-1998. The session explored global impacts, the significance of responsible nuclear stewardship, and the imperative of managing the reactive nature of deterrence. It delved into internal, bilateral, and doctrinal challenges to deterrence stability, also considering the disruptive impact of emerging technologies. The discussion encompassed impact of India's strategic partnerships, military expenditures, and arms acquisitions on regional deterrence dynamics.

Dr. Naeem Salik's lecture on **“Non-Nuclear Strategic / Disruptive Technologies and Pakistan's Response”** explained the pivotal role of advanced technologies such as AI, machine learning, and quantum computing in contemporary warfare. He underscored the imperative of leveraging advanced computing, especially quantum computing, to manage extensive data volumes from satellites and drones. Dr. Salik discussed the challenges of applying AI in nuclear domain due to a lack of operational data. He raised ethical concerns regarding autonomous weapons, advocating for human-centric decision-making. He emphasized the need for deliberate integration of disruptive technologies such as AI into decision-making processes, highlighting the

emergence of undersea autonomous vehicles, challenging secure second-strike capabilities. Dr. Salik elaborated on the surveillance capabilities of microsatellites and their implications on national security. Moreover, he shed light on the transformative potential of 3D printing in civilian and military applications, and stressed the importance of informed policy making in a rapidly evolving global landscape.

In the session on "**Non-Nuclear Strategic / Disruptive Technologies and Pakistan's Response**," Mr. Shayan Jamy delved into the pivotal role of Artificial Intelligence (AI) in modern warfare amid the Fourth Industrial Revolution. Highlighting AI's dual-use nature, he underscored its profound impact on military operations and global security, citing instances of recent Israel-Hamas conflict. The discussion evaluated the balance between AI's operational advantages and ethical concerns, referencing the Bletchley Declaration as a global recognition of the need for ethical guidelines in AI's military applications. Touching on cyberspace dynamics exemplified by the Stuxnet attack, Jamy outlined Pakistan's strategy—short-term collaborations for tech advancement and long-term plans for a domestic tech ecosystem. The session concluded by stressing the imperative for responsible AI implementation and strategic readiness in navigating the complex terrain of AI and cyberspace in military realms.

In the session on **Strategic Foresight and Scenario Planning**, Dr. Nasir introduced the subject and engaged the participants with various practical activities, which attracted great interest of the audience. He highlighted different techniques and models to conduct foresight studies in the realm of policy making.

Several surveys were systematically administered during the course of the workshop to assess any shifts in the participants' perspectives along with their assessment about the workshop. **The pre- and post-session assessments revealed a noteworthy shift in participants' opinions, particularly regarding Pakistan's preparedness to address diverse threats and its allocation of resources for defence spending.** The response of the participants regarding Capacity Building Workshop was overwhelmingly positive, and they expressed willingness to be part of all future activities of the SVI.

## **Key Takeaways**

- The heightened nuclearisation of oceans, driven by emerging naval security alliances stands as a significant concern since these coalitions have widened access to pivotal choke points, escalating arms race and fuelling strategic instability.
- Regulating and monitoring naval activities in crucial waterways, ensuring transparency and preventing further militarization is crucial.
- Bharat has been contributing to undermine the pursuit of strategic stability in South Asia. While states are building their capacities to fight kinetic war, they prefer to deter kinetic wars by strategies to compete below the threshold of war.
- The transformative impact of information pervasiveness and rapid technological advancements on modern conflicts facilitate biased narrative construction. Hence, implementation of counter-narrative campaigns and fact-checking mechanisms becomes crucial.
- A multi-layered approach to national security, focusing on internal resilience, economic partnerships, and diplomatic re-evaluation, is crucial amid regional complexities.
- Utilizing Pakistan's strategic location demands robust domestic structures and economic independence to leverage positive regional linkages and stability.
- Balancing national security amidst evolving global dynamics involves understanding global shifts, nurturing economic partnerships, and re-evaluating diplomatic approaches with all countries.
- Pakistan holds potential for geo-economic leverage, but unrest in Afghanistan and internal security issues hinder economic progress. Therefore, addressing security challenges in Afghanistan, especially terrorism require effective monitoring of fencing, curbing local support for extremist groups and collaboration between Pakistan and the Kabul government.
- The rapid evolution of military technology necessitates continual adaptation in warfare strategies, emphasizing comprehensive preparation for technological advancements.



- It is important to understand the expanding scope and complexity of deterrence, including its variants of cross-domain deterrence and integrated deterrence.
- The South Asian nuclear deterrence landscape is marked by historical conflicts, geopolitical complexities, and unique challenges. To ensure regional stability, policymakers should prioritize diplomatic initiatives and confidence-building measures.
- By managing the reactive nature of deterrence, minimizing the risk of miscalculation, and fostering open communication channels, the region can work towards maintaining stability.
- Recognising challenges at the national, bilateral, and doctrinal levels and addressing them through dialogue and cooperation can contribute to a balanced and stable nuclear equilibrium in South Asia.
- In navigating the evolving landscape of disruptive technologies, policymakers must prioritize efforts to achieve technological independence. By pursuing technological independence, Pakistan can mitigate risks associated and better safeguard its strategic interests in the face of rapid technological advancements.



## **Proceedings of the Workshop**

### **Day One**

#### **Address by Chief Guest Brig. Zahir Ul Haider Kazmi (Retd)**



**Brigadier Zahir Kazmi** (Retired) delved into crucial points centred around deterrence, notably discussing the impact of various security alignments—QUAD, AUKUS, INFIRUS, and RUIN. These coalitions have increased the nuclearisation of oceans, intensified arms race and exacerbated strategic instability. While

highlighting Bharat's role being projected as a net security provider, he stated that Bharat has been contributing to undermine the pursuit of strategic stability in South Asia. While states are building their capacities to fight kinetic war, they prefer to deter kinetic wars by strategies to compete below the threshold of war. Likewise Bharat's new strategic normal is to win below Pakistan's threshold without prompting a war fighting response. The leading trend is to break the will power of the adversary by conducting intelligence operations through strategic communication.

Races of pervasiveness of information and rapid technological advancements have changed the nature of warfare and politics. Pakistan, in this context, finds itself perceived as a victim of terrorism, yet unfairly depicted as a contributor to the problem. Information does not democratise which mean to ever rapidly connect with the audiences. Today, wars are being played in cognitive domains over global media networks. In the last three decades Indian Srivastava Group and Asian News International (ANI) aggressively employed their joint narrative against Pakistan.

Furthermore, he said that diplomacy and particularly the arms control diplomacy used to be an effective recourse to build strategic stability alongside deterrence; however in the prevailing environment, nuclear risk is high. Pakistan is being projected as a part of the problem. Arms control diplomacy and International Law, due to some reasons, have taken a backseat. States have been advocating for so-called responsible behaviour in space, cyberspace, and nuclear domains. However, there's a noticeable inclination for these states to prioritise their strategic interests over adherence to international law and arms control diplomacy. In the pursuit of stability, states resort to competitive, bilateral, and multilateral confrontations, advocating responsible conduct in crucial domains while side-lining international law in their endeavours.

### **Session I: National Security of Pakistan: Threat Perception and Challenges**

*Speaker: Dr. Hasan Askari Rizvi*

Distinguished Guest Speaker **Dr. Hasan Askari Rizvi** in the first session, titled “**National Security of Pakistan: Threat Perception and Challenges**”, explored Pakistan's evolving national security ideals. Tracing their evolution from the past to the present, he explained the strategic profile of Pakistan and the evolution of its threat perception.



Reviewing historical literature provides a foundational understanding of the security challenges Pakistan faced, particularly during its association with the United States in the mid-1950s. Aslam Siddiqui's "Pakistan Seeks Security" (1960) and Ishtiaq Hussain Qureshi writings from 1963 on foreign policy offer pivotal insights into evolving thought process on Pakistan's national security. The examination of security concerns in the 1960s and 1970s provides a comprehensive view of Pakistan's shifting perceptions over time. Notably, literature from the late 1970s, 1980s, and 1990s has predominantly focused on nuclear-related issues. Initially, the

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emphasis was on nuclear ambiguity; while later, there was considerable opposition and propaganda against Pakistan's nuclear program, notably from Britain and the United States.

Presently, Pakistan's national security challenges are complex and encompass a myriad of external, internal, and non-military issues. While critical policies have been formulated to tackle



external threats, domestic concerns such as political polarization, faltering economy, societal alienation, and disharmony pose significant challenges. Fundamentally, Pakistan's national security goals revolve around safeguarding independence, territorial integrity, and autonomy to formulate foreign policy and exercise

choices in the domestic context with reference to political, security and economic issues keeping in view Pakistan's national interest. Counteracting external military, economic, and political pressures while expanding policy options available to government of Pakistan embodies the essence of this security paradigm.

This retrospective analysis, coupled with personal experiences from the 1980s and 1990s, suggests examining Pakistan's security through three fundamental questions and six dimensions. Three pivotal questions include: 1. Factors that influenced the formulation of Pakistan's national security vision 2. Period of history that has profound impact on security and strategic orientation of the policymakers and Pakistan's strategic culture, and 3. The Issue of continuity and change in national security policies.

The delineation of six dimensions that characterizes Pakistan's national security evolution are: 1. Early years of independence and their impact on Pakistan's strategic outlook. 2. First Decade Post-Independence and the criticality of security in policymaking. 3. Pakistan's security disposition Post-Soviet Intervention in Afghanistan (1979) and the influences from the Afghan experience on Pakistan's security paradigms. 4. Post-9/11 security challenges (2001) addressing terrorism, including the waning impact of the Afghan experience. 5. Defence and security under the nuclear umbrella (Post 1998). 6. The notion of defence profile that takes into account comprehensive security and domestic dimension.

Moreover, understanding the impact of global context on security involves recognising the interplay between South Asian and global developments. This includes examining American security cooperation with Pakistan amid U.S. global policy shifts and the influence of the China-US rivalry, particularly concerning the China-Pakistan Economic Corridor (CPEC) and India's counteractions against Chinese influence.

Examining historical periods like post-independence challenges, the impact of the partition of India, and territorial disputes like Kashmir illuminate Pakistan's early security concerns. The initial years of independence were marked by challenges in relation to India's dominance, culminating in a deep-seated need for security and a focus on military power, diplomacy, and budgetary allocation until around 1953.

Pakistan's subsequent security strategies, such as forming alliances, particularly with the United States in the 1950s, 1980s, and post-2001 engagements, as well as cultivating ties with China, reflect attempts to fortify its defences. However, these strategies only addressed immediate vulnerabilities rather than adopting a holistic, long-term perspective.

India's multifaceted security and foreign policy approach significantly influenced regional dynamics, projecting itself as a stabilizing force while promoting an India-centric security system in South Asia. Pakistan, in contrast, advocates for a pluralist regional security framework, respecting the sovereignty of all states regardless of size.

The Afghan experience had a profound impact on Pakistan's security landscape. Collaboration with the U.S. against Soviet occupation led to contemplation of unconventional warfare strategies. Post-2001, Pakistan positioned itself as a frontline state against terrorism, prompting security operations in tribal areas, albeit raising concerns regarding handling proxies and their impact on Pakistan's security dynamics. Furthermore, Pakistan's strategic location offers substantial potential for positive linkages through





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trade, transportation, and cultural exchanges. However, capitalizing on these opportunities necessitates robust domestic structures, economic independence, and supportive non-official linkages like academia and media.

### **Interactive Session**

**In response to the strategic recommendations regarding evolving security situation in Afghanistan, particularly after the withdrawal of US forces, Dr. Rizvi underscored Afghanistan's strategic importance for Pakistan, and stated the challenges stemming from its security situation, especially terrorism that needs to be addressed. Pakistan must exert additional efforts to limit ties between different terror groups. Monitoring the effectiveness of fencing, curbing local support for these groups, and collaborating with Afghanistan are critical to controlling terrorism, essential for Pakistan's geo-economic prospects."**

**In light of Pakistan's national security policy and the evolving landscape of geo-economics, Dr. Rizvi was asked for his insights on Pakistan's potential to leverage its geographical position for geostrategic and economic purposes. He affirmed that Pakistan has potential geo-economic leverage, notably in providing connectivity to various regions. However, achieving economic benefits is hindered by ongoing unrest in Afghanistan and internal security issues. Infrastructure development and peace in Afghanistan are crucial for projects like TAPI. Additionally, regional and global constraints, impede Pakistan's full potential in geo-economics. Despite opportunities for economic exchanges with various regions, several factors, including international rules and dependencies, limit Pakistan's current capability to benefit significantly from these prospects."**



When asked about ways in which Pakistan can effectively balance its national security approach considering the evolving global security dynamics; Dr. Rizvi stressed on adopting a



multi-layered approach. First, Pakistan need to comprehend the evolving global security landscape, taking into consideration how major countries are reshaping their security perspectives. For instance, in the changing dynamics in the US-China rivalry, despite competition, economic interdependence is evident through investments and production partnerships. It is crucial for Pakistan to identify its immediate security requirements and craft a comprehensive strategy. This encompasses traditional territorial security, which remains vital despite technological advancements, along with domestic stability. They illustrate how a country's strength increasingly stems from within its

society, emphasizing the significance of internal resilience for a nation's overall security.

Additionally, he emphasised the importance of positive economic linkages and delved into Pakistan's relationships with its neighbours, demonstrating the complexities with countries like India, Afghanistan, Iran, and China. For instance, the strained relationship with India and the challenges in fostering reliable ties with Iran due to geopolitical pressures faced by the latter. The potential for economic cooperation with China amid the larger China-US rivalry. This situation holds a lesson for Pakistan, highlighting the need to understand the security challenges clearly to resolve the ongoing confusion in its security and foreign policies.

Lastly, the speaker probed whether Pakistan can learn from the dynamics of the US-China rivalry for redefining its relationship with India. Whether Pakistan should explore new approaches, considering the strained ties, and whether adopting a policy of no communication is a feasible stance in the current geopolitical scenario. A multi-dimensional approach combining an understanding of global shifts, identification of domestic needs, nurturing positive economic partnerships, and re-evaluating diplomatic approaches must be considered in dealing with regional complexities.

**In response to the query whether Pakistan requires a shift in its decision-making process to effectively embrace a more comprehensive approach to address its security challenges;**

**Dr. Rizvi** stated that fostering a more holistic approach in our decision-making process makes it



crucial to expand the scope of inputs and insights beyond the conventional bureaucratic and military circles. This openness to diverse perspectives is especially critical given the evolving complexity of global challenges. Therefore, as we aim for a more comprehensive approach to national security, it is essential

to adapt our decision-making mechanisms to be more inclusive, incorporating insights from a wider range of sources, including non-official circles and diverse political perspectives. This shift could better equip us to address the fast-changing international landscape and navigate complex security challenges more effectively.

**In response to the question regarding Pakistan's immediate needs in the current scenario—political reconciliation or economic rehabilitation;**

**Dr. Rizvi** stated that economy's reliance on domestic versus external sources is a key consideration. Presently, Pakistan leans heavily on external sources, but a shift to internal sources could potentially offer greater confidence and



expand available options. In the context of national security, the number and variety of available options significantly matter. Diplomatic ties and alliances, as seen in India's engagement with other countries, form a crucial part of a nation's defence and security policies. These policies encompass not just military strategies but also diplomatic interactions to convey concerns and garner support for a country's perspectives and objectives.

**Given the above scenario, how should Pakistan balance its approach between economic self-reliance and diplomatic engagements to fortify its national security objectives in the global arena? In response to the question, Dr. Rizvi stated** that India focuses on a broader global role contrast with Pakistan's regional security-centric approach. However, Pakistan's stance is also influenced by internal factors, particularly its economic and political contexts. The speaker suggested that an improved Pakistani economy could expand its diplomatic options and enhance its role as a conduit to Central Asia. Yet, these prospects are contingent on Pakistan's domestic landscape. The easing tensions between Iran, and Saudi Arabia could create opportunities for Pakistan to strengthen its economic ties, specifically regarding the gas pipeline agreement. Furthermore, the withdrawal of sanctions against Iran might pave the way for increased economic engagement between Pakistan and Iran, primarily in the energy sector.

Understanding the interplay between Pakistan's internal dynamics, its regional relationships, and its economic aspirations is necessary. The question still remains that how can Pakistan effectively leverage its regional relationships, to bolster its economic stability and diplomatic stature, given the evolving global and regional dynamics?

## **Session II: Development in Military Technology and its Impact on Warfare**

*Speaker: Dr. Naeem Salik*



In the second session on “**Development in Military Technology and its Impact on Warfare**,” **Dr. Salik** discussed the evolution of military technology across all three spheres of warfare: land, sea, and air. He elaborated on a definite relationship between military technology and warfare affecting military operations, both at tactical and strategic levels. Violence has been a part of

human history from the very beginning, starting with the sons of Adam, where one brother killed the other. Since then, violence has been ongoing. Initially, people used their fists, hands, stones, and sticks. Later, weapons were developed, initially for hunting and resource fights among tribes and families.

When the crossbow emerged, it was an advanced weapon for its time, allowing engagement with enemies from a distance, unlike close-quarter battles with swords and knives. Initially these were made of wood but later improved using different metals. By the 15th century, significant advancements were made, but the real impetus was seen after Industrial Revolution in the 16<sup>th</sup> century.

During the Napoleonic wars French had an advantage in military maps, road systems, and the Chap Telegraph—a communication system using towers, lights, and mirrors to relay messages up to 400 km a day, although with potential for errors. Hot air balloons, initially uncontrollable and anchored, were used for reconnaissance. However, due to stability issues, Napoleon disbanded the balloon corps despite early enthusiasm.

In land warfare, military technology evolved in five key areas: firepower, protection, mobility, intelligence, and communication. Advancements in one area often led to developments in others, like the Chap Telegraph evolving into modern global communication. 1830 marked significant technological breakthroughs with the introduction of the steam engine and electric telegraph,



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revolutionising industry and communication. Railways synchronised time and facilitated troop movements but faced limitations on battlefield communication.

This rapid technological evolution reshaped warfare, from communication and logistics to combat tactics and survivability, fundamentally altering how wars were fought and won. Innovations like conoidal bullets, metallic cartridges, and rifling in barrels enhanced firearm range, accuracy, and rate of fire, altering battlefield tactics. The introduction of helmets for individual protection revolutionised battlefield dynamics, altering warfare from grand spectacles to a more tactical engagement. The strategic significance of decreasing soldier density on the battlefield became evident, as tightly packed troops faced increased vulnerability to enemy fire. However, this spatial reconfiguration posed command and control challenges.



The debut of machine guns further complicated attacks on fortified defensive positions, particularly those entrenched with barbed wire, challenging conventional warfare tactics. European nations disregarded these critical lessons during World War I, resulting in staggering casualties. The perpetual contest between offensive firepower and defensive measures continued, culminating in the emergence of tanks in World War II, offering enhanced protection against machine guns. However, the development of anti-tank weapons countered this advantage, perpetuating the cycle of technological escalation.

Naval warfare witnessed a metamorphosis from wooden sailing ships to steam-powered vessels, leading to the establishment of colonies for fuelling and maintenance bases. The pivotal shift came with the dominance of air power, transforming naval battles from close-range cannon fire to long-distance airstrikes. Submarines encountered propulsion challenges underwater, prompting the development of diesel-electric and subsequently nuclear-powered submarines. While air technology evolved from balloons to airships.

The introduction of more efficient aircraft during the interwar years and into the Second World War, enhancing ranges and payload capabilities. Aircraft were categorised into fighters/interceptors and bombers, defining their roles in strategic engagements. The evolution of aircraft further progressed post-Second World War with the emergence of fighter-bombers, capable of fulfilling interceptor and fighter roles while carrying bombs for targeted strikes. Aircraft like Mirages, F-16s, and JF-17s exemplify this multifaceted capability, wielding the capacity for bomb deployment, rocket launches, and adeptness in interceptor roles.

Furthermore, the ongoing developments in military technology have seen the advent of unmanned aircraft, commonly referred to as drones, reshaping modern warfare paradigms with their unique capabilities and applications.

## Interactive session

**Can Pakistan's recent policy related to Afghan refugees, imposing a limited timeframe for their return, be perceived as a strategic move. Dr. Salik pointed out** statements coming out



of Kabul about Afghan refugees that indicate that this action contributes to Afghan grievances against Pakistan. Some of these statements have been harsh in response to Pakistan's decision, and this move hasn't been well-received internationally, especially given the decision to repatriate refugees during the winter season, which exacerbates problems for the

Afghan government. Moreover, the Kabul government is using this situation at the international level against Pakistan, branding the decision as inhumane.

**Dr. Rizvi added** that the problem with decision-making in Pakistan often stems from a narrow and limited perspective. Legally, one might argue that the country has every right to remove undocumented individuals without official permission or visas. However, the situation with Afghans is more complex. When Afghans arrived in Pakistan in large numbers during the 1980s, they were allowed to reside anywhere in the country, be it in refugee camps or outside, due to immediate national security imperatives. Most of our past security policies focused on immediate needs, leading to long-term troubles. The refugee issue exemplifies this, where although we may be legally justified. However, Kabul can exploit this situation against us politically and diplomatically.

**While answering the question about changes in India's military culture impacting its strategic orientation, regional security dynamics, and eliciting reactions from Pakistan; Dr. Salik stated** the fact that the induction of new technology doesn't always change mind-sets developed over centuries. For instance, despite introducing the Cold Start Doctrine emphasising lightning operations by mechanized forces like the IBGs, doubts persist regarding its efficacy. The Indian Army's history in the 1971 War, specifically in the Shakargarh sector, highlights prolonged delays in movement / speed of the operations. He observed that integrating theatre commands pose challenges, especially for the Air Force, potentially making their role subservient to the Indian Army. The Navy's involvement in certain theatre commands is also limited in certain regions. This integrated approach will require



significant investment and doctrinal changes which may be difficult. India is experimenting with integrated theatre commands, which will be an ongoing process with uncertainties about its success. Pakistan might not need organisational changes despite India's strategic alterations. Minor adjustments in doctrine and strategic thinking might suffice to adapt to these shifts



**.In response to the question about the potential challenges for India's military modernization in transitioning from Russian to American weapon systems, and how they affect the strategic mind-set of Indian military planners concerning conflicts or wars with adversaries; Dr. Salik highlighted** that the challenges for a large army like India, even with a simple rifle replacement for soldiers, is substantial. It involves not only procuring a large number of rifles but also maintaining sufficient reserves to cater for replacements and other unforeseen situations .possible damage or other issues. Introducing a new weapon system necessitates extensive ammunition requirements for regular training and operational reserves of varying periods. This becomes a

significant issue in Indian military modernization plans, leading to delays in implementation due to slow procurement processes and bureaucratic hurdles.

**In response to the question on firing of Indian Brahmos missile in Pakistani territory and the impact of the development of Autonomous Weapon Systems on the military strategy, and command and control; Dr. Salik stated** that the incident involving the purported accidental firing of Indian Brahmos missile is improbable as cruise missiles follow specific activation steps. What could have caused this incident: inefficiency in handling the weapon, flawed safety protocols, or command and control issues? Despite Indian claim of it being a conventional missile, questions arise about command-and-control systems and safety protocols of its weapons systems.

**While answering the question regarding development and potential deployment of conventional weapons systems and nuclear warheads in space; Dr. Salik referred** to an existing agreement on the non-weaponisation of space which prohibits the placement of weapons in space. Nobody is seriously considering placing weapons on satellites due to the immense danger involved. However, weapons systems are increasingly using space base platforms for target acquisition and guidance. As far as the prevention of arms in outer space is concerned, initially the US and Western countries showed less interest, but China has been actively pursuing this.



## **Day Two**

### **Session I: Evolution of Nuclear Strategy and Nuclear Deterrence**

*Speaker: Dr. Naeem Salik*

In the first session on “**Evolution of Nuclear Strategy and Nuclear Deterrence**”, Dr. Salik elaborated on the concept of deterrence. He explained that deterrence is intended to stop an adversary from taking a certain course of action using the threat of inflicting unacceptable costs on the adversary. In this way, the negative consequences of taking the particular action on part of



the adversary overshadow the expected positive outcomes and the adversary refrains from committing the act. He then further explained different types of deterrence. 'Deterrence by Punishment' manipulates the behaviour of the adversary by posing the threat of the use of force to prevent the adversary from undertaking an undesirable

action, while 'Deterrence by Denial' works on the principle of making the adversary believe that the intended gains of the actions would not be possible through active fighting/resistance. Other variants of deterrence include 'Extended Deterrence', which implies commitments to protect allies and partners if they are threatened by a third party and 'Intra-war Deterrence' involves a process of explicit or tacit bargaining within an ongoing war aimed at restoring deterrence.

The common notion of handling consequences upon failure of an action doesn't hold good in the nuclear domain due to the catastrophic nature of nuclear weapons. For deterrence to be effective, rationality is essential. Only rational actors recognise that the potential gains from aggressive moves can outweigh imminent suffering. At the interstate level, deterring adversaries from undesirable actions demands imposing unacceptable costs. Not only capability but credibility of the threat is also important.



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In the maritime domain, submarines offer a critical advantage of assured second-strike capability. While no current technology directly observes submerged submarines, however, ongoing advancements in maritime warfare and anti-submarine surveillance aim to enhance underwater visibility and submarine detection. Unmanned naval platforms, akin to aerial drones and land robots, patrol underwater territories, detecting and neutralizing submarines or relaying their locations to ensure a reliable second-strike capability.

Threat of responding to nuclear strikes with reciprocal nuclear attacks represent primary deterrence model. Extended deterrence goes beyond territorial defence, offering a deterrent shield to allied partners. American nuclear umbrella extends to NATO countries without physical weapon deployment, reassuring partners and allies within their territory. Concepts like "cross-domain deterrence" expand the scope of nuclear deterrence, deterring not just nuclear but also conventional, chemical, biological, and cyber threats. Pakistan's nuclear policy, for instance, aims at deterring both Indian nuclear threats and conventional assaults. Similarly, the U.S. in its 2002 nuclear posture review expanded its considerations to include using nuclear weapons in response to attacks involving chemical or biological weapons. The notion of "integrated deterrence" combines conventional and nuclear forces with diplomatic and economic potential. This strategy was introduced by China and now adopted by the U.S. in its 2022 nuclear posture review.

Reflecting on historical instances of nuclear weapon use, the bombings of Hiroshima and Nagasaki in 1945 pose fundamental questions about necessity and decision-making. Despite Germany's surrender, Japan persisted in its fight. While the Americans were hesitant to invade the Japanese mainland, foreseeing substantial casualties. While the bombings caused immediate and lasting devastation, the anticipated immediate surrender did not materialize. These events drastically altered military strategies and provoked ethical issues regarding the deployment of such destructive weaponry. Nuclear weapons were primarily designed as city busters for effectively targeting urban areas to inflict substantial casualties. Their use on battlefields was unfeasible due to the proximity between enemy and allied forces. President Truman emphasized the grim nature of nuclear conflict, noting in a letter to Congress that soldiers at the frontlines might be safer than their families back home.

Initially, nuclear weapons were used in a strategic bombing campaign, much like the carpet bombing of cities during World War II, such as Dresden, Berlin, and other German cities, along

with the firebombing raids on Tokyo. These weapons were handed over to the Strategic Air Command without specific targets or government-level planning, possibly due to an aversion to discussing them openly.

Key global events, such as the 1948 Berlin Crisis and the subsequent establishment of NATO in 1949, underscored the necessity of American engagement in Europe to counter Soviet influence and contain Germany's resurgence. Further concerns arose with the Soviet Union's successful nuclear weapon test in 1949, the Chinese Communist Revolution in the same year, and the outbreak of the Korean War in 1950. These events magnified American apprehensions, particularly regarding the broader conflict between democratic nations and communist forces. Acknowledging the vulnerability of European defence and economic constraints inhibiting heavy investment in conventional forces, the U.S. leaned more on its nuclear superiority. Leveraging long-range bombers and global bases provided an edge over the Soviets, leading to the articulation of the strategy of massive retaliation in 1954 by Secretary of State John Foster Dulles.



This strategy meant responding to Soviet conventional attacks in Europe with massive nuclear strikes on Soviet cities and industrial centres. However, criticism arose due to its inflexibility in handling smaller conflicts or incursions outside major invasions. This strategy persisted until the end of the Eisenhower administration in the late 1950s.

When President Kennedy took office in 1961, he appointed his Defence Secretary, Robert McNamara, to reassess the strategy. McNamara introduced the strategy of flexible response in 1963, aiming for a more adaptable approach to various levels of conflict, addressing the limitations of massive retaliation.

The strategy of flexible response was designed around proportional responses to aggression. Initially, conventional attacks were countered with conventional forces. If the situation escalated beyond control, the next step was the limited use of battlefield nuclear weapons against enemy

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forces. These short-range weapons provided a pause, signalling a willingness to resolve issues through negotiation. If the enemy persisted, higher-tier nuclear weapons can come into play.

Theatre nuclear weapons were deployed in Europe, capable of reaching Warsaw Pact countries and parts of the Soviet territory. This strategy emphasised specific counter-force targeting, aiming to minimise damage to cities and limit destruction. It required a range of weapons, from short-range to intermediate-range theatre weapons, with no predetermined limit on the number of weapons needed due to abundant potential targets. However, a significant limitation was its dependency on mutual agreement between adversaries. If one side escalated beyond battlefield weapons, the other wasn't obliged to reciprocate in a similar manner. This vulnerability led to a reconsideration of strategies. By 1965, the idea of assured destruction emerged, intending to target specific objectives - eliminating a fraction of the population and a significant portion of Soviet industry. Yet, the realization that such an approach would result in mutual destruction shifted this strategy to Mutual Assured Destruction (MAD).

These strategies encompassed a range from deterrence by punishment to deterrence by denial, adapting to the evolving geopolitical landscape. Flexible response was adopted as NATO's official stance in 1967 to uphold American engagement in Europe. Concerns arose about the US readiness to risk its cities for European defence, leading France and Britain to develop their nuclear capabilities.

Successive administrations, re-examined these strategies. Nixon criticised the limited options and introduced packages of nuclear targets to increase choices to seek pauses for negotiation.



Carter then refined this into a counter-veiling strategy, aiming to prevent Soviet victory at any escalation level. During Reagan's presidency, the prevailing strategy prioritised ensuring American victory across all tiers of conflict. In the post-Cold War era, periodic nuclear posture reviews, exemplified by Bush administration in 2002, concentrated on

assertive language against non-nuclear countries and their armaments. The trend continued during Obama's tenure, focusing on a nuanced approach with reduced dependence on nuclear weapons.

Trump's administration made explicit declarations and announced the modernization of existing weapon systems. Biden's 2022 strategy aimed to reassure allies, maintain credible deterrence, and merge deterrence with defence strategies. These approaches, developed within specific contexts, were influenced by the security environment and technological advancements. Evolving from the Berlin crisis to subsequent global events, these strategies adapted to the prevailing circumstances of their times.

## **Session II: Nuclear Deterrence in South Asia: Challenges and Responses**

*Speaker: Ms. Ahyousha Khan*

In the second session on “**Nuclear Deterrence in South Asia: Challenges and Responses,**” Ms. Ahyousha stated that the South Asian deterrence model, while often compared to the Cold War paradigm, diverges significantly due to distinct factors. Geographical proximity in the region intensifies immediate threat, allowing less time for response and increasing the likelihood of direct confrontations. Territorial conflicts, notably the Kashmir issue, contribute to the complexity, as both India and Pakistan have a history of limited wars and active hostilities.

Unlike the Cold War adversaries with large nuclear arsenals, South Asian nations possess relatively small nuclear inventories. Pakistan, despite being the smaller state, has proposed measures like Strategic Restraint Regime. However, India's global or regional ambitions does not allow it to engage in arms control or disarmament measures. The dynamics of South Asian nuclear deterrence is also based on “reactive” model, where Pakistan is constantly reacting to Indian aggressive actions. However, point of importance here is that Pakistan’s reactions have ensured equilibrium, despite financial constraints with utmost focus on avoidance of arms race.

While the literature on nuclear deterrence generally agrees that nuclear weapons prevent conventional wars and promote stability, South Asia's specific challenges give rise to a unique context. The idea of a "virtual deterrence situation" or "non-weaponized deterrence" emerged in the mid-1980s. This non-weaponized deterrence induced a sense of mutual vulnerability, restraining bellicose behaviour and reducing fears of unauthorized or sudden nuclear weapon use. However, the paradigm shifted in 1998 with nuclear tests, transitioning from non-weaponized to weaponized deterrence. The reactive nature of South Asian nuclear deterrence is evident in the



ongoing cycle of action and reaction between India and Pakistan. India's nuclear tests in 1974 and 1998 prompted responses from Pakistan.

Crucially, the South Asian nuclear deterrence dynamics reflect a regional structure subservient to the global order. While both India and Pakistan are impacted, Pakistan faces particular challenges in pursuing independent policies. However, despite the challenges, nuclear deterrence has generally contributed to stability in South Asia, preventing conventional wars and fostering a degree of maturity and sober realization among the possessors. The ongoing challenge lies in managing the reactive nature of deterrence, minimizing the risk of miscalculation, and exploring diplomatic initiatives and confidence-building measures to maintain regional stability.

Initially, scepticism surrounded the newcomers to the nuclear deterrence arena, questioning their ability to exercise "responsible nuclear stewardship" amidst global uncertainties. The post-

9/11 era intensified concerns, particularly in Western media, highlighting the potential threat of non-state actors acquiring nuclear weapons and casting doubt on states' capacity to ensure the safety and security of nuclear assets.



However, these apprehensions were alleviated through the establishment of a nuclear command and control structure, reinforcement of export control mechanisms, and the implementation of a nuclear security regime by Pakistan.

In the context of South Asia, nuclear weapons have emerged as a key element for conflict management, providing Pakistan with a strategic option against India's conventional military superiority. The nuclear equilibrium created by Pakistan significantly curtailed India's ability to achieve a decisive victory. Unlike conventional deterrence, where quantitative or qualitative disparities play a crucial role, nuclear deterrence in South Asia relies on achieving strategic stability, a goal pursued by Pakistan.

The question of challenges to deterrence in South Asia arises, and the concept of deterrence stability becomes pivotal. Deterrence stability is achieved when no party exploits a nuclear



advantage over the other. This equilibrium requires credibility and clarity in the minds of both parties about the elements that underpin deterrence. Addressing challenges to deterrence stability involves recognising those concerns, or "challenges," do not imply a lawless environment but rather signify potential issues that could impact one or all three Cs of deterrence (credibility, capability, and communication). Confusion or ambiguity surrounding these elements can adversely affect deterrence stability. Moreover, the definition of deterrence stability emphasizes Pakistan's stance of not seeking to exploit an advantage over India. Actions taken by India that undermine deterrence stability in the region are highlighted, emphasising the need for careful consideration and examination of potential challenges to maintain a balanced and stable nuclear equilibrium. The challenges to South Asian deterrence can be categorised into three broad segments: the national or internal level, the bilateral level, and doctrinal considerations.

At the national or internal level, India faces a growing concern related to war-mongering and fanaticism within its political and strategic elite. The game of deterrence heavily relies on perception, and it is crucial for leadership to have a clear understanding of the concept of "mutual vulnerability." However, statements from Indian leaders, including the Prime Minister and Defence Ministers, have often lacked sensibility and contradicted the logic on which nuclear deterrence is built. Such statements deny reality and indicate the intent of leadership, thereby putting nuclear deterrence under stress. At the bilateral level, unresolved disputes, particularly in the context of false flag operations near elections remain a concern. The potential for inadvertent escalation exists, as witnessed in the crises of 2019, and with upcoming elections, the risk of another crisis cannot be ruled out. The third segment pertains to doctrinal considerations, where India's nuclear doctrine introduces ambiguity. By not specifying the source of the nuclear threat to its security, India leaves the size of its 'minimum' deterrent open-ended. Ambiguity also exists in the command-and-control system, as demonstrated by the Brahmos missile incident. India's declaration of a 'no first use policy' is seen as a strategic move to gain the moral high ground.

Doctrinal modifications, including India's Cold Start Doctrine (CSD), pose a significant risk of escalation to the nuclear level. The concept of limited war and force restructuring, as outlined in Indian joint forces military and land warfare doctrines, further complicates the deterrence landscape. The formalization of concepts like surgical strikes and limited war adds layers of complexity, emphasizing the need for careful consideration and strategic restraint in the region.

Overall, these challenges underscore the delicate nature of South Asian deterrence and the importance of addressing internal, bilateral, and doctrinal issues for regional stability.

The introduction of disruptive technologies in the South Asian region, such as hypersonic glide vehicles, Ballistic Missile Defence (BMD) systems, canisterised ballistic missiles like the Agni-V, and the nuclearisation of the Indian Ocean, has the potential to disturb the equilibrium of deterrence. These technologies blur the boundaries between conventional and strategic warfare and between peacetime and wartime. Additionally, they introduce discrimination in military capabilities among states, increasing the likelihood of a first strike, particularly between asymmetric military powers. In this context, India's efforts to operate below the nuclear threshold raise concerns about the success of deterrence stability in South Asia.

India's substantial military spending, ranking third globally at \$76.6 billion in 2021, and its



position as the largest arms importer during 2013-17, reflect a significant conventional asymmetry in the region. With sustained investments in military modernization and acquisitions from countries like the US, Russia, France, Spain, and Israel, India is enhancing its military capabilities across domains. This extensive investment raises the risk of triggering deterrence failure in

South Asia over the next decade. If technological asymmetries continue to grow beyond a certain point, they may encourage belligerency, worsen arms race instability, and incentivize pre-emptive actions by irrational decision-makers.

On the international level, India's strategic partnerships and exceptionalism play a crucial role in the dynamics of deterrence. As global geopolitics shifts towards multipolarity, the United States, grappling with maintaining global pre-eminence amid a rising China and resurging Russia, has fostered cooperation with India. This cooperation, initiated by the 2005 Indo-U.S. Nuclear Deal and the 2008 Nuclear Supplier Group (NSG) waiver, includes multiple defence, trade, and intelligence sharing agreements. Similarly, India's collaboration with Russia involves the

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acquisition of advanced military assets such as the S-400 Missile Defence System, Akula-class nuclear-powered attack submarines, and joint ventures like the BrahMos supersonic cruise missile. These developments and agreements have cascading effects on Pakistan's security, contributing to strategic instabilities in the region.

## Interactive Session

**Pertaining to a detailed inquiry over the strategic implications of Ukraine relinquishing its nuclear weapons post the Soviet Union's dissolution in 1991" Dr. Salik said that** Ukraine was not the sole country facing this decision; Kazakhstan also had a considerable number of Soviet weapons on its soil. Both countries gave up their nuclear weapons with the promise that the world would open up to them, providing recognition, trade, and other facilities in exchange for relinquishing their nuclear weapons. The underlying concern was to prevent the spread of nuclear weapons to multiple countries. During the Cold War, Moscow and Washington were the two primary decision-making centres, with Britain and France part of the American Alliance, and China remaining on the side-lines at the international level. The objective was to avoid creating numerous nuclear decision-making centres, complicating the nuclear environment. Encouragement was given to these countries to give up their nuclear weapons in return for security guarantees. However, the conflict might have been averted if both sides had kept their promises. The creeping expansion of NATO towards Russian borders, contrary to promises made during that time, led to Russian concerns and a response. Even if Ukraine had retained nuclear weapons, conflict might still have occurred, although not necessarily escalating to the nuclear level. The Ukrainian case serves as an example, setting a precedent with lessons for other countries, like North Korea, which is unlikely to give up its nuclear weapons. Similar considerations apply to Iran and, in turn, encourage countries like South Korea and Japan to debate having their own nuclear capability rather than relying on the Americans.



**Another question was asked about Indian surgical strikes and the challenge posed to Pakistan's concept of credible minimum deterrence. While responding to the question, Dr. Salik stated that** India has been questioning the credibility of Pakistan's nuclear weapons from the outset. The logic behind surgical strikes dates back to February 2000, following the embarrassment of the Kargil conflict. Indian thinkers, including General VP Malik and George Fernandez, began discussing the need for limited conventional war below the nuclear threshold to deter Pakistan from another Kargil-like situation. However, in 2001 and 2002, mobilization efforts showed that limited objectives couldn't be

achieved. Later the concept of Cold Start was adopted, but after the Mumbai attacks in 2008, it was never actualized. Realizing the potential of escalation to the nuclear level in a limited conventional war, India has shifted its focus to surgical strikes. This change benefits Pakistan, as India's overall conventional superiority is effective only in an all-out conventional war. Operating in bits and pieces suits Pakistan's capability, as demonstrated in the Balakot incident. Our policy revolves around quid pro quo plus – responding to their actions and adding our measures. Achieving escalation control or dominance in a nuclear environment is not easy for India.

**While responding to a query over limited war or limited conventional escalation within the sphere of nuclear strategy;** Dr. Salik stated that historically, most wars were limited in scope until the era



of total wars during the First and Second World Wars. Total wars involved entire societies, but with the advent of nuclear weapons, the concept of total war seemed less viable due to the high cost and consequences. Nuclear weapons brought deterrence to the forefront and revived the concept of limited war. Limited war can be confined geographically, have limited objectives, use a portion of available force, and

may be limited in time. Examples include the Korean War and Vietnam War, where conflicts were kept within specific boundaries. There are now three types of limited wars: conventional between two adversaries, conventional under the nuclear umbrella (as seen in India-Pakistan or India-China scenarios), and limited nuclear war. The latter, however, is challenging to keep truly limited. In the case of India-Pakistan, attempts to leverage conventional advantages were thwarted, leading to the adoption of sub-conventional tactics such as surgical strikes.

**The second question addressed to Ms. Ahyousha acknowledged the potential unfairness of directly comparing the dynamics of nuclear deterrence from the Cold War era to the South Asian context. Can India assume a position akin to the Soviet Union and Pakistan's role resemble that of NATO. Ms. Ahyousha responded** that the proximity factor, as seen in incidents like the Able Archer exercise, is significant. While agreeing with the need to consider these dynamics, she emphasized additional factors not included in the US-Europe deterrence equation as outlined in her presentation. Factors such as continuous US support for Europe and the role of NATO buffers were highlighted, noting their distinct differences from the dynamics between India and Pakistan. **Dr. Salik added by stating that** in the US-Soviet dynamic, the main decision-makers and nuclear powers were the United States and Russia. While

certain European countries had nuclear weapons on their soil, they lacked control over these weapons, as ownership and decision-making rested with the Americans. This distinction sets apart the South Asian environment, where countries with contiguous borders have control over their nuclear decision-making.

**Questioning the nature of hostilities between India and China and its linkages with Indo US strategic partnership, it was inquired as to how Indian preparations against China add complexities for Pakistan. Ms. Ahyousha stated** that China and India are currently not even engaging in conventional conflict, let alone the use of nuclear weapons. The factors involved in India's connection with China, especially along the Line of Actual Control, show that China's military presence has advanced, as reported by open-source intelligence services. Despite these developments, India's response has been more focused on negotiation rather than using force. The Indian government, during the crisis, did not pose a direct threat similar to what they did with Pakistan. While India claims to be preparing for a two-front war, the actual deployment of its military is more directed against Pakistan than China. The critical evaluation should not solely consider intentions but must also assess capabilities to determine whether China is a genuine factor in Indian nuclear equation.



**While responding to an enquiry about the potential for an extended deterrence arrangement between Pakistan and China regarding India in the future; Dr. Salik stated** that the idea of seeking extended deterrence from China is unnecessary. Pakistan has a robust national deterrence against India, and there is no need for external assistance.

**Impact of climate change on all nations and the role of nuclear technology in mitigating the threat is well understood. What is our perspective on the discussions regarding climate responsibilities in such a context? Dr. Salik stated** that the reliance on nuclear energy can help mitigate the adverse effects of climate change, as nuclear energy is a clean and efficient source. Nuclear power plants have high capacity factors, running at 85 to 90%, compared to thermal power plants that typically operate at 30 to 40%. Therefore, nuclear energy is beneficial in addressing climate concerns. The presence of nuclear weapons, as long as they are not used, does not contribute to climate issues.



**What is the potential impact of the revived arms race between Russia and the United States on accelerating an arms race between India and Pakistan? What policy options are available for Pakistan to leverage the disadvantage India faces by sharing borders with China and Pakistan?**

Regarding the first question, **Dr. Salik** stated that the current arms race between Russia and the United States is more about modernizing arsenals rather than a quantitative increase in weapons. Both nations are



upgrading their nuclear capabilities, introducing new designs and delivery systems. The situation is not comparable to the massive arms race during the Cold War. China is also building up its arsenal due to advancements in precision technologies. As for India and Pakistan, One of India's strategists, estimated the number of weapons India would need to deter China and Pakistan, arriving at a figure of 132. However, India has already surpassed this with an arsenal of 160, and it might potentially reach 200 or 250. Nevertheless, there seems to be no practical use in exceeding these numbers. Pakistan, on the other hand, follows a minimum deterrence strategy, emphasizing that even if India were to develop 5000 weapons, there's no cause for concern. Pakistan's focus is on having a sufficient number of weapons for effective retaliation and

causing unacceptable damage in the event of an attack. The key lies in understanding and adhering to this minimum deterrence strategy, rather than succumbing to the temptation of engaging in an unnecessary arms race.

Regarding the second question, he stated that India has historically emphasized China as its main threat, downplaying the significance of Pakistan. However, the force configuration tells a different story. Despite claims, a significant portion of Indian forces and air bases are oriented towards Pakistan.

**Another question was asked regarding the forthcoming elections in India and the concerning hostile rhetoric toward Pakistan. Dr. Salik responded that** the military operates as a group of professionals with a keen understanding of the perils associated with warfare, making them valuable advisors. The Indian military shares this professionalism, refraining from taking undue risks beyond a reasonable threshold. If the Indian Government were to propose an attack on Pakistan, the military would dutifully outline the potential consequences, prompting policymakers to weigh the implications.

## Day 2 – Interactive Session

Regrettably, the infiltration of Hindutva ideology into the Indian Armed Forces in recent years has been observed. This ideological shift, promoted under the BJP regime, has led to the elevation of individuals



sympathetic to the BJP's ideology, marking a departure from the military's traditionally apolitical stance. The introduction of new schemes like "Agniveer" and recruitment practices aimed at breaking centuries-old military traditions raises concerns. The recruitment of individuals indoctrinated into the RSS and BJP ideologies poses a significant risk to the military's professionalism. While military

professionals typically offer assessments based on war gaming and calculations, Dr. Salik recognised instances where certain individuals may align with policymakers, especially when personal interests are at stake. A notable example is the Indian Air Force's collaboration with the Modi government in launching the Balakot strike and making claims about shooting down an F-16. This collaboration extended to delaying the publication of a report on a helicopter shooting until after the elections, underscoring the potential influence of selected individuals heading the military services.

### **Session III: Introduction to Strategic Foresight and Scenario Planning**

*Speaker: Dr. Nasir Hafeez*



In the third session, Dr. Nasir Hafeez, in an insightful lecture, provided a detailed exploration of the ‘**Strategic Foresight and Scenario Planning**’. He stated that strategic foresight, which is a crucial aspect of policy planning and decision-making, involves a comprehensive understanding and analysis of alternative futures. This encompasses a spectrum of possibilities, ranging from the possible and probable to the preferred scenarios, and delves into the worldviews and myths that underpin these potential trajectories. The essence of strategic foresight lies in fostering flexibility in decision-making, steering away from a singular future perspective to a more nuanced exploration of multiple potential futures. This paradigm shift seeks to move beyond the management of present realities to the exploration and creation of new possibilities, thereby broadening the scope from narrow problem-solving to systemic and trans-disciplinary perspectives and solutions.

In navigating the complex landscape of strategic foresight, it is paramount to anticipate emerging issues and discern weak signals that could impact strategic plans and policies. Through meticulous environmental scanning, this approach aims to proactively address tomorrow's challenges and seize opportunities at an early stage. Employing both logical reasoning and creative thinking, strategic foresight endeavours to articulate the long-term consequences of current issues, offering a comprehensive understanding of their direct and indirect impacts.

Transformative and strategic foresight extends the temporal horizon of planning from short-term fixes to a more encompassing view that spans the medium and long term. By providing methodologies and tools to navigate the three horizons—short, medium, and long-term perspectives—it equips organizations and leaders to navigate the complexities of an ever-changing future. Importantly, strategic foresight underscores the need to align the inner narratives of organizations and nations with systemic strategies. Recognizing that strategies can falter not due to inaccurate assessments of alternative futures but due to a lack of understanding of deep-seated cultural nuances, this alignment becomes a linchpin for successful implementation.

Understanding the worldviews of multiple stakeholders is a critical facet of strategic foresight, as it significantly reduces risk. This involves addressing blind spots inherent in the knowledge frameworks of individuals and organizations through inclusivity. Shifting the focus from mere risk avoidance to risk reduction, management, and eventually to the creation of opportunities and innovation is foundational to the strategic foresight framework. This approach acknowledges that the future is inherently uncertain, and by embracing this uncertainty, organizations can position themselves to thrive amidst change.

At its core, strategic foresight leverages the future as a catalyst for driving change in the present. It urges organizations and leaders to proactively utilize future scenarios to inform current actions and decisions. This forward-thinking approach is instrumental in fostering adaptability and resilience in the face of evolving challenges. By encouraging a mind-set that transcends immediate concerns, strategic foresight empowers leaders to contemplate the broader, longer-term implications of their choices.

In summary, the principles and practices of strategic foresight encapsulate a holistic approach to decision-making. Understanding alternative futures, shifting temporal horizons, aligning inner narratives with systemic strategies, addressing blind spots through inclusivity, and leveraging the future to drive present change are all integral facets of this forward-looking framework. As the world continues to evolve at an unprecedented pace, strategic foresight emerges as an indispensable tool for leaders navigating the complex interplay of uncertainties and possibilities.

## Day Three

### Session I: Non-Nuclear Strategic / Disruptive Technologies and Pakistan's Response

*Speaker: Mr. Shayan Hassan Jamy*



In the first session on “**Non-Nuclear Strategic / Disruptive Technologies and Pakistan's Response**”, **Mr. Shayan Jamy stated that** the historical evolution of warfare has been intricately linked with technological advancements, each revolutionising the nature of conflicts. The ongoing Fourth Industrial Revolution, prominently featuring Artificial Intelligence (AI), stands out as a transformative force with profound implications for military operations and global security. At its core, AI is a versatile, dual-use technology with capabilities that extend beyond traditional warfare. Its capacity to learn, solve complex problems, and operate autonomously positions AI as a game-changer in various aspects of society. In the military domain, AI is making substantial contributions, ranging from decision-making support to surveillance and the development of autonomous weapons systems.

The recent conflict between Israel and Hamas underscored the tangible impact of AI in contemporary warfare. Israel leveraged AI systems for data collection, battlefield mapping, real-time analysis, and decision-making processes. This case serves as a testament to the practical integration of AI into military operations, showcasing its ability to enhance situational awareness

and strategic planning. On the global stage, the United States and China have emerged as frontrunners in AI investments for military applications. Both nations are actively pursuing AI projects with the aim of establishing dominance in this critical technological domain. India, recognizing the strategic importance of AI in defence, has integrated AI-enabled Intelligence, Surveillance, and Reconnaissance (ISR) drones into its military operations, aligning itself with the global trend.

The debate surrounding AI in warfare is multifaceted, reflecting divergent perspectives on its ethical and strategic implications. Proponents argue that AI enhances operational efficiency, accuracy, and has the potential to reduce human casualties through the use of autonomous systems. However, opponents raise valid concerns about the risk of arms race escalation, the potential loss of human control over AI-driven weaponry, and the diminishing role of human emotions in critical decision-making processes. As AI continues to evolve, the international community grapples with the need for regulations and ethical frameworks to govern its military applications. Striking a balance between leveraging AI's capabilities for enhanced security and mitigating the associated risks requires a nuanced approach. Informed discussions and global cooperation are essential to navigate the complex landscape of AI in warfare and ensure that its integration aligns with ethical and humanitarian principles.

The Fourth Industrial Revolution, spearheaded by AI, marks a pivotal moment in the evolution of warfare. The global landscape is witnessing the convergence of technological advancements and military strategies, prompting careful consideration of the ethical and strategic implications associated with AI in modern conflict scenarios. The Bletchley Declaration, a significant international agreement signed by 28 states, including major players like the US and China, signals a collective acknowledgment of the potentially catastrophic consequences associated with advanced AI capabilities. This landmark declaration emphasizes the urgent imperative to delve deeper into the understanding of these risks and to take swift, appropriate actions to mitigate them. It underscores the global consensus on the challenges posed by the military applications of AI and advocates for the responsible and ethical utilization of AI in warfare.

Concurrently, the domain of cyberspace has emerged as a pivotal arena for military applications, with the Stuxnet cyber-attack serving as a watershed moment. Attributed jointly to the US and Israel, Stuxnet significantly disrupted Iran's nuclear program by causing damage to



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centrifuges at the Natanz facility. This incident highlighted the potential of cyberspace as a formidable tool for both disrupting and influencing critical infrastructure and military capabilities. In the aftermath, a cyber-warfare campaign ensued between Iran and Israel, marked by mutual targeting of critical infrastructure and engagement in information warfare through cyberspace.

India, positioned as a Tier-3 cyber state, has strategically directed its cyber capabilities toward Pakistan, with a focus on developing cyber deterrence and defence capabilities. Pakistan, in response, has articulated its cybersecurity policy, emphasizing the imperative to treat cyber-attacks as acts of aggression and advocating for the use of appropriate response measures to defend against such threats. The evolving landscape of AI and cyberspace in the realm of military



applications underscores the interconnected nature of modern warfare. The international community's commitment, as evidenced by the Bletchley Declaration, to responsible AI use reflects a proactive stance in addressing the potential risks associated with these advancements. Simultaneously, the dynamic interactions in cyberspace highlight the strategic importance of cyber capabilities in modern conflict scenarios, where nations are not only defending against cyber threats but also actively engaging in offensive cyber operations as a means of asserting influence and control. As technology continues to advance, the ethical and strategic dimensions of AI and

cyberspace in warfare will remain pivotal considerations for nations navigating the complexities of modern security challenges.

The intersection of AI and cyberspace in military applications presents unique challenges, including the difficulty in attribution, blurred lines between civilian and military applications, and the increasing role of non-state actors in cyberspace operations. In the face of these challenges, countries like Pakistan are strategizing to counter advancements in military AI and cyberspace technologies. Short-term measures include technology transfer with friendly states and AI and cyber-related training, while long-term strategies focus on creating a domestic technology ecosystem and fostering a civil-military nexus for dual-use technologies. The need for a strategic re-think to prepare for the technology revolution is evident, as the intersection of AI and cyberspace continues to shape the landscape

of modern warfare. In conclusion, the intersection of emerging and disruptive technologies, particularly AI and cyberspace, has significantly impacted military applications. From historical perspectives to the current Fourth Industrial Revolution, the role of AI in warfare, global



debates, and insights into military applications in various countries, the challenges and responses related to these technologies are shaping the future of warfare. As these technologies continue to evolve, responsible and ethical use, along with strategic preparedness, will be crucial in navigating the complex landscape of military applications of AI and cyberspace.

The convergence of Artificial Intelligence (AI) and cyberspace in military applications poses distinctive challenges that demand strategic responses from nations navigating the complexities of modern warfare. One of the foremost challenges lies in attribution difficulties, where determining the origin of cyber-attacks becomes a complex task. Additionally, the lines between civilian and military applications become increasingly blurred, and the influence of non-state actors in cyberspace operations adds another layer of complexity.

Countries like Pakistan, recognizing the significance of countering advancements in military AI and cyberspace technologies, have adopted a multi-faceted strategic approach. Short-term measures include collaborating with friendly states for technology transfer and providing AI

and cyber-related training. These initiatives aim to enhance immediate capabilities and foster collaboration in addressing shared security concerns. Simultaneously, long-term strategies are focused on building a robust domestic technology ecosystem and cultivating a civil-military nexus that leverages dual-use technologies for both civilian and military purposes.

The imperative for a strategic revolution becomes evident in light of the ongoing technology revolution. The intersection of AI and cyberspace continues to shape the landscape of modern warfare, necessitating adaptive and forward-thinking approaches. From historical perspectives to the contemporary Fourth Industrial Revolution, the role of AI in warfare has evolved, prompting global debates on responsible and ethical use. Insights from various countries provide valuable perspectives on the challenges and responses related to these technologies, highlighting the nuanced nature of the future of warfare.

In conclusion, the intersection of emerging and disruptive technologies, particularly AI and cyberspace, has left an indelible mark on military applications. The ongoing evolution of these technologies underscores the need for responsible and ethical utilization, coupled with strategic preparedness. As nations continue to grapple with the multifaceted implications of AI and cyberspace in warfare, a proactive and collaborative approach will be crucial in navigating the intricate landscape of military applications in the digital age.

## **Session II: Non-Nuclear Strategic / Disruptive Technologies and Pakistan's Response**

*Speaker: Dr. Naeem Salik*

In the second session on “**Non-Nuclear Strategic / Disruptive Technologies and Pakistan's Response**”, Dr. Naeem Salik provided a detailed exploration of the intricate relationship between artificial intelligence (AI), machine learning, and quantum computing. Emphasising their interconnectedness and profound implications, he underscored the pivotal role



of advanced computers, specifically quantum computing, in processing the colossal volume of data generated by diverse sources such as satellites, drones, and other means. The urgency arises from the time-sensitive nature of information and the need for swift analysis, as delayed processing renders data practically useless.

The lecture initiated with the fundamental concept that AI operates efficiently based on the quality of the data set provided to it. The application of AI involves providing the system with information to carry out tasks, wherein it initially relies on pre-fed data. However, machine learning distinguishes itself by imbuing the system with the capability to autonomously evolve its decision-making processes over time through repetitive task performance.

Dr. Salik stressed that for the effective operation of AI and machine learning, advanced computing is imperative. Quantum computing, a highly sophisticated and rapid supercomputer, is required due to the escalating volume of data generated from various sources like satellites, servers, and drones. In the contemporary era, data acquisition is abundant, but its sheer volume surpasses human capacity for collation and analysis. The significance of quantum computing lies in its ability

to process this voluminous data promptly, recognizing the time-sensitive nature of information, particularly in critical situations.

He further emphasised that the importance of supplying relevant databases to enhance the system's efficiency and performance. However, a critical challenge surfaces in the nuclear domain due to the absence of a substantial data set. Unlike conventional wars, where historical data is abundant, the lack of two-way nuclear conflicts creates a dilemma for utilising AI effectively in this sphere.

The speaker also delved into the realm of autonomous weapon systems, a frontier marked by the development of autonomous robots and weapons. Notably, the U.S. Army has introduced unmanned naval ships, controlled by artificial intelligence (AI) and remote systems, navigating the high seas without a crew. This mirrors the prevalence of drones, such as the ones extensively utilized during the American War in Afghanistan and, more recently, in the conflict between Azerbaijan and Armenia. The ongoing Ukraine-Russia conflict has showcased a third category of drones known as suicide drones or kamikaze, armed with small explosive payloads that strike targets, reflecting a distinct form of weaponisation.

Drones, the focal point of contemporary warfare, manifest in different varieties. The first is the conventional pilot-operated drones, controlled remotely by operators sitting miles away using joysticks akin to computer games. Contrastingly, the second category comprises loitering munitions—drones capable of autonomous decision-making. These drones, armed with weapons, autonomously scour battlefields for potential targets and, upon identification, launch their weapons without direct human control. We witnessed the deployment of such loitering weapons in the Azerbaijan-Armenia conflict.

In addition to aerial drones, ground-based robotic soldiers have emerged. These mechanised entities, ranging from tanks to smaller infantry units, operate autonomously on the battlefield, equipped with machine guns and other weaponry. However, a critical ethical concern arises due to the absence of human emotions, such as compassion and empathy, in these machines. Human soldiers can alter their decisions based on the context of the target, whether it be a child, woman, or elderly person. In stark contrast, machines lack this ability to discern and may indiscriminately execute actions based on their programmed directives.

This ethical dilemma is especially pertinent in the context of lethal autonomous weapons, a topic of prolonged discussion in Geneva. Efforts are underway to establish regulatory controls over their use, acknowledging the need to address the inherent challenges posed by machines devoid of human compassion. Despite ongoing discussions, progress in establishing effective regulations for these weapons remains limited.

In the realm of Artificial Intelligence (AI), extensive discussions persist with in the United States and China, emerging as the frontrunners in investment, followed by Russia. Despite Russia's notable advancements, its relative lag stems from an inability to match the substantial investments made by the aforementioned leaders in AI development. Consequently, a multilateral forum seeking to establish regulatory mechanisms or legal frameworks faces challenges, as countries with significant investments and technological advantages are hesitant to relinquish their positions.

The reluctance to embrace regulatory measures is exacerbated by the competitive landscape where a select few countries possess the capability to compete at the forefront of AI development. These technologically advanced nations are disinclined to constrain their choices in favour of countries lagging behind. This reluctance underscores the current impediment to achieving consensus on regulatory frameworks for AI.

The term "evolving and disruptive technologies" reflect the dual nature of these advancements that can be harnessed for both positive and negative purposes. Many technologies, including cyber and AI, are labelled as disruptive due to their potential to significantly alter existing systems. This disruption extends to command and control structures, prompting concerns about the possible consequences of delegating decision-making authority to AI.

Command and control, a critical area of concern, necessitates human involvement in decision-making processes. The apprehension is that AI, if solely entrusted with command and control responsibilities, might analyse threats and trigger counter-responses, such as weapon deployment without factoring in nuanced considerations. The Cuban Missile Crisis of 1962 serves as a historical reference, where President Kennedy, confronted with the suggestion of a pre-emptive strike, displayed a human-driven logic. He weighed the potential risks, contemplating the devastating consequences for New York and Washington, and ultimately refrained from the proposed action. This human decision-making element, grounded in strategic thinking and risk



## National Security Dynamics of Pakistan

assessment, becomes crucial in crisis situations, a perspective often missing in machine-driven analyses.

The concern persists that a machine, devoid of emotional and ethical considerations, might prioritize numerical advantages without fully grasping the complex consequences, leading to potentially catastrophic outcomes. These challenges highlight the critical need for ongoing discussions and careful considerations surrounding the integration of disruptive technologies, particularly AI, into decision-making processes.



We previously discussed aerial drones and ground-based robotic weapons, but the technological landscape has now expanded into a third domain: the maritime domain. Here, the focus is on undersea autonomous vehicles, akin to underwater drones. Some of these vehicles function solely as surveying tools, mirroring their aerial counterparts, while others are equipped with weaponry. Navigating beneath the water's surface, these autonomous vehicles employ sensors to detect enemy submarines and relay crucial information about their whereabouts. In scenarios where adversaries are identified, armed variants can engage and neutralise the threat.

The implications of such advancements are profound, particularly in the context of nuclear deterrence. Submarine-based nuclear weapons are traditionally viewed as a secure second-strike capability. However, the emergence of undersea drones introduces a potential vulnerability to submarines, eroding the assurance of a secure second-strike capability. This shift in dynamics could escalate crisis situations, prompting both sides to prioritize swift action to ensure they are not caught without a reliable second-strike capability.

Additionally, the use of drones introduces challenges to established strategies aimed at making weapons invulnerable or survivable. Previous efforts involved dispersion, silo placement, and mobile launch platforms to enhance survivability. However, with drones continuously patrolling airspace, the mobility that once contributed to the survivability of mobile launchers is compromised. Real-time tracking capabilities enable drones to monitor the movement of these platforms, negating the element of surprise and reducing the effectiveness of strategies designed to withstand counter-strikes. This represents a paradigm shift in the dynamics of strategic mobility and survivability in the face of evolving technological capabilities.

A cutting-edge technology on the horizon is the advent of microsattellites. Satellites play a pivotal role in providing information, and it's crucial to note the distinction between two types: geosynchronous satellites and military satellites. Geosynchronous satellites, situated in orbits beyond 6 to 800 kilometres, synchronize their movement with the Earth, making them ideal for communication and TV transmission. However, due to their considerable distance, the resolution of ground images is not optimal for military applications.



On the other hand, military satellites operate in much closer orbits, approximately 200 to 300 kilometres away. To circumvent gravitational forces, these satellites move at significantly higher speeds, completing orbits in varying durations—some in 12 hours, others in 8 hours, and some in 6 hours. The challenge with such satellites lies in their intermittent coverage of specific areas, leaving gaps in monitoring and observation. This limitation can impede the ability to detect events or changes occurring during the intervals between satellite passes.

Enter microsattellites, a technological solution to this challenge. These compact and cost-effective satellites can be launched in large numbers, facilitating continuous coverage of target areas. As one microsattellite completes its orbit, another swiftly takes its place, ensuring an uninterrupted and overlapping view of the designated region. This constant surveillance leaves no room for activities to go unnoticed, presenting a paradigm shift in surveillance capabilities.

In the realm of cyber operations, the integration of microsattellites adds another layer of complexity. While enhancing surveillance capabilities, these technologies also bring about vulnerabilities, especially concerning command and control systems. The term "attributability" has been raised in this context, reflecting the challenge of ascertaining the source or origin of cyber-attacks and attributing them accurately.

The realm of technology has expanded beyond our conventional understanding of traditional printing with the advent of 3D printing. While traditional printers operate in a single dimension, the integration of computer-linked machines has ushered in a new era. Designing intricate blueprints and feeding them into a computer enables the use of 3D printers capable of reproducing components and shapes in three dimensions. This innovation has proven transformative, as demonstrated by instances where American Marines experimented with printing components of a drone, assembling and physically flying them.

Concerns have been raised about the misuse of 3D printers for the production of nuclear weapons, however, such fears are unfounded. The critical materials required for nuclear weapons, i.e. fissile materials (enriched uranium or plutonium) which cannot be replicated through 3D printing. Designing weapon blueprints and producing various components may be possible, but functional nuclear weapons cannot be produced.

The potential of 3D printing extends far beyond military applications, finding innovative use in civilian domains. Construction, for example, has benefited from the rapid and efficient capabilities of 3D printers. Buildings and houses can be constructed at an accelerated pace, revolutionising the traditional methods of construction.

Understanding these technological advancements is paramount for social scientists, as it directly influences our ability to analyse the evolving threat environment and formulate appropriate responses. Without a comprehensive understanding of these technologies, devising effective policies becomes a challenging task.

## Interactive Session



In response to the question regarding the concerns surrounding the expansion of cyberspace and the continuous growth of artificial intelligence, Mr. Shayan answered by suggesting that the initial step in addressing this issue would involve formulating a code of conduct within the cyberspace domain.

He noted that while several states have implemented cybersecurity policies at a national level, the challenge arises in establishing a global framework. Shayan highlighted the difficulty in aligning distinct perspectives to create a unified code of conduct, presenting a formidable challenge in both AI and cyberspace regulation. **Dr. Salik added that** one of the inherent challenges in cyberspace is the difficulty in distinguishing between state and non-state actors during conflicts. As highlighted in the earlier presentation, the issue of attributability further complicates matters. Even if an agreement or treaty is reached among states, akin to established international treaties like the NPT, the unique nature of cyberspace raises doubts about its effectiveness. Non-state actors, not bound by such treaties or laws, remain a significant challenge. States are hesitant to accept restrictions that may prove unenforceable, especially when dealing with independent actions by their nationals. This inherent challenge complicates the prospects of effective regulation in this domain.

**How Pakistan manages the balance between implementing cybersecurity measures and fostering open communication in the digital era, especially concerning national security?**

Dr. Salik emphasised the essence of genuine cybersecurity independence, highlighting the need to refrain from dependence on imported computers and software. There are inherent risks associated with unknown vulnerabilities in such technology, susceptible to remote exploitation or long-term vulnerabilities. Dr. Salik acknowledged Pakistan's usage of imported software and underscored the critical examination of inexpensively available pirated versions. He highlighted the significant



threat posed by pirated software, potentially containing concealed malware that compromises system security, especially in sensitive sectors. Dr. Salik emphasised the importance of authenticated software, advocating for the adoption and ideally, the development of proprietary software in sensitive domains. Dr. Salik stressed that authentic cybersecurity involves the creation of indigenous systems and software.

**What strategic measures states, particularly Pakistan, should employ to heighten nuclear security in light of incidents like the Stuxnet attack?** Dr. Salik expressed gratitude for the question and emphasised the global nature of nuclear security, highlighting that it is a concern shared by every nation, not solely confined to Pakistan. To address this, it is essential to differentiate between the weapons, which are typically stored in secured locations and the facilities involved in their production. In the case of cyber threats, the primary targets are often nuclear power plants or production facilities.. These facilities are critical for producing weapons, and protecting them is paramount to maintaining a secure nuclear arsenal. One widely adopted measure involves creating an air gap between these facilities and the internet. This means having a localized internal system that is not connected to the wider internet or any external networks. Additionally, strict security protocols are necessary to prevent unauthorized access, as accidents or problems within these facilities. Maintaining a high level of discipline is crucial. Employees working in these facilities must not bring in external storage devices like USB drives. Another strategic approach is to enhance offensive capabilities. Learning from incidents like Stuxnet, states may choose to develop their own malware and offensive tools. This not only acts as a deterrent but also establishes a capability to respond in kind to potential cyber-attacks. The experience of Iran, which developed its own malware after the Stuxnet attack, illustrates the importance of having a robust offensive capability to discourage adversaries from targeting critical facilities. In essence, a combination of defensive measures, strict security protocols, and the development of offensive capabilities is crucial for safeguarding nuclear assets in the face of evolving cyber threats.





**Another question was asked about the extensive reliance of Pakistani society on imported equipment, smartphones, laptops, and services like Google and Amazon,**



**highlighting potential threats to data security and national security.** Dr. Salik's response emphasised the consistent need for developing technical and intellectual capabilities. He stated that at present, our dependence on cell phones manufactured abroad, like those from Korea or the US, leaves us with no control over the

information being extracted and sent back, as it is controlled by these external entities. In the short term, reducing this dependency is crucial. However, the long-term solution lies in developing our own instruments to avoid continued dependence. Databases from major companies like Google are controlled by Western countries, and the fact that key positions in major tech companies are now held by individuals of Indian origin, adds an additional layer of concern. To counter this, serious consideration must be given to developing our own manufacturing capabilities. While we may not initially match the sophistication of existing machines, it is imperative to start thinking about and encouraging indigenous design and manufacturing.

**India's emphasis on enhancing cyber capabilities requires an evaluation of the current dynamics of cyber deterrence between India and Pakistan in the broader context of strategic stability.** Mr. Shayan's response emphasised the absence of effective cyber deterrence in South Asia or globally, attributing the challenge to a lack of understanding among states in

regulating and defining boundaries within the cyber domain. He noted the vulnerability of both India and Pakistan to cyber-attacks despite



their nuclear capabilities. Shayan suggested the potential benefit of signing a cyber Confidence-Building Measure (CBM) as a step forward, acknowledging the uncertainties. He highlighted the possible advantages of establishing a cyber-deterrence mechanism or signing a CBM, indicating the potential for trust-building through information exchange in the event of a cyber-attack during a conflict which seems a distant possibility.

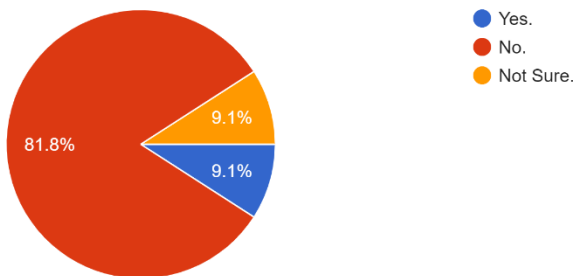
## Survey Results

### General Pre and Post Workshop Assessment Survey

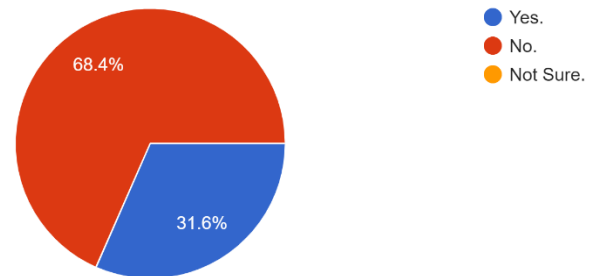
A comprehensive survey concerning national security of Pakistan was conducted both at the commencement and conclusion of the workshop. The primary aim was to assess any shifts in perception that could be ascribed to the lectures and interactions held throughout the duration of the workshop. **The findings indicate a significant change in opinions, particularly with regard to inquiries concerning Pakistan's preparedness to confront various threats and its allocation of resources towards defence spending.**

- Do you think that Pakistan's current level of readiness is sufficient to safeguard its interest and ensure its security as per the existing spectrum of threats?

#### Before

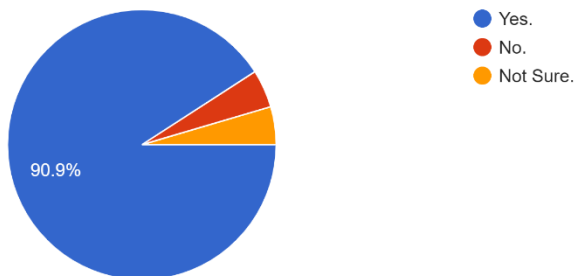


#### After

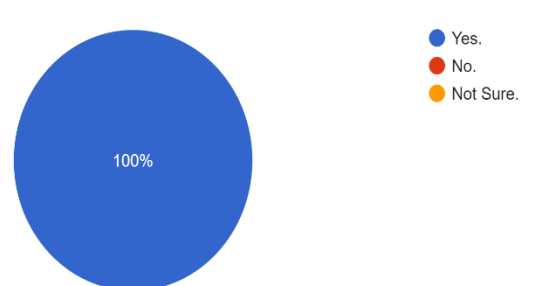


- Do you think that Pakistan's nuclear weapons play an effective role towards national security (i.e. **detering Indian aggression**)?

#### Before

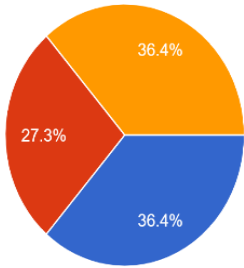


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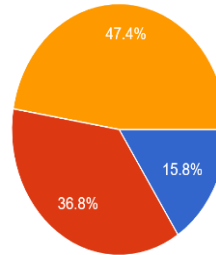
- Is the current state of National Defence Spending enough to safeguard Pakistan against the existing threat spectrum?

**Before**



- Defense spending should be decreased.
- Defense spending should be increased.
- Not Sure.

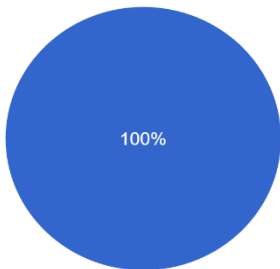
**After**



- Defense spending should be decreased.
- Defense spending should be increased.
- Not Sure.

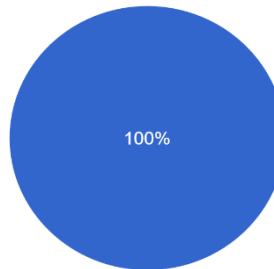
- Do you think activities like this Capacity Building Workshop are effective to enhance the understanding of the participants?

**Before**



- Yes.
- No.
- Not Sure.

**After**



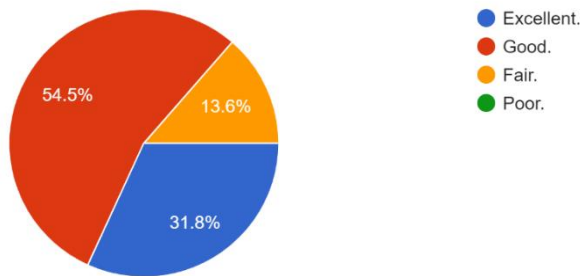
- Yes.
- No.
- Not Sure.

### Pre and Post Assessment Survey – Day 1

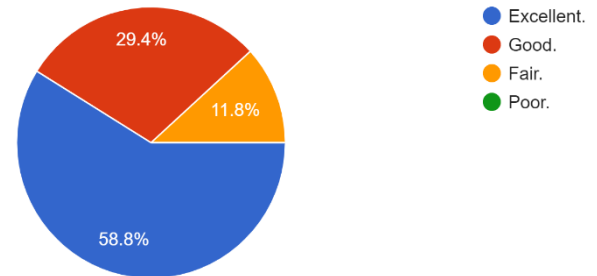
The survey was formulated in accordance with the themes of the day's session, namely "National Security of Pakistan: Threat Perception and Challenges" and "Development in Military Technology and its Impact on Warfare," with the objective of assessing alterations in perception prior to and following the session. **The outcomes manifested a discernible shift in opinions, particularly evident in queries pertaining to the perceived threats from India and Pakistan's capabilities in countering various forms of threats.**

- Rate your understanding of the topics "National Security of Pakistan: Threat Perception and Challenges" and "Development in Military Technology and its impact on Warfare"?

#### Before

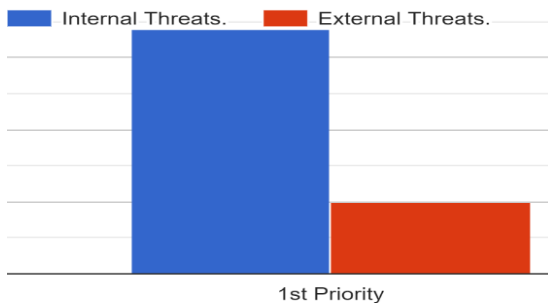


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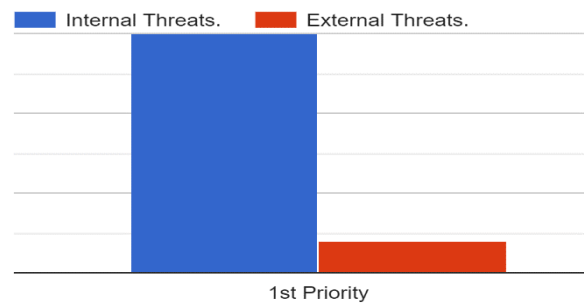


- How do you prioritize threats to Pakistan's National Security?

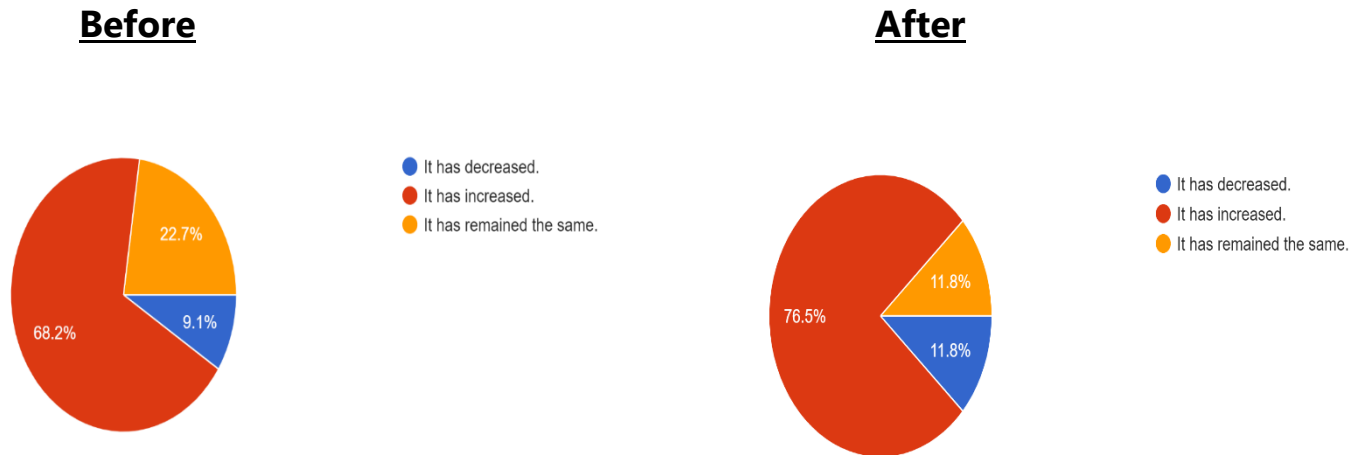
#### Before



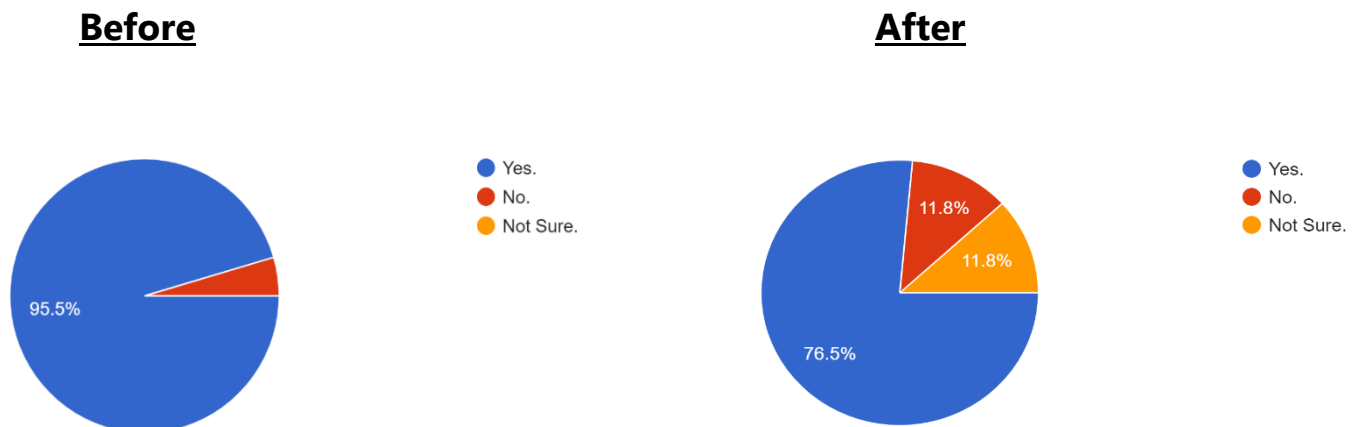
#### After



- How, in your opinion, has the external threat from India evolved over the last 2 years?



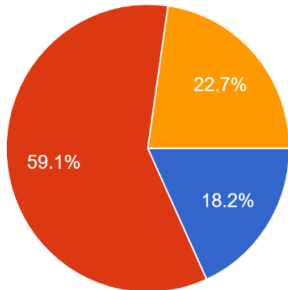
- National Security Policy 2021 focuses on pivot to "Geo-economics" from traditional **Geo-Strategic paradigm**. Do you think it is practical or will be effective for Pakistan?



- Do you think that existing military technology, including indigenously produced and procured weapon systems, is sufficient to counter the threat spectrum that Pakistan is currently facing?

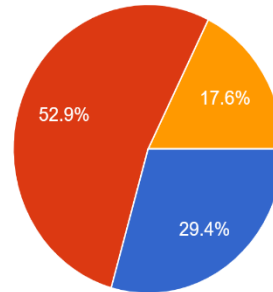


**Before**



● Yes.  
● No.  
● Not Sure.

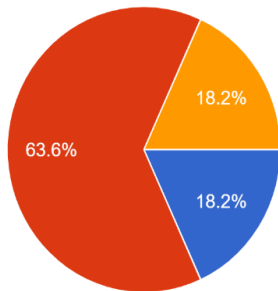
**After**



● Yes.  
● No.  
● Not Sure.

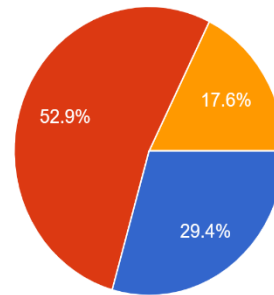
- Do you think that current readiness level of Pakistan's defence forces can effectively counter all kinds of threats?

**Before**



● Yes.  
● No.  
● Not Sure.

**After**



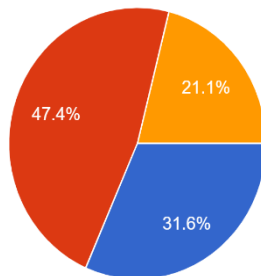
● Yes.  
● No.  
● Not Sure.

## Pre and Post Assessment Survey – Day 2

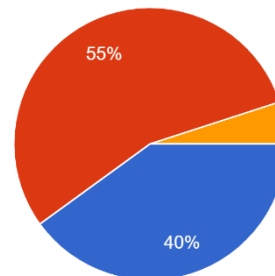
The survey was crafted in alignment with the thematic components of the day's sessions, specifically addressing "Evolution of Nuclear Strategy and Nuclear Deterrence" and "Development in Military Technology and its Impact on Warfare." **While modest changes were observed across all questions, the most noteworthy variation was identified in responses to the question concerning the impact of Hamas's operation in Israel on the Kashmir freedom struggle.**

- Rate your understanding of the topics "Evolution of Nuclear Strategy and Nuclear Deterrence" and "Development in Military Technology and its impact on Warfare"?

### Before

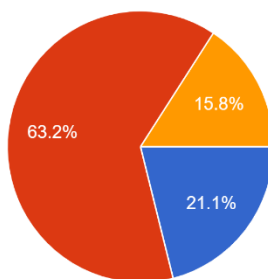


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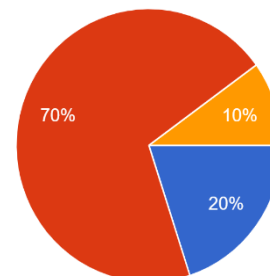


- Do you think that universities in Pakistan have sufficient course content dealing with Nuclear Strategy and Security at graduate/postgraduate level?

### Before

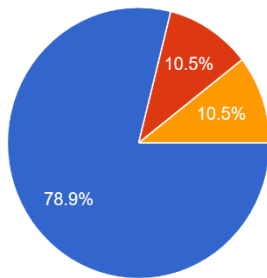


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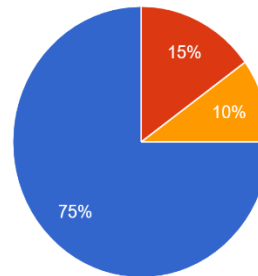
- Should the universities in Pakistan include **more** course content on **Nuclear Strategy and Security** at graduate/postgraduate level?

**Before**



- Yes.
- No.
- Not Sure.

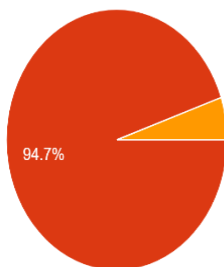
**After**



- Yes.
- No.
- Not Sure.

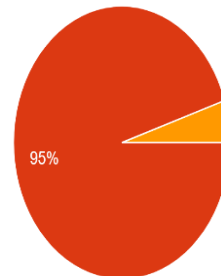
- How has Pakistan's nuclear capability impacted the regional strategic stability?

**Before**



- It has increased the probability of war with India.
- It has decreased the probability of war with India.
- It has no impact on the probability of war with India.

**After**

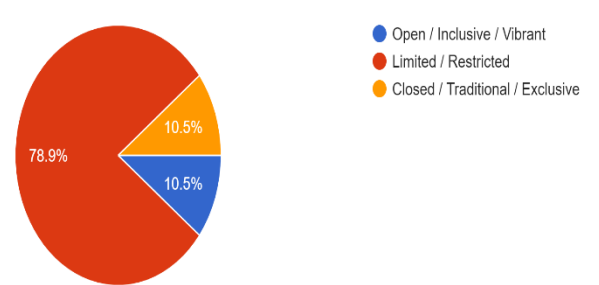
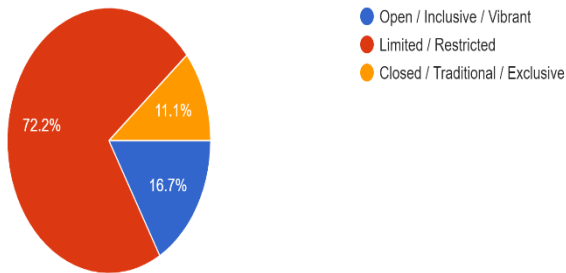


- It has increased the probability of war with India.
- It has decreased the probability of war with India.
- It has no impact on the probability of war with India.

- National discourse on the matters of national security is:

**Before**

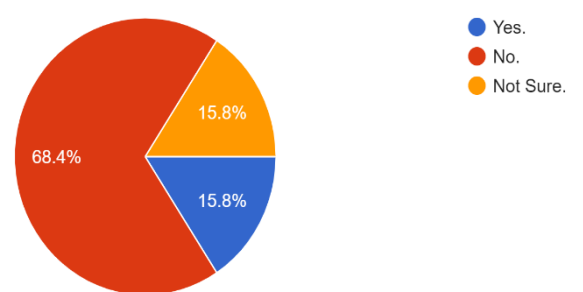
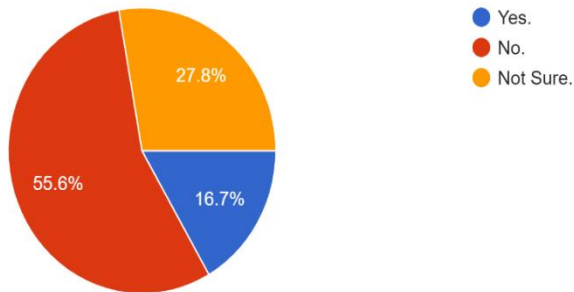
**After**



- Can Kashmiri freedom struggle be influenced by operation "Al-Aqsa Flood" which Hamas executed against Israel?

**Before**

**After**

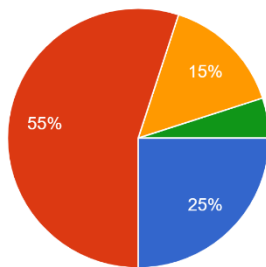


### Pre and Post Assessment Survey – Day 3

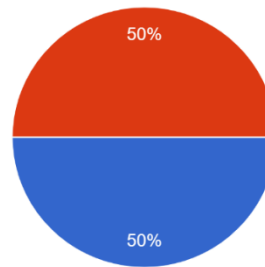
The survey was conducted on the 3<sup>rd</sup> day around the designated themes of the session, "Non-Nuclear Strategic / Disruptive Technologies and Pakistan's Response." **A discernible shift was evident, particularly in responses to inquiries concerning Pakistan's capacity to safeguard itself against disruptive technologies wielded by India, as well as the role of sophisticated technologies in asymmetric warfare.**

- Rate your understanding of the topics "Non-Nuclear Strategic / Disruptive Technologies and Pakistan's Response"?

#### Before

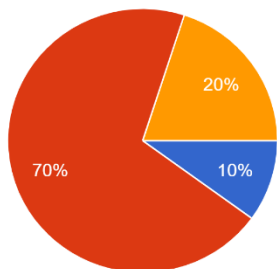


#### After

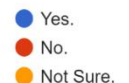
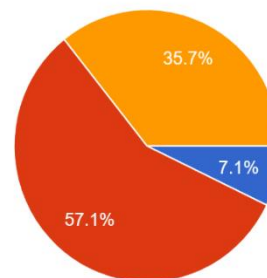


- Do you think Pakistan's defense capabilities are sufficient to defend against disruptive technologies possessed by India?

#### Before

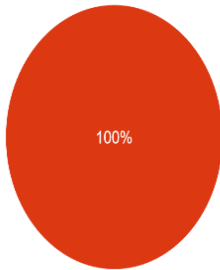


#### After



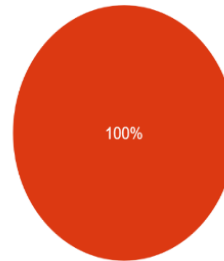
- Should Pakistan invest more in the emerging and disruptive technologies capacity, considering technological lag it has with developed world?

**Before**



- No, Pakistan should focus on procuring these technologies from other countries.
- Yes, it should build indigenous capabilities to avoid dependency on other countries.
- I am not sure.

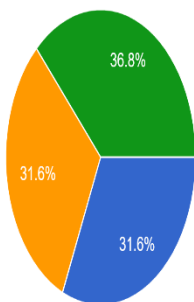
**After**



- No, Pakistan should focus on procuring these technologies from other countries.
- Yes, it should build indigenous capabilities to avoid dependency on other countries.
- I am not sure.

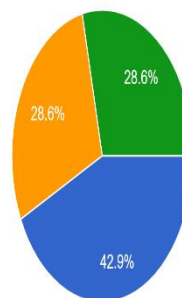
- Considering **Afghan war** and recent "**Al-AQSA Flood Operation**" by Hamas, do you think **sophisticated technology** is irrelevant in asymmetrical warfare as it can easily be overpowered by unconventional methods and techniques?

**Before**



- No, these two cases are anomalies. Countries with cutting edge technology will always triumph.
- Yes, countries like Pakistan should focus on inexpensive defensive antidotes to these technologies.
- I am not sure.
- Yes, countries like Pakistan should focuses on inexpensive defensive antidotes to these technologies.

**After**



- No, these two cases are anomalies. Countries with cutting edge technology will always triumph.
- Yes, countries like Pakistan should focus on inexpensive defensive antidotes to these technologies.
- I am not sure.
- Yes, countries like Pakistan should focuses on inexpensive defensive antidotes to these technologies.



## Photo Gallery

### Lectures and Q/A Sessions



Photo Gallery





**Policy Discussions**





## Certificate Distribution





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**Dr. Naeem A. Salik**  
Executive Director (SVI)



**Dr. Hasan Askari Rizvi**  
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