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Khan, Feroz; Wueger, Diana

Center on Contemporary Conflict (CCC)

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U.S.-Pakistan Naval Track II Strategic Dialogue 2016 Report

Brig. (ret) Feroz H. Khan
Naval Postgraduate School

Ms. Diana Wueger
Naval Postgraduate School

WORKSHOP REPORT | APRIL 2017



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Feroz Hassan Khan
Naval Postgraduate School

Diana Wueger
Naval Postgraduate School

April 2017

This report is the product of the Center on Contemporary Conflict (CCC) at the Naval Postgraduate School (NPS), with support from the U.S. National Nuclear Security Administration (NNSA). The CCC is grateful for the

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Acknowledgements

The authors and workshop organizers are grateful for the steadfast support of the Department of Energy’s National Nuclear Security Administration. We also wish to acknowledge the Naval War College, particularly the Strategic Research Division, and the Center for Global Security Research at Lawrence Livermore National Laboratories, without which this project could not have succeeded.

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Acronyms

BMD	Ballistic missile defense
C2	Command and control
CBM	Confidence building measure
CPEC	China-Pakistan Economic Corridor
CTF	Combined Task Force
IAF	Indian Air Force
ICBM	Intercontinental ballistic missile
INCSEA	Incidents at Sea Agreement
IONS	Indian Ocean Naval Symposium
IOR	Indian Ocean Region
IORA	Indian Ocean Rim Association
ISR	Intelligence, surveillance, and reconnaissance
LOC	Line of Control
MEZ	Maritime Exclusion Zone
MDA	Maritime domain awareness
MIRV	Multiple independently-targetable reentry vehicle
NAVCENT	U.S. Naval Forces Central Command
NCA	National command authority
NFU	No first use (India's declared nuclear doctrine)
P5	Permanent Five of the UNSC, referring to USA, UK, France, Russia, and China.
PAF	Pakistan Air Force
PLAN	People's Liberation Army Navy (China)
PM	Prime Minister
PN	Pakistan Navy
ROE	Rules of Engagement
SAARC	South Asian Association for Regional Cooperation
SBSD	Sea-based strategic deterrence
SCO	Shanghai Cooperation Organization
SFC	Strategic Forces Command (PK)
SOP	Standard operating procedure
SPD	Strategic Plans Division (PK)
SLCM	Sea-launched cruise missile
SSBN	Nuclear-powered ballistic missile submarine
SSK	Diesel-powered attack submarine
SSN	Fast attack nuclear-powered submarine
TNW	Tactical nuclear weapon
TTX	Tabletop exercise
UNSC	United Nations Security Council
USN	United States Navy

Introduction and Event Overview

With support from the U.S. National Nuclear Security Administration (NNSA), the Center on Contemporary Conflict (CCC) at the Naval Postgraduate School (NPS) organized the inaugural U.S.-Pakistan Naval Track II Strategic Dialogue on October 17-18, 2016. This two-day dialogue began the engagement of retired senior naval officers from the United States and Pakistan in a candid bilateral strategic dialogue on both long-standing and emerging security challenges in the Indian Ocean Region (IOR), especially the changing maritime dynamics in the North Arabian Sea.

This dialogue fostered a deeper understanding of Pakistani and American thinking on naval and maritime issues, particularly the implications of the introduction of sea-based nuclear weapons for strategic stability in the region and beyond. During this workshop, senior retired military officers from both countries discussed three broad clusters of issues: Peacetime/Status Quo Issues; Conventional Conflict Issues; and Nuclear Issues.

Background

The security environment between India and Pakistan is characterized by uncertainty, with peace and stability frequently tested by crisis. Growth in both sides' nuclear options and widening gaps in conventional force capabilities, coupled with historical bilateral distrust, do not reinforce confidence in regional stability. The threat from violent extremists coupled with the development of security doctrines that envisage waging limited conventional war under the nuclear overhang make the regional environment prone to sudden crises that can escalate uncontrollably. This construct is especially complicated by the fielding of a suite of new nuclear-capable delivery systems and related technologies, such as short-range tactical nuclear weapons, cruise missiles, ballistic missile defenses (BMD), and maritime nuclear forces.

While there have been numerous exchanges between the U.S. and Pakistan focused primarily on land-based security challenges, the naval and maritime realms have been neglected. In recent years, however, regional maritime developments as well as tabletop exercises (TTXes) organized by the Naval Postgraduate School and the Naval War College at the behest of the National Nuclear Security Administration have demonstrated that this lacuna in understanding would likely have serious implications should a crisis erupt in South Asia. In these exercises, India has declared a Maritime Exclusion Zone (MEZ) off the Makran Coast; in response, Pakistan has retaliated by declaring a MEZ off the western coast of India. While these have been simulations, there is a real-life precedent of naval blockade in the 1971 war. The dimensions of a conventional war at sea between India and Pakistan are poorly understood in the West and the implications of two nuclear armed navies facing off in the North Arabian sea are very much *terra nova*.

The advent of sea-based deterrence in a South Asian context is a critical new dimension, with many aspects that deserve attention and exploration. Sea-based nuclear weapons significantly complicate strategic stability in a region already struggling with a challenging security environment. This highly complex environment is characterized by instability at

Sea-based nuclear weapons significantly complicate strategic stability in a region already struggling with a challenging security environment.

the sub-conventional level, asymmetry at the conventional level, and expansion and introduction of nuclear forces at the strategic and battlefield levels. The introduction of sea-based nuclear weapons along with other emerging systems – cruise missiles, battlefield nuclear weapons, MIRV, and ballistic missile defense, among others – coupled with the policies governing their employment will have far reaching implications for the regional nuclear balance.

Event Overview and Framework

In response to a concept paper and a series of panel descriptions and prompts, workshop participants prepared brief remarks for presentation and discussion at the workshop. Each of four substantive panels followed a similar format, with a final panel dedicated to a roundtable discussion of pathways forward. The substantive panels addressed:

1. Peacetime Trends in the Indian Ocean Region
2. Conventional Doctrines and Strategies
3. Sea-Based Deterrence in a South Asian Context
4. Regional Strategic Modernization and Other Maritime Developments

This report is organized by panel, followed by an analysis of the themes and findings of the workshop. We have included verbatim the prompts that were provided to participants to guide the preparation of their remarks. All discussions took place under Chatham House rules; as such, no participants will be identified by name or affiliation.

Panel 1: Peacetime Trends in the Indian Ocean Region

Panel Prompts for Discussion

1. The Pakistan Navy is justifiably proud of its integral role in CTF-151, and has developed a strong working relationship with NAVCENT and 5th Fleet. Looking forward, how does the Pakistan Navy want to see the relationship with NAVCENT develop? What are the United States' and Pakistan's primary shared security concerns in the Indian Ocean?
2. Do changes in U.S.-Indian maritime cooperation affect Pakistan's historic significance and roles in the IOR, if at all?
3. What does the development of Gwadar mean for the Pakistan Navy? Are there concerns for the Navy related to the development of the Pakistani coastline in response to the implementation and expansion of the China-Pakistan Economic Corridor (CPEC), which has been described as "game-changer" in Pakistan?
4. How does the development of Iran's port at Chabahar with India's involvement affect Pakistan's maritime development plans? Does this affect Pakistan Navy's traditional relations with UAE and Saudi Arabia?

Summary of Panel Discussion

During the opening panel, the participants focused primarily on two topics: the longstanding, all-weather relationship between the United States Navy (USN) and the Pakistan Navy (PN) and the changing geopolitical landscape in the Indian Ocean Region. The U.S. and India are increasing their maritime and naval cooperation even as China and Pakistan grow closer, particularly through the development of the China-Pakistan Economic Corridor. Nevertheless, Pakistan's coastline and its location at the entrance to the Gulf of Oman make Pakistan an important naval partner for the United States, with many opportunities for continued cooperation between the two countries.

Historical Relations and Shared Interests

Historically, the relationship between the USN and the PN has been positive and cooperative and has remained strong even during periods of heightened tension between the two countries. Both speakers discussed the role of the Pakistan Navy in two Combined Task Forces, CTF-150 and CTF-151, which conduct counterterrorism and counter-piracy missions in the western reaches of the Indian Ocean and Persian Gulf areas. The area of operations for these CTFs is vast—over two million square miles—and critically important to global commerce, with over one third of the world's oil passing through each year.

While the incidence of piracy has declined in recent years, ongoing unrest in the Middle East and the challenges of terrorism, piracy, and smuggling continue to demand nations' attention and resources to mitigate their effects. The U.S. speaker suggested that while the intensity of these problems may wax and wane, they are far from resolved, and the CTFs remain extremely valuable for maintaining open sea lines of communication and addressing growing threats from extremist groups and the continued flow of illicit goods. The Pakistani speaker expressed concern that Pakistan will find itself squeezed out of this coalition by the increased cooperation between the U.S., which seeks to balance against China, and India, which is interested in developing a blue water navy that operates in all parts of the Indian Ocean.¹ The speaker indicated that the Pakistan Navy is interested in expanding its relationship with the U.S. Navy to ensure that Pakistan is not forgotten when the Indian Ocean is under discussion.

The relationship between the U.S. Navy and the Pakistan Navy has been positive and cooperative and has remained strong even during periods of heightened tension between the two countries.

China, India, and Changing Regional Geopolitics

Participants discussed the continued hostility between Pakistan and India in the context of the growing rivalry between the United States and China and the necessity of avoiding a security dilemma as states deploy new and expanded naval capabilities in the IOR. The challenge Pakistan faces is how to match resources to priorities and changes in the security environment—an especially difficult problem when financial and material resources are limited and the threats are numerous and varied.

The maturation of the China-Pakistan Economic Corridor as the flag carrier of China's One Belt One Road trade initiative offers great possibilities for Pakistan to expand its economy. There are still significant hurdles to the development of Gwadar as a significant port able to handle the volume of trade that is envisioned. Furthermore, China's model of investment tends to be for the primary benefit of Chinese-owned companies, which use Chinese laborers and Chinese goods rather than domestic workers and products when it develops infrastructure projects overseas. Nevertheless, Chinese investment will improve Pakistan's electricity grid, which will help Pakistan's economy significantly even if the profits are

¹ India has not been a member of these CTFs, preferring to operate independently but in coordination with the Combined Maritime Forces (CMF), which operates the CTFs, and United States Naval Forces Central Command (NAVCENT).

repatriated to China. CPEC will also bring greater economic activity to the coast and to more rural parts of Pakistan.

American participants noted, however, that while China's interest in CPEC appears to be primarily economic, Pakistan should not discount concerns that the People's Liberation Army Navy (PLAN) may also become a more regular presence in the North Arabian Sea should the port of Gwadar continue to expand. While the PLAN has been a benign influence in this region thus far, the safety and protection of trade routes is clearly a high priority for China. In other regions such as the South China Sea, China's influence has been significantly less benign. Should CPEC become a significant trade pathway for China, the PLAN may become more active, which India would likely find threatening.

Pakistani participants noted that India has also sought to expand its influence in the western Indian Ocean, such as through the fitful development of Chabahar as a competing port to Gwadar. The Pakistani speaker expressed concern that India may be moving toward a "gray-zone coercion" strategy in which it uses maritime and naval assets to threaten Pakistani sea lines of communication (SLOC) and destabilize Pakistan by use of a proxy as a way to isolate Pakistan. Other participants surmised that as India and Pakistan expand their naval capabilities, they will need to be sensitive to the other's threat perceptions to avoid creating a security dilemma. Participants broadly agreed that greater bilateral interaction regarding naval issues, potentially at the action officer level, would be a positive step toward avoiding misunderstandings.

Panel 2: Conventional Doctrines and Strategies

Panel Prompts for Discussion

1. Conventional wisdom suggests that war between India and Pakistan could most likely start as the result of a major terrorist incident, to which India may choose to respond following its Cold Start doctrine. Cold Start is primarily a land- and air-centric doctrine, with the Indian Navy playing a support role that could include the declaration of an MEZ of some variety. In the event of such a war, what would be the role of the Pakistan Navy? How would you expect India to respond in and from the maritime domain? What is the purpose and impact of the MEZ for each side?
2. What rules of engagement (ROE) would you expect India to be likely to follow in peacetime, crises, and war? How would Pakistan's ROE be likely to change in peace, crises, and war?
3. What naval role would the U.S., China, and/or other regional powers be expected to play in a conventional conflict between nuclear armed protagonists in South Asia? Would US and China be treated as neutrals and if so, under what conditions? Under what conditions would they, or others, be seen as belligerents?

Summary of Panel Discussion

During panel two, participants discussed the elements of conventional naval warfare and the challenges posed to the Pakistan Navy by the idea of limited war under the nuclear threshold. Participants focused on two critical elements in mitigating the risks associated with naval activity: clear rules of engagement that are well understood within the navy itself, and clear communication between navies during peacetime that can prevent misunderstandings from escalating into conflict. Further, as one speaker noted, the characteristics of the event that sparks hostilities will be critical in determining wartime objectives and goals. Whatever the precipitating event, however, there can be no victory if the underlying causes of conflict are not addressed.

Crises and Conflict under the Nuclear Overhang

The Pakistani speaker opened his remarks with a discussion of the difficulties associated with conducting a limited war under the nuclear threshold. In such a war, escalation would be very difficult to control, with the likelihood of achieving a so-called victory uncertain. Nevertheless, as both sides increase their nuclear arsenals and seek advanced conventional assets, the Pakistan Navy must continue to fulfill its primary function of deterring aggression with credible capability, ensuring Pakistan's maritime interests across all aspects of this domain. As India improves its conventional capabilities, Pakistan feels compelled to reinforce its strategic deterrence to make up for this growing conventional

asymmetry. In particular, India's introduction of nuclear-armed ballistic missile submarines and other advanced naval technologies creates new risks in the maritime domain for Pakistan.

The U.S. speaker noted that during the Cold War the U.S. and the Soviet Union found it necessary to engage one another directly to mitigate the risks associated with naval activity. Because navies operate in an open area devoid of physical boundaries, there is a higher likelihood of close encounters and thus a higher risk of crises that carry escalatory potential. The Cold War adversaries felt it prudent to develop various bilateral mechanisms by which they could come to understand one another better, such as the Incidents at Sea Agreement (INCSEA), naval staff talks, port visits, joint task forces, and search and rescue exercises. By creating mutual understanding, these engagements helped avoid potentially catastrophic miscalculations or misinterpretations, which was especially crucial during periods of tension or crisis.

Rules of Engagement and Maritime Strategy

The importance of well-understood rules of engagement (ROE) cannot be overstated; for any navy, clearly defined rules of engagement set the parameters under which naval vessels may operate. In a crisis, Pakistan is likely to put to sea and conduct operations for sea control and the maintenance of normal maritime activity, which could include an increase in anti-submarine warfare and maritime air operations. The adversary is also likely to conduct intelligence gathering against the fleet. Such an increase in activity could lead to more interactions with the adversary, raising the possibility of miscalculation. In such situations, clear ROE that are well understood and that have been exercised are invaluable. Participants discussed the various levels at which different ROE may come into force. While peacetime ROE and wartime ROE may be relatively straightforward, periods of tension are murkier. One participant suggested that ROE during tensions may be further subdivided into low, medium, and high, though the specifics of what is permissible at each level entails remain vague.

Participants also discussed the value of a maritime strategy that can provide a cohesive and flexible plan that is shared across the navy. For the United States, the Maritime Strategy of the 1980s provided a baseline for training and from which the navy could operate. Pakistani participants argued that while the Pakistan Navy has a strategy, it is reactive to their one threat, not proactive.

Maritime Exclusion Zones

Rules of engagement are closely linked to the notion of a Maritime Exclusion Zone (MEZ), which has become a staple of both India and Pakistan's navies during the series of tabletop exercises referenced in the Introduction. Such a zone would hypothetically strain its target's economy and thus the ability to continue a war over a prolonged period. However,

a MEZ carries serious diplomatic and commercial ramifications, with increased risk to neutral shipping that could well have global economic consequences. A MEZ in the North Arabian Sea would almost assuredly cause global oil prices to spike as tankers exiting the Persian Gulf were diverted around the conflict zone lest they be stopped and searched or, at the other extreme, subjected to intentional (or inadvertent) attack. While both India and Pakistan have turned to a MEZ during the TTXs, however, imposing a MEZ requires significant naval assets. In the near future, both India and Pakistan would likely find it difficult to generate sufficient forces to sustain such an endeavor.

The Implications of Sea-Based Nuclear Weapons for Conventional Operations

The problems of defining ROE and developing a force structure are compounded by the introduction of sea-based strategic deterrence. The deployment of SBSB changed the operating patterns of both the U.S. and Soviet navies, creating a much more complex

maritime environment. While the U.S. and the Soviet Union were able to negotiate an INCSEA that would cover air and surface activity, submerged interactions were considered too sensitive for such an agreement.²

The need to protect strategic naval assets creates new burdens on conventional assets. The use of naval assets for that mission may limit their ability to perform other, vital missions.

It is likely that India and Pakistan will face a similar change in their traditional ways of operating. In both peacetime and crisis, SBSB will change naval operations as both sides seek to mitigate risks without generating escalation. During the Cold War, both the U.S. and the Soviets sought to locate and track the other side's SSBNs, with the expectation that they

would be eliminated early in a crisis if possible. The need to protect strategic naval assets creates new burdens on conventional assets. The use of naval assets for that mission may limit their ability to perform other, vital missions.

² The INCSEA agreement between the United States and the Soviet Union (later Russia) stipulates only that the other side should be notified if submarines are exercising in the area. A 2008 memo promulgated by the U.S. Chief of Naval Operations further interprets INCSEA to apply to submarines only when they are operating on the surface (OPNAV Instruction 5711.96C).

Panel 3: Sea-Based Deterrence in a South Asian Context

Panel Prompts for Discussion

1. What does India's introduction of SSBNs mean for Pakistan generally and for the Pakistan Navy specifically? Will this result in changes to Pakistan's strategic force structure, its conventional force posture and doctrine, or both?
2. Will the introduction of Pakistani sea-based nuclear weapons increase strategic stability in the region?
3. What are the possible consequences of accidents or incidents at sea? Some scholars argue that increasing strategic stability can lead to greater crisis instability, which can be particularly problematic when nuclear weapons are at sea and therefore more likely to encounter adversary or even neutral forces?

Summary of Panel Discussion

In this panel, participants discussed Pakistan's thinking about sea-based deterrence and began the process of unpacking the unavoidable challenges and decisions that must be made in order to turn sea-based nuclear weapons into a safe, credible, assured second strike that contributes to Pakistan's deterrence posture.

Pakistan's Threat Perceptions and Drivers

The Pakistani participants acknowledged that introduction of nuclear weapons in the maritime domain is a new feature and studies are underway to understand the implications of the third leg of the strategic triad. Pakistan was following India's lead in seeking a sea-based strategic deterrent. In their view, the introduction of India's SSBN has provided India with strike options at all levels, while Pakistan is limited in how it may respond in an escalating crisis scenario. For example, if India were to enact a Cold Start operation across land borders that forced Pakistan to use tactical nuclear weapons in response, Indian doctrine implies that massive counter-value strikes would be likely. Because India's likely targets are concentrated, they argued, Pakistan sees itself as having little recourse against such a strike, and therefore seeks a secure second strike to deter India from enacting its declared doctrine.

Alongside the introduction of the SSBN fleet, India's concurrent improvements to its conventional submarine force and its anti-submarine warfare capabilities also pose a problem and potential threat for Pakistan. Pakistan is vulnerable to a blockade of Karachi, which would severely damage Pakistan's economic health, while congestion and the physical characteristics of the North Arabian Sea would make Pakistani ASW a difficult endeavor. The comingling of nuclear-armed, nuclear-powered, and conventional naval

assets along with commercial shipping increases the risk of accidental encounters or inadvertent engagements. The absence of robust command and control mechanisms on both sides as well as unclear safeguards and doctrines also generate uncertainty that could be detrimental to regional stability.

Operational Concepts, Survivability, and Command and Control

The U.S. speaker presented three primary areas of concern that have faced every nation that seeks to employ a sea-based strategic deterrence posture: the overall operational concept, the ships' survivability, and command and control. Operational concept in this context refers to the choice between deploying SBSB assets on continuous at-sea patrols or keeping them in port behind air- and land-based defenses. Beyond the question of stationing of ships, Pakistan will also need to decide whether it will keep nuclear weapons on board while its submarines are in port, which necessitates additional security measures.

Survivability is the second critical component in developing robust SBSB; as the primary function of SBSB is to provide a second-strike option, knowing one's submarines are safe and available for retaliatory use is paramount. Greater survivability may be achieved in several ways, including quieting technology that makes ships harder to find and longer-range missiles that either expand the space a ship has to hide in or allows the ship to use its weapons from behind its bastion. In part, the choices made to ensure survivability are directly linked to a country's sense of its adversary's ASW capabilities. Another U.S. participant noted that in his view, survivability of the second strike is also linked to the survivability and ability to reconstitute the national command authority to avoid the problems associated with pre-delegation. Absent either reconstitution capabilities or pre-delegation, there will be no authority able to give direction to the SBSB force.

The third component of SBSB is the challenge of command and control, both over the ships themselves and over the nuclear weapons aboard. The always-never problem—that weapons will always launch when the NCA commands and never if the NCA does not—is complicated by communications with submerged submarines. Managing C2 requires reliable and secure communication with built-in redundancies to ensure that authenticatable launch orders can be sent and will be received even in the event of a nuclear attack. However, with robust C2, SBSB assets do not need to stay close to their targets; while it may take several days as the submarine transits to its launch site, a state can feel confident that the order has gone through and retaliation will occur. This can enhance survivability by allowing the submarine to stay further out at sea.

Targets, Accidents, and Other Considerations

There were several additional issues addressed during this panel and the discussion that followed, including targeting policy, the potential for accidents (both accidents on the ship and accidental interactions with other naval or commercial vessels), and whether

Pakistan's SSKs will be tasked with both nuclear and conventional missions or whether they will be single-purpose.

Several U.S. participants raised the question of what targets would be appropriate for a second strike, referencing the U.S., French, and British analyses of the Soviet Union during the Cold War. Participants agreed that as a result of intensive study of the Soviet leadership's preferences and interests, the Western nuclear powers concluded that they only needed to hold Moscow at risk—and convey that they had sufficiently survivable forces to conduct a second strike—to augment deterrence. For the USSR, the preservation of Moscow was more important than anything they could have gained from attacking France or Britain. One U.S. participant noted that if the Cold War example were to apply in South Asia, India must decide whether it would opt to exhaust its arsenal against Pakistan, leaving nothing for a potential war with China. If Pakistan can complicate Indian targeting by dispersing its weapons, it may be able to achieve survivability and stability at lower numbers. Pakistan must also make clear to India that its forces are survivable by writing, talking, and operating in a way that demonstrates this to be true.

Participants also touched on issues of accidents, such as whether fires or casualties aboard ship might have implications for the safety and security of the nuclear weapons. The issue of accidental interaction between nuclear-armed ships and conventional naval vessels was also raised. Participants broadly agreed that if either India or Pakistan were to find and identify the other's nuclear-armed submarines, they would likely undertake ASW operations—a potentially dangerous undertaking if it created use or lose pressures or was seen as an attempt to degrade the other side's deterrent.

A U.S. participant suggested that given the Pakistan Navy's expanding mission set and its limited force structure, it might feel compelled to assign its nuclear-armed ships to conventional operations. Pakistani participants refuted this, stating that the Pakistan Navy would not risk its second-strike capability by mixing nuclear and conventional roles. Pakistani participants also noted that while Pakistan would likely be interested in adding a more traditional nuclear-powered, nuclear-armed submarine with ICBM-range missiles to its fleet, the significant financial and technical constraints make a Pakistani SSBN an unlikely development in the near future.

The comingling of nuclear-armed, nuclear-powered, and conventional naval assets along with commercial shipping increases the risk of accidental encounters or inadvertent engagements.

Panel 4: Regional Strategic Modernization and Other Maritime Developments

Panel Prompts for Discussion

1. How do India's efforts to improve its maritime domain awareness (MDA) affect Pakistani maritime operations?
2. How might the introduction of nuclear weapons at sea affect traditional peacetime activities of the Pakistan Navy, such as port calls, flag showing, and logistics support during disaster relief efforts?
3. How does a sea-based system fit in with other new systems in the region, like the potential for MIRVing, BMD, new land and air systems such as cruise missiles, etc.?
4. What is the goal of strategic modernization? How do you expect the role of the Pakistan navy to change as a function of taking nuclear weapons to sea? Do you see this as a driver for budgetary or intra service status change?

Summary of Panel Discussion

In this session, panelists and participants took a wide-ranging look at emerging conventional technologies as well as the challenges and implications of strategic modernization efforts by both India and Pakistan.

Conventional Challenges of the 21st Century

Presenters discussed several important trends that are emerging in the Indian Ocean Region that have the potential to alter the security dynamics of the subcontinent. The Pakistani speaker noted that full-scale naval warfare was almost unthinkable in this day and age; rather, modern navies are primarily concerned with directly or indirectly influencing outcomes on land during a conflict, to include new land-attack cruise missiles being deployed by both Pakistan and India. New, relatively inexpensive technologies such as unmanned aerial vehicles could potentially bolster conventionally weaker powers against more capable adversaries.

Both presenters discussed non-traditional forms of warfare, such as economic, cyber, and information warfare, and how these trends may affect Pakistan. Pakistan's economic dependence on sea-borne trade is well known and is therefore a potential avenue for coercion by India. Even in peacetime, the need to maintain maritime domain awareness (MDA) in order to monitor fishing and other commercial vessels is a significant undertaking for the Pakistan Navy.

Integrating the Elements of Strategic Deterrence

The U.S. panelist noted that effective deterrence requires both credibility and will. Credibility can be demonstrated through a state's concepts of operations and regular exercises to ensure that the force is trained on that concept and the necessary safety, security, and surety program that undergird deterrence. Resilience in C2 and an ability to reconstitute national leadership also enhance the credibility of a deterrent threat.

Declaratory policies are the primary vehicle for conveying a state's will and the circumstances under which nuclear use might be considered. While ambiguity can be useful for instilling uncertainty in an adversary, too much vagueness may suggest that there is no internal agreement among a state's leaders. For ambiguity to bolster deterrence,

While ambiguity can be useful for instilling uncertainty in an adversary, too much vagueness may suggest that there is no internal agreement among a state's leaders.

the civilian and military national leadership must share a clear, concrete set of objectives and understandings regarding the circumstances under which the state would authorize nuclear use.

The U.S. panelist argued that a search for stability should drive force structure decisions rather than numerical parity. He stated that U.S. forces are designed such that deterrence ultimately depends not on the capability to strike first, but on the assurance that the United States will always have the capability to strike second. Pakistani participants suggested that India's acquisition of ballistic missile defense (BMD) was in part driving their pursuit of SBSB, though some on the U.S. side questioned the

efficacy of India's BMD and expressed doubts that it would amount to a true defensive shield that would undercut Pakistan's offensive capabilities.

Command and Control Continued: Technical and Political Elements

Participants engaged in an in-depth discussion of the technical and political requirements of command and control for strategic systems, drawing on the U.S. experience to illuminate some of the things Pakistan will need to consider as it moves toward SBSB. The U.S. presenter emphasized the need for redundancy and dispersal to make sure the adversary believes they cannot guarantee decapitation or preemption and that they will be unable to eliminate all possible sources of authorization. For the U.S. Navy, this has entailed sending messages during exercises via surface ships and air assets; these practice transmissions would reach the submarine in question a dozen times or more. Furthermore, just as important as making sure a launch order gets to the right place is creating a mechanism to rescind that order if necessary.

These insights are linked to critical questions of target selection. Because the state is dependent on multiple redundant paths, it is necessary to select targets that aren't mobile or time-sensitive. This, combined with the adversary's knowledge that they cannot prevent launch orders from being transmitted, can bolster deterrence by assuring that a second strike on a valuable, stationary target is inevitable. However, states must also give thought to the necessity of war termination. Targeting an adversary's leadership or their C2 will make it extremely difficult to de-escalate, pause, or terminate a conflict if their leadership is in disarray, or you are unable to communicate with them.

The Pakistani participants acknowledged the need for redundancy in its NCA; they surmised that as the exigencies of maintaining a strategic triad become sharper, NCA reform would be inevitable. Historically, the Army has dominated wartime decision-making in Pakistan; however, future decision-making will likely need to incorporate inputs from the Navy in order to integrate command and control, determine target selection, and manage other requirements of nuclear weapons deployed at sea. The question of who could legitimately authorize nuclear use if the Prime Minister was incapacitated was also discussed as another element of redundancy and reconstitution planning, with the U.S. participants noting that the ability of the U.S. government to reconstitute a chain of command lent further credibility to its second strike; even if U.S. leadership were decapitated in a splendid first strike, an adversary would be assured that retaliation was inevitable.

Arms Control Negotiations as a Driver of Stability

All participants agreed that the existing multilateral institutional architecture in the region is insufficient to address the emerging security dynamics identified in the first panel. The South Asian Association for Regional Cooperation (SAARC), the Indian Ocean Naval Symposium (IONS), and the Indian Ocean Rim Association (IORA) were judged to be ineffective and lacking in implementation capacity. The challenges to regional maritime security are transnational and at several levels of the threat spectrum, with no one navy in the region able to exert control over maritime security.

In addition to the need for better multilateral forums for addressing transnational challenges, India and Pakistan could potentially benefit from bilateral arms control negotiations in specific domains such as sea-based deterrence. Even if a final agreement could not be reached, several U.S. participants highlighted the importance of arms control negotiations with the Soviet Union for enhancing our understanding of their capabilities and their understanding of ours. Conversations at the operational level could help avoid misunderstandings and could enhance deterrence by making clear that both sides have the credibility and will needed to back up their deterrent postures.

Next Steps

Over the two days of this dialogue, the candid, insightful conversations that took place led both sides to recommend a follow-up event in which these topics could be explored more fully.

Participants agreed that there was scope to delve further into the many complexities of sea-based strategic deterrence that were discussed during the four panels, such as the technical and political challenges associated with command and control; the need to ensure survivability of the ship and its weapons, both in port and at sea; and the challenges of developing and exercising concepts of operations that integrate SBSB into the conventional navy and into Pakistan's larger strategic deterrence force posture.

Participants also proposed additional topics that were touched on but for reasons of time could not be fully explored in this event. These could include technological and operational issues, such as greater attention to the role of naval air, changes in anti-submarine warfare, and emerging unmanned technologies. On the political and strategic front, participants evinced interest in discussing the challenges of signaling and avoiding misunderstandings related to SBSB; the growing importance of cyber, information, and economic warfare; and how to integrate a multiplicity of delivery systems and an ambiguous doctrine into a deterrent posture that is credible to India.

Both sides also expressed interest in continuing to discuss changes to the geostrategic environment of the Indian Ocean Region. This event was held before the U.S. election; as such, it was not clear at the time how or whether U.S. policies toward Pakistan, India, China, and Russia would evolve under a new administration. This Track 2 has the potential to serve an important role in maintaining the historically positive relationship between the Pakistan Navy and the United States Navy.

Future NCA decision-making in Pakistan will likely need to incorporate inputs from the Navy in order to integrate command and control, determine target selection, and manage other requirements of nuclear weapons deployed at sea.