



# VISION

VISIONARY INSIGHTS INTO THE STRATEGIC INQUESTS OF NATIONS

## SVI FORESIGHT

VOLUME 7, NUMBER 12

DECEMBER 2021

Compiled & Edited by:

Zafar Iqbal Yousafzai

**Strategic Vision Institute**  
**Islamabad**

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## **Strategic Vision Institute (SVI)**

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SVI aims to project strategic foresight on issues of national and international import through dispassionate, impartial, and independent research, analyses, and studies. The current spotlight of the SVI is on national security, regional and international peace and stability, strategic studies, nuclear non-proliferation, arms control, and strategic stability, nuclear safety, and security and energy studies.

## **SVI Foresight**

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*SVI Foresight* is a monthly electronic journal. It has a multi-disciplinary perspective highlighting contemporary strategic and security studies. The Journal is envisioned to be a collection of policy-oriented articles written by its Research Associates, Visiting Faculty, and professional experts. The objective is to provide the readership with a concise all-around and real-time policy-oriented discourse on contemporary strategic regional and international developments, highlighting their relevance to Pakistan.

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## Editor's Note

The deployment of the S-400 missile defense system by India has provided for a new debate on whether the US will sanction India or not. And how this move will affect the South Asian strategic environment? In 2018, the Modi-led BJP government inked a deal of FIVE S-400 units with Russia worth \$5.5 billion. This deal shows India has yet a close cooperation and military ties with Moscow. This move is an unbalancing act for South Asia and especially Pakistan which lacks this sophisticated technology.

On the other hand, Pakistan is a developing country with very limited resources and is also pursuing very modest space program. However, as a nuclear power and active member of the CD, it is imperative that Pakistan must work to attain the ban on ASATs at international level. Due to its geography and history its conflict with India and miscalculations and uncertainties attached to it could increase many folds if the situation of space weaponization goes on like this. India has already in 2019 tested a Kinetic ASAT test, on which Pakistan expressed grave concern.

Moreover, this issue discusses, Pakistan's security challenges, Pakistan's efforts for deterrence stability in South Asia, militarization of space, Pak-Russia security cooperation, Indian missile proliferation, Advancement of UAVs and Future of Warfare in South Asia, and Pakistan's efforts to strengthen sea based deterrence.

It is hoped that readers will find a good blend of articles focusing on various aspects of the contemporary security discourse in South Asia. The *SVI Foresight* team invites and highly encourages contributions from the security and strategic community in the form of opinion-based short commentaries on contemporary political, security, and strategic issues. Any suggestions for further improvements are welcome at our [contact address](#). Please see [here](#) the copy of the *SVI Foresight* electronic journal. You can find us on [Facebook](#) and [Twitter](#) and can also access the [SVI website](#).

**Zafar Iqbal Yousafzai**  
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## ***India's Deployment of S-400: Its impact on the regional stability***

***Zafar Iqbal Yousafzai***

The deployment of the S-400 missile defense system by India has provided for a new debate on whether the US will sanction India or not. And how this move will affect the South Asian strategic environment? In 2018, the Modi-led BJP government inked a deal of FIVE S-400 units with Russia worth \$5.5 billion. This deal shows India has yet a close cooperation and military ties with Moscow. This move is an unbalancing act for South Asia and especially Pakistan which lacks this sophisticated technology. When Turkey acquired the S-400 missile defense system, the Trump administration last year sanctioned Turkey.

In 2017, the US Congress passed Countering America's Adversary's Through Sanctions Act (CAATSA) following a tense domestic situation created by the revelations of the Russian interference in the US Presidential elections. When India signed the deal in 2018, the then US Secretary of State James Mattis argued for an exception to India, having non-aligned status in mind. Any country which purchases major defense equipment from Russia will face punitive sanctions. It aims at preventing Russia from supplying its weapons technology to the world. However, India is a member of QUAD, the new Indo-Pacific security partnership which keeps India close to the US and other major powers.

Similarly, Washington considers New Delhi as an integral player in the Indo-Pacific. In such a situation, it's unlikely that Washington will go for sanctioning India. Washington is nourishing India to keep China engaged in the region or somehow counterbalance it. However, policymakers in Washington are divided over a waiver to India from CAATSA despite strong support for India in the US Senate. The US sees India as a counterforce to China and the former is deploying a missile defense system on its border with China and Pakistan. Hence, sanctioning a counterforce of an enemy is an inappropriate action on the part of Washington. Moreover, the US cannot ignore its billion dollars arms sales to India. The Indian arms purchase from the US last year rose to \$3.4 billion.

Besides, India has purchased Rafael fighter jets from France and has a Drone deal with Israel made this year in September. On the contrary, if the US does not waive off the CATSAA sanctions, it would certainly weaken the India-US partnership in the Indo-Pacific and will have a huge impact on QUAD. Containing China, one of the main aims of QUAD could be undermined if any rift emerges between QUAD members. Though there could be reservations by Australia and Japan on the procurement of the S-400 system by India, however, these countries also see India as a counterbalance of China. Likewise, the formation of AUKUS further heated the debate of India's purchase of S-400 from Russia. Though Biden has reiterated to enhance its alliances and partnerships, its relations are souring with France, an old partner.

Furthermore, the US sudden withdrawal from Afghanistan and the return of the Taliban to power has questioned the US global role as a guarantor of security. Similarly, any waiver to India from US sanctions will further question the US role and commitment to regional security among its allies. Though India is important for the US, however, completely ignoring any obvious and serious issue in the shape of a waiver to India from CATSAA will further damage the US global position as a responsible state. India is looking to strengthen its clout in the region and make itself a rising power in the Indo-Pacific. Though India is a part of QUAD and Washington needs it as a counterforce to China, any over weightage to India will affect the US global image in addition to accelerating arms race in the region as Pakistan will check these developments and will try to balance India in defense capabilities. Any extra mile step by the US in favor of India will irritate Pakistan and it will have a huge impact on the US-Pakistan relations.

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<http://southasiajournal.net/indias-deployment-of-s-400-its-impact-on-the-regional-stability/>

## ***Shaheen 1A Test: Pakistan Maintaining Deterrence Stability in South Asia***

*Amber Afreen Abid*

The flight test of Shaheen 1A has been conducted by Pakistan, recently on November 25, 2021. Shaheen 1A is a nuclear capable, surface-surface ballistic missile. It is a solid-fueled, road mobile launched ballistic missile, having the range of targeting at 900km, and has a weight of 10,000 kg. The ballistic missile was first tested in 2012, and can hit the target with great accuracy, as the ballistic missile has the exceptionally developed guidance system; it thus, includes it amongst the utmost accurate ballistic missiles systems. According to ISPR, the flight test was conducted to revalidate the designs and practical considerations of the ballistic missile. The missile tests are performed to enhance Pakistan's credibility of nuclear missiles and to augment the nuclear posture of credible minimum deterrence. According to 2005 Bilateral Missile Pact between Pakistan and India, both countries notify each other before performing such tests.

The strategic policy making of the south Asian nuclear rivals accounts for several aspects, including the geographical factors, economic, military aspect, and relations with other states. The foreign policy of states on these factors and considering the long state rivalry with the neighboring country-India, Pakistan has to regularly update and modify its military capability, in order to counter for any aggressive action coming from India. For this purpose, Pakistan has designed its policy of credible minimum deterrence, which would be adequate to halt the enemy from going into adventurism.

The purpose of deterrence has always been to deter wars. Wherever, there is a nuclear dyad, the deterrence theory works. The purpose of that is to threaten and coerce the enemy to not to take any undesirable action, keeping in view the costs in response to that. In case of South Asia, the deterrence theory is visibly seen. But in order to maintain this deterrence, Pakistan has to keep up with the developments made by India, and respond efficiently to that, for maintain the balance, strategic stability and for the deterrence to work. Pakistan reserves the option of Nuclear First Use when it comes to the nuclear weapon state, however, considers nuclear weapon as a weapon of mass destruction. By maintaining the policy of credible minimum deterrence vis-a-vis India is entirely based upon security.

Indian military posture is aggressive in nature, which enhances the need for Pakistan armed forces to cater for their operational and military preparedness. Pakistan needs to augment its capabilities in view of the growing Indian technological and military capabilities. Pakistan, therefore, is pushed to adopt the strategic measures in line with the nuclear posture of credible minimum deterrence. The sole purpose of acquisition of nuclear weapons by Pakistan is security vis-à-vis India. Pakistan's nuclear use doctrine is clearly based upon the policy of Credible Minimum Deterrence posture. The 'minimum' and 'credible' in the nuclear posture are entirely dependent upon the advancements made by the rival state, and thus changes in accordance with its technological advancements and force postures.

Pakistan is playing field at par with the adversary. The posture of credible minimum deterrence serves as a stabilizing factor in South Asian strategic environment. It is to be certain of having dealt with up with the growing aggressive Indian strategies and force postures, and has thus wiped the chances of a total war in the region.

The nuclear deterrence of a state must depends upon three Cs-Credibility, Capability, and Communication. Hence, to maintain a credible deterrence, the capability of the nuclear forces should be communicated effectively, and the demonstration should be credible enough to restrain adversary from taking any aggressive action. The test of nuclear missiles are an effective way to show-casing the capabilities and a successful test enhances the credibility of the forces. The three Cs are always interdependent and thus creates a strong deterrence. This is the core of deterrence and is extremely important in rapidly advancing technological developments in south Asia.

The overt nuclear in south Asia has diminished the chances of a total war in South Asia has considerably been reduced. The unstable peace in the region, between two nuclear rivals remains vulnerable to animosity and competition. The unstable peace is there in south Asia, which depends highly on robustness of deterrence and strategic stability in the region. Pakistan has been compelled by the nonpareil conventional superiority of India and its aggressive military designs, to go for the option of aggressive defensive nuclear postures. Thus, by maintaining the nuclear and non-nuclear security measures, the deterrence and strategic stability in the region can prevail.

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<https://www.eurasiareview.com/15122021-shaheen-1a-test-pakistan-maintaining-deterrence-stability-in-south-asia-oped/>.

## *Guiding Militarization of Space through International Cooperation*

*Ahyousha Khan*

In November, after the most recent Russian ASAT test, United Nation's General Assembly, First Committee passed a resolution proposed by UK, which calls for the creation of a "new open-ended working group" to create norms, rules that create the standard operating procedures for the "military activities in the space". Rationale behind the resolution proposed by the UK was that in recent years ASAT tests in lower orbit have created huge debris, which increases the probability of collisions and destruction of satellites working in lower earth orbit. Moreover, the debris and ASAT tests are increasing the chances of miscalculation and uncertainty. Thus, it is necessary that the military activities in Space should be guided through the proper procedures. If the resolution gets the final approval from the UN its mandate makes it necessary for it to present its final report in year 2023.

There are some international agreements which guide the weaponization in outer space but mostly this topic is not given enough importance in context of creating arms control measures for outer space. The reason could be that it is actually the global powers that are pursuing the space weaponization and missile defense programs and it is detrimental for their national interests to pursue the international agreements that could cap kinetic and non-kinetic anti-satellite weapons and their usage in space. In the name of stopping weaponization in Space one active treaty is the "Outer Space Treaty" of 1967 which prohibits the placement of nuclear weapons in space, but does not talk about the other weapons and their placement in space. Many states realize this issue as a result of UNGA's Special Session on Disarmament in its final document "orders to prevent an arms race in space". However, no progress was made on the treaty because of the cold shoulder from the US.

Other than this China and Russia have pursued the treaty of "Prevention of Placement of Weapons in Outer Space". In 2014 both countries presented this treaty at the forum of Conference on Disarmament (CD). The purpose of this treaty was also to fill the gaps left by the Outer Space Treaty and will prohibit not only the placement of weapons in Outer Space but also ban the ASATs from earth. However, this proposal by China and Russia was discussed from the platform of CD and newly approved resolution approved by the UNGA's first committee is

coming from the platform of UN. It is also important to mention here that UNGA's first committee deals and work with Conference on Disarmament and UNDC (United Nations Disarmament Commission) on the issues of peace, stability, disarmament, threats and challenges to peace globally and through what measures these issues can be resolved.

Space is a "common good" where every state reserves the right to use it peacefully; many states are utilizing this right and operating their satellites in the space. If one go by the statistics it can be said that the 1,950 satellites are operated in outer space by nearly 50 states, and all of these satellites are not military satellites, almost 145 satellites are of purely civilian nature and 276 are of mixed nature. Space is already filled many obstacles and creation of debris in outer space is making it more and more difficult for states to operate their satellites peacefully. Most of the emerging issues in outer space are man-made and required non-discriminatory, collaborative international mechanism to guide the actions of militaries in space.

Pakistan is a developing country with very limited resources and is also pursuing very modest space program. However, as a nuclear power and active member of the CD, it is imperative that Pakistan must work to attain the ban on ASATs at international level. Due to its geography and history its conflict with India and miscalculations and uncertainties attached to it could increase many folds if the situation of space weaponization goes on like this. India has already in 2019 tested a Kinetic ASAT test, on which Pakistan expressed grave concern. With technological innovations and emerging technologies in weapons it is becoming imperative that states must formulate some sort of arms control measures internationally and regionally because these technologies are blurring the lines between peace and conflict.

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<https://www.eurasiareview.com/15122021-guiding-militarization-of-space-through-international-cooperation-oped/>.

## *Pakistan and Russia to Strengthen Ties through Defense and Cyber-Security Cooperation*

*Sher Bano*

As a significant step in strengthening bilateral relation both Russia and Pakistan's public security counsels had series of addresses on 1st December, 2021. After 2018, this was the first time that delegation level talks were held between Pakistan and Russia. Dr. Moeed Yusuf (National Security Adviser, Pakistan) and his Russian counterpart Mr. Nikolai Patrushev had in depth discussion on transnational and indigenous issues and also reviewed the diapason of Pakistan-Russia relations. The main agenda of the meeting was cooperation in the field of defence, energy, counter-narcotics, counter-terrorism, economy, cyber-security and information. Collaboration among special services, defence ministries and law enforcement agencies was also discussed.

During the meeting both sides paid special attention to the issue of medicine trafficking and cyber security. Possibility of trade and profitable cooperation among both the states was also discussed. A preliminary agreement was also signed between both the parties to build Pakistan stream gas pipeline that would be 1,100 km long known as 'flagship strategic venture' that will further strengthen the bilateral relations. The project worth 2.5 billion dollars will annually deliver 16 billion cubic meters natural gas from LNG (Liquefied Natural Gas) terminals in Gwadar and Karachi with those located in Lahore.

By the year 2023 the project is expected to be completed. The current situation in Afghanistan was also an important point of discussion among Mr. Patrushev and Mr. Yusuf, both agreed to support all the efforts in order to achieve lasting peace in South Asia. They also expressed their concerns regarding impending humanitarian crisis in the Afghanistan and urged the need for international community to intervene and take practical measures to curb the looming crisis. Furthermore, Pakistan's focus was also in developing economic relations with Russia and Central Asian countries to improve economic integration and regional connectivity.

With the emergence of 5th generation warfare or hybrid warfare that India is waging against Pakistan, Pakistan's security concerns have also changed. India is using different tools of cyber warfare, disinformation, and diplomatic isolation, financial and economic coercion etc. in order to destabilize Pakistan. Pakistan's former Ambassador Munir Akram in 2018 wrote about

techniques used by Russia to counter hybrid warfare. Russia used combination of cyber-attacks, narrative control, irregular forces, anonymous militia's and diplomatic support etc. This new form of warfare is also becoming more sophisticated with new emerging technologies. Hence Russia being the architect of hybrid war can prove to be beneficial partner for Pakistan. Pakistan can acquire and learn new technologies such as tools for cyber-security and to further defend the hybrid attacks from India.

Both the states have also agreed to develop mutually beneficial relations in the military sphere during the JMCC (Russia-Pakistan Joint Military Consultative Committee) meetings held in September, 2021. Moscow and Islamabad military partnership is governed by 2014 defence cooperation agreement. Since both the states have signed this agreement the defence ties have steadily grown among the two. Different areas have been explored for the joint cooperation such as holding joint military exercises, military training, defence industrial cooperation and intelligence cooperation. Both sides need immediate implementation and effective follow up upon the decisions taken during JMCC meetings. Developing such a constructive military relation between Pakistan and Russia is a significant factor in maintaining regional stability in the changing regional dynamics. Both the state can also work collectively to control the deteriorating political situation in Afghanistan through inclusive political dialogue and create conditions under which the conflicting sides could reach a constructive solution. It will also allow them to build inclusive power structure through mutual agreement and ending the prevailing civil war.

As per the statement by Mr. Shah Mehmood Qureshi (Foreign Minister, Pakistan) during a meeting in Islamabad in April, 2021, in Pakistan there is a new approach and mindset regarding its relations with Russia. Both do not just have geographical proximity but Russia is also an important factor for stability at the regional level and also international level. They have been working collectively in the domain of counterterrorism and to curb extremism. Russian Foreign Minister Mr. Lavrov also promised to provide special military equipment to Pakistan to fight terrorism. Hence relationship between Russia and Pakistan has come long way since cold war hostility to strategic cooperation at the current stage and also hope for continued bilateral cooperation in various other fields in future.

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<https://www.eurasiareview.com/13122021-pakistan-and-russia-to-strengthen-ties-through-defense-and-cyber-security-cooperation-oped/>

## ***Pakistan's Security Challenges***

***Zafar Iqbal Yousafzai***

Pakistan has been facing challenges in both the dimensions of security: internal and external. Though since 2014, the internal challenges were overcome by Pakistan due to its comprehensive counterterrorism strategy and operations in the tribal belts. However, following the fall of Kabul to the Taliban, the security situation in Pakistan's tribal areas and Baluchistan have deteriorated where attacks are constantly happening on security forces. Similarly, Pakistan had been facing a two-front external security threat, however; the western front is not a serious threat now as it was before the fall of Kabul to the Taliban. Tehrik-i-Taliban Pakistan (TTP) is constantly launching attacks on the security forces in the tribal and adjacent areas.

Pakistani government and TTP in early November signed a month-long ceasefire that has ended on December 8. Though the government wanted to extend it, yet the Taliban refused to do so. It was reported that the Taliban government in Afghanistan had helped agree on the Taliban to the ceasefire. The government of Pakistan was interested in extending the ceasefire as well as wanting to reach any negotiated settlement with the Taliban, however, the TTP demands could not be met instantly. It is pertinent to mention that TTP is demanding the release of its 102 prisoners. Yet the government is cautious about this matter as there is no guarantee whether negotiations will succeed or not. Despite government interests, there is skepticism in experts working on the issue. There had been many agreements between the TTP and government in the past. However, each agreement collapsed after some time.

Hence, expecting any long-term and durable agreement is unlikely between the two parties. The government of Pakistan is also trying to persuade the Taliban in Afghanistan to either convince them to talk or take action against them those sheltering in Afghanistan. Moreover, Pakistan is also facing security challenges on the external front. India-Pakistan relations are not on a smooth path. Since BJP has come to power in 2014, India's aggressive

policies have provoked Pakistan. Modi is in favor of a retaliatory approach towards Pakistan. Even before that, when the Mumbai terrorist attacks did happen, India adopted the strategy of limited war (surgical strikes) in addition to the Cold Start Strategy. This new Indian warmongering has poisoned the South Asian strategic environment. India was also using Afghan and Iranian soil against Pakistan. However, the change of regime in Kabul has changed the dynamics for India where she is no more able to use Afghan soil against Pakistan. Moreover, the security of the China-Pakistan Economic Corridor is another challenge for the government. Being called a game-changer, CPEC security is significant for Pakistan in addition to China. India is fueling terrorists and extremists to try to sabotage CPEC or inflict considerable harm to it which will dent Pakistan's global image as an unsafe country.

It is pertinent to mention that RAW operates a special cell that has the task to harm CPEC. After a long period, some minor incident takes place where the terrorist elements try to harm CPEC. However, due to tightened security measures, no major incident has taken place. India by any means wants to destabilize Pakistan and inflict harm on it. The construction of Chabahar in Iran was meant to affect the Gwadar port project. However, it could not yield the desired results. India is also fuelling sectarianism in Pakistan and other ethno political groups like Pashtun Tahafuz Movement to defame Pakistan in the name of human rights. In fact, Pashtun greatly enjoys their due rights in Pakistan. Hence, the government of Pakistan needs to chart out a comprehensive strategy to deal with the terrorists and make the tribal region a safe area.

Earlier, the Afghan side was not secure and the Afghan government was supporting anti-Pakistan elements however, at the moment, it is unlikely the Taliban will support any anti-Pakistani group on the Afghan soil or tolerate them to conduct activities across the border. There should be a comprehensive agreement between the Taliban government and the Pakistani government for working against terrorists and extremists and not to allow any group that works against another state. The issue of TTP can be solved once Pakistan and the Taliban reach any agreement vis-à-vis extremist elements. In order to balance the Indian threat, Pakistan should maintain its credible deterrence to ensure its peace and security.

<http://southasiajournal.net/pakistans-security-challenges/>

## *Indian Nuclear Missile Proliferation: Effect on South Asian Strategic Stability*

*Amber Afreen Abid*

The nuclear capability of Pakistan is purely security based and depends upon the changing technological developments in the region. Pakistan maintains a posture of credible minimum deterrence and ensures strategic stability in the region. However, India continually pushes Pakistan towards arms race, by the development and induction of new aggressive technology, and incorporation of offensive doctrines.

The proliferation of supersonic and hypersonic weapons is echoing in south Asia which could be disastrous for the regional peace and stability. Ever since the mass nuclear power has been invented, the deterrence stability in the region is maintained by keeping the mutual vulnerability intact, which India tries its best to sabotage. The introduction of supersonic and hypersonic weapons could be devastating as it travels with immensely high speed, and the enemy can't be certain whether it is carrying conventional or non-conventional weapon, hence the chances and risks of nuclear war manifolds.

India recently test fired the air version of Brahmos supersonic missile. The supersonic missile is a joint venture of the Indian DRDO and the Russian NPOM. It is basically an offensive missile, and India intends to develop a series of supersonic missiles. India is most likely to supplement it with the nuclear missile as well, which would intensify the already volatile scenario in south Asia. Moreover, India has also tested the Supersonic missile assisted torpedo (SMART), which indicates the continuous modernization of its technology. Recently Indian Defence Minister said that India wants to go for hypersonic missile in line with credible minimum deterrence. Owing to the volatile situation in south Asia, with the absence of any conflict resolution treaties and agreements, the innovation in technology in South Asia leads to the change in the nuclear doctrines a swell. Pakistan maintains a policy of minimum credible deterrence, but that minimum is directly proportional to the advancements made by the adversary in offensive technology and ultimately in the nuclear doctrine.

The Indian posture of NFU is also questionable, as the statements from the defence minister of India comes otherwise. The recent development indicates India's move towards a

counterforce targeting, which is a highly destabilizing factor for south Asia. The Indian military modernization is far exceeding the 'minimum' in minimum credible deterrence, and there is no reasonable justification of credible and minimum in the recent developments. Such doctrines only exist when a country prepares for the offensive first strike targeting and pre-emption strikes, hence leading to a full scale war.

India doesn't have any security concern for which it is going for the acquisition of hypersonic weapons or change in doctrine. It doesn't have any potent threat from the neighboring countries to go for such ventures; hence, the drive is totally out of the prestige factor, as India wants to come at par with US, Russia and China in leading world technologies, without realizing the effect of such technologies on the regional stability. India needs to withdraw its hegemonic ambitions if the stability and regional peace is required or if the arms race needs to be withheld. As a responsible nuclear weapon state, Pakistan always maintains a modest nuclear posture, and any military development is the part of strategic chain in the south Asia, and or because of its allies.

<https://www.eurasiareview.com/30122021-indian-nuclear-missile-proliferation-effect-on-south-asian-strategic-stability-oped/>.

## ***Advancement of UAVs and Future of Warfare in South Asia***

***Ahyousha Khan***

Although drones considered as a modern day technology but their history can be traced in World War I and II as flying bombs and inaccurate devices, than in Cold War as surveillance and reconnaissance devices and later on right after the Cold War drone technology contributed in artillery and surveillance missions. However, than these weapons did not have their current day sophistication; start of 21st century, digitalization and computer based systems with the help of automated maps and satellites provided the current level of sophistication to drone technology. In 21st century this technology gains their notoriety when Bush Administration used them against terrorists in many countries, which lead to the debate of violation of sovereignty of states and elements of transparency in killings. Owing to their ability of ISR, precision striking and air support these weapons became widely sought after weaponry in arsenals of nations states.

Today, states are using these weapons against each other not just for ISR but also against to fight wars such as in case of Nagorno-Karabakh. South Asia is a home to two rival nuclear neighbors which are interlocked in to situation of uneasy peace due to many territorial disputes, hostile borders and deep rooted mistrust. The deterrence equation between both countries is getting effected due to continuous technological developments, offensive policy and doctrinal initiatives and because of the involvement of global powers in the region. In terms of technological developments recently both countries are working towards acquiring and operationalizing sophisticated drone technology. Therefore, the essential question in this wake is to analyze the trends of UAVs technology development and acquisition in Pakistan and India, while also it is important to analyze the impact of this technology in any future conflict.

In terms of drone technology recently Pakistan's GIDS (Global Industrial and Development Solutions) showcased its Medium Altitude, Long Endurance (MALE) Shahpar-II drone, which is indigenously developed by the NESCOM and was also displayed at the military parade on 23 March, 2021 by the country. According to the media sources, Pakistan's Shahpar-II is equivalent to the Turkish Bayraktar TB2 with its carrying capacity of nearly 170 kg and other capabilities. Other than, Shahpar-II, Pakistan also inked the contract with Turkish Aerospace Industry to develop MALE combat drone. Moreover, Pakistan also acquired 4 Cai HONG MALE UAVs from China and in 2018 both countries inked the agreement where China would sell 48 Wing Long II drones to Pakistan. Other than this international collaboration there are indigenously developed drones by Pakistan such as Buraq and Shahpar-1, which are in service and Pakistan has operationalized them against terrorists and for ISR at its eastern border. India after its strategic agreements with the US is also in process of acquiring several high-end military UAVs. At the moment it is in process of procuring 30 MQ-9B Predator UAVs from the US, Heron from Israel and has already inducted guardian drones from the US for its Navy. With the arrival of drones technology in the region India is heavily investing in anti-drone technology as well.

On the other hand, Pakistan has so far not invested in anti-drone technology. But with the recent trend where Pakistan alone till mid of year 2021 shot down 8 India Spy small drones or quad copters reflect that in future Pakistan might need to invest in certain kind of air defence system that would also provide defense against drones ingression at its borders. India, recently in month of December, handed over its armed forces, locally developed and anti-drone system

along with automated air-launch system and advance countermeasure radar system. Recently given anti-drone system to Indian armed forces possess the “soft-kill” and “hard-kill” capabilities, which means it can electronically jam in the incoming drones and through laser strike can kill it as well. India is also deploying its recently acquired batteries and systems of S-400 anti-aircraft and anti-missile system along with its border against Pakistan. As drones are less expensive than combat air planes and can achieve the objective of increasing in adversary’s homeland they will be preferred by a state that wants to exploit the territorial boundaries between states.

At the moment due to current Indian strategic thinking where it deems fit to exploit the levels below the nuclear threshold by conducting surgical strikes armed UAVs could together with capability to target adversaries aerial capability could give the “false sense of superiority” to India, which could lead to it using drones as a mean to conduct surgical air strike. However, any such situation will require Pakistan to respond to Indian offensive actions because in 2019 crisis, Pakistan showed its commitment towards its reliance on the policy of “quid pro quo plus”. Thus, what is needed is to realize that levels below the nuclear threshold, even if they seem exploitable, are not exploitable without the risks of escalation of crisis into full blown conflict. Drone is a technology which provides both countries with numerous benefits for not only their security but also for the development of their society, thus it is important that both countries remain cautious in their use.

<http://southasiajournal.net/advancement-of-uavs-and-future-of-warfare-in-south-asia/>

## ***Strengthening Sea Based Deterrence: Pakistan’s Quest for Strategic Equilibrium***

***Sher Bano***

Pakistan’s Navy on December 8, 2021 conducted a successful live-fire test of SAMs “surface to air missiles” at Karachi port demonstrating its GBAD “Ground Based Air Defense”. It was a joint venture carried out by Pakistan’s navy and air defence unit, showcasing the armed forces combat readiness. Strengthening its sea based nuclear capabilities would allow Pakistan to counter India’s growing BMD “Ballistic Missile Defence” capability and other technological developments by Indian navy. The Pakistan’s pursuit to enhance its sea based deterrence is defined by concept of mutual vulnerability and is based on rational calculations. In the evolving

maritime environment, if there is no effective nuclear deterrent at sea by Pakistan, the chances of conflict escalation and the probability of use of nuclear weapons would also increase.

As per the spokesperson of Pakistan's Navy, the missiles successfully hit the target in the live-fire test. Admiral Muhmaad Amjad Khan Niazi (The Chief of Naval Staff) was chief guest at the occasion. He was updated about the ongoing developments, operational capabilities' of Pakistan navy and how the induction of SAMs would augment the security. The Chief of Naval Staff expressed his satisfaction over the operational readiness of the navy. He reassured that Pakistan navy is fully ready and prepared to prevent any nefarious strategy against the country. The Pakistan navy earlier also conducted "steel cutting" at Karachi shipyard in order to begin the work on fifth hanger class submarine that would be first of its kind to be indigenously built by Pakistan navy. This submarine is the part of agreement of eight submarines with China that have the capability to attack various targets simultaneously. In 2015, Pakistan bought eight submarines from China. Pakistan will manufacture four among the eight vessels and rest would be supplied by China. By next year the first submarine built by China is expected to be delivered, whereas the other four are expected to be built at Karachi by the year 2028.

Even though right now Pakistan does not have SSBN but these viable sea based deterrents would help it to maintain the strategic equilibrium and to stabilize its deterrence relationship vis-à-vis India. The naval nuclear deterrents have historically relied on submerged platforms because as compare to land based deterrents, they offer a fair degree of concealment. This advantage of reduced sea based deterrent vulnerability is critical in order to stabilize deterrence. It is also important to note that despite being significant platform in attaining second strike capability, nuclear weapon states do not pursue SSBNs as the first platform to achieve deterrence. The reason behind this is the technological and economic considerations. However with the increasing possibilities of pre-emptive strikes by India, Pakistan as next logical step needs to develop SSBN capability and attain credible sea based deterrent.

India is also rapidly increasing its ASW "Anti-Submarine Warfare" capabilities that might become a challenge for Pakistan's sea based deterrent in future. In order to meet the futuristic requirements of Indian navy, it has been collaborating with the US. As a result of 2020 Indo-US deal on ASW, India had acquired MH60R Seahawk helicopters and DRDO has also been collaborating with India's Defense Research to develop multiple AUVs "Autonomous

Underwater Vehicles”. In the emerging maritime environment, this ASW operation might shift from being defensive mission to an offensive one in order to attain greater surveillance in sea. Even though yet there is no practical application of ASW offensive capability, if India decides to take this step, it might limit the operational mobility of Pakistan’s submarines endangering their survivability by targeting and locating the submarines on patrol. Hence this increasing vulnerability of the undersea forces might lead to crisis instability. These emerging trends might have implications for Pakistan and would force it to diversify its sea based and land deterrent forces. The possible offensive use of these systems that aim to enhance deterrence would worsen the crisis stability and would instigate arms race. Pakistan has responded to India’s growing counterforce capabilities by opting for diversifying its nuclear platforms instead of increasing its land based nuclear arsenal that would ensure greater survivability along with credible targeting options to counter Indian BMDs.

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