CISS WEBINAR REPORT

Two Decades of India-US Strategic Partnership: Impact on Strategic Stability in South Asia

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03:00 pm – 05:00 pm

Overview of the Webinar

The Center for International Strategic Studies (CISS) held a Webinar on "Two Decades of India-US Strategic Partnership: Impact on Strategic Stability in South Asia," on November 27th, 2020. The webinar was chaired by Ambassador Ali Sarwar Naqvi, Executive Director CISS. He formally inaugurated the webinar by his welcome and introductory remarks. The guest speakers included Dr. Naeem Ahmed Salik, Dr. Rajesh Rajagopalan, Dr. Adil Sultan and Dr. Mansoor Ahmed, while Ms. Afeera Firdous introduced the panelists and moderated the discussion. The main theme of Webinar was to discuss the Two Decades of India-US Strategic Partnership: Impact on Strategic Stability in South Asia. The presentations by the worthy speakers were followed by an interactive question answer session, in which different participants shared their thoughts and analyses regarding the webinar's presentations. This report comprises the salient points of the presentations and set of takeaways drawn from the discussion and question-answer session.

Opening Remarks by Ambassador Ali Sarwar Naqvi - Executive Director CISS

Good afternoon ladies and gentlemen, I welcome you to this fifth CISS webinar. I welcome the distinguished speakers, the scholars and experts, the students, and media representatives, as well as the diplomatic representatives and the foreign participants to this event.

Ladies and gentlemen,

The subject of our discussion today is 'Two decades of Indo-US partnership: Impact on Strategic Partnership' which needs proper and full examination due to many implications and ramifications that relate to this relationship. The evolution of the partnership is perhaps one of the major geo-political developments of the last twenty years. In my view, it goes back even a decade earlier than that. When I was in Washington, President Clinton assumed office, in his first term, in 1992. I could hear suggestions being made in the think-tank community in Washington of starting a new relationship with India. I remember Carnegie bringing out a monograph strongly recommending that such a step be taken by the US. The Afghan war had ended with the withdrawal of the then Soviet forces from that country, and the US did not have much use for Pakistan any longer. It was therefore looking at South Asia in a new perspective in which India figured prominently. Be it as it may, the shape of its new relationship with India began to materialize. Back in Islamabad, I also saw President Clinton's much-heralded visit to India in March 2000, during which he made a 5-hour stop in Pakistan, which visit I handled as Additional Foreign Secretary in the Foreign Office overseeing the Americas desk. Anyway, that is the broader framework of this subject. Coming to this webinar, its objective, as specified from the title,

is to assess the development of the India-US strategic partnership in the last two decades and how it has and will impact the peace and stability in the South Asian region.

United States-India bilateral ties have leapfrogged into an enduring strategic partnership over the last two decades. Both India and the US have their reasons to build on their strategic partnership. India sees the US as an important source of weapons and technology. It also seeks US political support which increases India's power and influence in the region. The US, on the other hand, wants to get a big share in India's military procurement, it wants to beef up India's military might to make it a counterweight to China, has eyes on India's domestic market, and sees a major partner and ally in it.

Over the years, India's well-placed diaspora in the US has put its enormous weight in advertising India as the most effective strategic counterweight to China before the Congress and the US security establishment. This has become the basis of a new era of US-India relations with the US designating India as a 'net security provider' in the Indo-Pacific, and a key member of the Quadrilateral Alliance against China, notwithstanding India's robust and long-standing defense collaboration with Russia.

The first step in forging US-India ties was the General Security of Military Information Agreement (GSOMIA), concluded in 2002. This was followed by the conclusion of Next Steps in Strategic Partnership (NSSP) in 2004 and the New Framework for the India-U.S. Defense Relationship signed in 2005 that paved the way for a broad-spectrum US-India defense and strategic cooperation in the domains of civil nuclear, civil space, high-technology military trade, and missile defense. The 2006 India-US civil nuclear cooperation agreement, also known as the 123 Agreement, paved the way for the

exceptional and unprecedented waiver to India in 2008 by the Nuclear Suppliers Group, without any corresponding obligations of an NPT signatory state.

The US has also helped India in gaining membership of three multilateral export control regimes—the Missile Technology Control Regime in 2016, the Wassenaar Arrangement in 2017, and the Australia Group in 2018.

In 2012, India and the US joined a Defense Technology and Trade Initiative (DTTI) for joint production and collaboration in an aircraft carrier and jet engine technologies and to modernize India's defense industrial base.

In June 2016, the US also designated India as a "Major Defense Partner," that puts India at par with the closest US defense allies and partners. The same year, both countries also signed the Logistics Exchange and Memorandum of Agreement (LEMOA). In 2018 the US and India signed the Communications, Compatibility and Security Arrangement (COMCASA), started the 2+2 Ministerial Dialogue between their Defense and Foreign Affairs counterparts, coupled with the grant of the Strategic Trade Authorization Tier-1 status to India. The latest of the four foundational agreements (GSOMIA, LEMOA, COMCASA) is the Basic Exchange and Cooperation Agreement (BECA), concluded last month.

Since 2008, India has purchased $ 21 billion worth of high-tech conventional military hardware from the US alone. These agreements have coincided with the largest and most ambitious expansion in India's modernization, buildup, expansion, and restructuring of its conventional military and strategic nuclear forces in history. It has also made unparalleled

progress in its civilian and military space program. It has also conducted more missile tests in the past two months than ever before in such a short timeframe. India is being propped up as a net security provider for the Indo-Pacific and South Asia by the US.

These developments will have far-reaching and enduring implications for regional security and will grossly undermine strategic stability. Ostensibly against China, the US-India strategic partnership, as India's other strategic defense collaboration with other major arms suppliers, directly impacts Pakistan's security by exacerbating existing asymmetries that are driving shifts in force postures and are fueling offensive conventional and nuclear doctrines in South Asia.

In this context, the Center for International Strategic Studies Islamabad has planned to hold this webinar that will focus on four key areas. We will have both Indian and Pakistani perspective on India's space, missile, and nuclear program. We will also cover how India-US Foundational Agreements are pivotal to India's emerging military capabilities and the two decades of India's nuclear program development.

We have four distinguished speakers to talk about these important aspects of the India-US strategic partnership. From our center, we have Dr. Naeem Salik and Dr. Mansoor Ahmed. We have Dr. Rajesh Rajagopalan from India and Dr. Adil Sultan from Air University, Islamabad.

We hope that the webinar will present an informed and realistic picture of the issues and generate a fruitful discussion. I wish the participants a worthwhile session.

Thank you.

Speaker 1: Dr. Naeem Salik

Topic: India's Space and Missile Program: A Pakistani Assessment

Dr Salik started his presentation with reaffirmation about the depth of India-US bonding that there is nothing new about 2004 India-US Next partnership. One of the most significant cooperation in civilian space research and as a result of that most of the entities associated with India's Space and Research Organization which were previously on the entity list of US commerce department were moved from that list and allowed to have commerce related to the space technology from the United States. However, we know that space technology has something which has got multiple uses even space capabilities which are solely for civilian purposes but can easily be modified for military purposes. India's space programme started in 1967 in earnest and in fact Pakistan's space program predates India's space program by couple of years. But unfortunately, it did not get enough attention or the allocation of resources therefore, the Pakistani space program lagged behind and it is now trying to catch up. But a big gap has been created in the meantime. India's in the beginning sent some of its scientists for training in the US and that group of scientists including AJP Abdul Kalam who had an opportunity to visit NASA and get important information about space exploration and then when he came back he setup a space research organization. But actual boost to the Indian space program was given by what we know as the Vikram SaraBhai profile who was secretary of Indian Department of Energy and Chairman of Indian Atomic Energy Commission. This was the 10-year development program announced in early 1970s India as we know conducted its first nuclear tests in 1974 but unlike 1998 it did not declare itself as a nuclear weapon

state at that time. One of the major reason other than the political and diplomatic considerations was that India did not have any appropriate delivery systems for its nuclear weapons except some old vintage Canberra bombers which had very limited range and pay load capacity that is why India refrained itself from declaring its nuclear weapons status. Because it would have been counterproductive then and could have got some counter reactions from may be China or from some other countries. So it was held back then and the focus shifted from the nuclear program to the space program which had two elements one was the surveillance, intelligence and communications systems which would ultimately become part of the command and control systems and also provide India intelligence, reconnaissance and surveillance capabilities which are essentially useful for target acquisition. It also linked up with the missile program because the rocket technology which is used for launching of satellites is also the same which can be modified a little and used for missile purposes. So that was the focus of the SaraBhai's profile, it combined the developments in the space and nuclear programs and went parallel from there onwards. The India's space program has developed Space Launch Vehicles (SLV's) and augmented SLV's in the early 1980's but they had limited payload carrying capability and could not launch bigger satellites and bigger loads in the space. They also faced lots of technical failures in the launch of space vehicles. As a result, they discarded SLVs and ASLVs programs. And then India started the Polar Satellite Launch Vehicles (PSLV) program and later on the Geo-Synchronous Launch Vehicles (GLSVs) programs. The PSLVs was a very successful program as far as India's space program is concerned, it has four stage rocket and can carry 1600 Kilograms of payload into space. Basically, it is for low earth orbits and it has been the work horse of India's space program.

It has also been used for commercial purposes for launching satellites for other countries. Up to May 2019 it has completed up to 50 missions. It also included mission to the moon and Mars Orbital. So this programme has proved successful. In the beginning GSLVs had some technical problems but later on it became mature. Now they have capabilities in low earth orbit and as well as in Geo-Synchronous orbits. Additionally, India can be seen as a country which has largest fleet of remote sensing and communication satellites in the Asia which is quite an achievement. But then to further add to technical sophistication to the program the agreement between the US and India in 2004 NSSP has opened up new avenues for India to further expand its space program. Since then we have seen further developments in the India's space program such as last year on 27th of March India conducted its first anti-Satellite test. By demonstrating the capability, it joined the exclusive club of four countries which have tested this technology including US, Russia, China were the first three and now India is the fourth member. It is generally believed that India's Anti-Satellite program was the response to China's ASAT tests in 2007.Since India has got lots of space assets, it probably felt threatened by China's capability to launch anti-satellite vehicles, to deter any kind of offensive actions against India's space assets. Although it was kinetic kill test launched in controlled environment because it hit one of India's own satellite which was launched a couple of months earlier than this test. The earlier attempt in February 2019 was a failure but the March 2019 attempt was succeeded. And the timings were very important because the technological advancement has its own domestic political angle because the Indian National elections were to be held in May 2019. Obviously, the ruling party gained political dividends out of the success of this test. However, there are other aspects also people said that the kinetic kill capability

is an old technology and now the new thinking is to avoid any space debris which can cause problem for other space satellites moving in close by orbits. Now the focus is shifting towards laser and other electronic means to jam the satellite signals. India's established space program is growing day by day. Now it has advanced capabilities for remote sensing, communication and surveillance. It has recently launched…… the Carto Sat I and II which has got very good resolution. Carto Sat I has about resolution of 3 meters and Carto Sat II has 1 meter which will be very useful for military purposes. It can provide surveillance of China's or Pakistan's movement at the borders. So this was the India's space program's overview, once you have the capability to launch PLVs and GSLVs than it is not very difficult to convert that capability into some kind of ICBM or intermediate range missile capability. We have seen that India started its ballistic missile defense program in mid-1990s and part of that defense program Prithvi air defense system which was one of the interceptors of one of the BMD systems was modified and used as the anti-ASAT satellite program. So there is complementarity of these sophisticated systems which can be modified from one use to another use such as from space to the missile program.

As far as the India's missile program is concerned it began with the reverse engineering of the Russian origin surface to air missile SAT II and this was converted into Prithvi missile it was a liquid fuel missile with the range of 150 Kilometers. The testing of that missile was started in 1988 and in 1989 the Indians tested the intermediate range missile Agni which had 1500 kilometers Range II stage missile with one liquid fuel and one solid fuel stage. Although, this was not a very successful experiment the first test was

successful but the subsequent two tests failed and then this program was frozen until 1989 when it was resumed. India announced that they were going to send a manned mission to the moon in 2022 coinciding with the India's 75th Independence anniversary. It has established a Defense Space Agency along with Space Research Organization similar to Space version of DRDO Department of the US. It is also planned to establish Aerospace center under the aegis of the Indian Air Force and that will be the center for controlling data for communication and intelligence being provided by all the satellites particularly those associated with the military applications. It has also established a technology cell in Ministry of Home Affairs to benefit from the images available from the Indian satellites specifically from remote sensing and surveillance satellites to help control the borders. India besides the US, also got cooperation from Australia, Japan and France.

Coming back to the missile program had actually started in 1980s and it was called the integrated guided missile development program. The program was aimed at developing five kinds of missiles out of which two had strategic implications, the short range Prithvi and medium range Agni missile, others two were surface to air missiles one short range Trishul and the other medium rage Akash and fifth one was anti-tank missile but of Pakistan's concern were the two missiles Prithvi and Agni. This program was continued for 25 years and warmed up in 2008 and after the launch of Agni III missile with 3000-3500 kilometers range. The Prithvi missile test as I mentioned was started in 1998. Initially, 15-16 tests were conducted before they were inducted them into the Indian army there were two longer range versions in the Indian Army with 150 Kilometers range which can carry 1500-kilogram payload so therefore, it was clearly a nuclear capable missile.

The other one was of 250 kilometers range with air force version which was acquired by the Indian Air force to be used for the interdiction of Pakistani air bases and installations. It was a ground based missile it was not the air launched missile. The other one was the Dhanush or Prithvi III missile with range of 350 kilometers. This is the Naval version again a unique experiment because generally on the naval platforms cruise missiles are employed because the thrust of the ballistic missile may crash the top deck of the ships. Therefore, they had to be reinforced with the specially designed decks on the Indian ships. But interestingly, it was liquid fuel missile obviously which cannot remained filled. It requires to contain liquid filled to be stored on the ships with all the dangers of leakage of the very toxic fuel as well as the vapors which could be very harmful to the cruise. But this experiment is still going on. In view of technical problems in my view this may be abandoned in the future as Indians are developing other sea-based capabilities. Therefore, it may not be useful for them in the long run. India has also launched long range versions of Agni I and Agni II with 2000 kilometers range, Agni III with 3000-3500 Kilometers range, Agni IV 2500-3500 kilometers range. These ranges are in a broad ranges and payloads can be modified according to the requirement of distance. The Agni V is the ICBM category missile with 5000-8000 kilometers range and Agni VI which is likely to have range of 100000 kilometers is still in the development stage. Then there are the K series of the missiles out which two are already fielded. One is K-15 with 700 kilometers range, it is SLBM which can carry 1000 kilograms of payload. the other is K-4 with 3500 kilometers of range which can carry 1-2 tons of payload. The K-5 is the longest range missile which is in ICBM category with 6000 kilometers range it is still in the development phase. The K-15 and K-4 are installed in the Indian submarines. There is

another missile with the name of Shuriya short medium range missile which is supposed to be a hypersonic missile as its tests were after declaration as a technology demonstrator before it will be ready for induction into the defense system. There are also short range tactical ballistic missiles like Prahaar with 150 kilometers of the range which can also be used as nuclear delivery systems. Although, Indians have never said it was a nuclear delivery missile. Probably Indians will replace the aging Prithvi I missile with it. There are two more versions of Prahaar one is Pragati with 170 kilometers of range, and the other is Pranash with 200 kilometers of range. Then there is Nirbhay which is a long range sub-sonic missile with 0.6 – 0.8 Max speed. It has got a range of 700 kilometers. It is still under development but supposed to be a nuclear delivery missile. India already has the cruise missile which was first introduced in 2002. This is actually a joint venture of India and Russia. This gave us an idea about the India's inventory with variety of missile in its defense system with multiple ranges to get the target. Recently, they have exercised with a long list of missile testing probably as a strategy of signaling in view of the current tensions with China. It also draws attention to the fact that India is upgrading its missile systems specifically the hypersonic range missiles. Finally, the Ballistic Missile Defense systems of India which started in 1990s. The first test was carried out in 2006 and then they had subsequent tests.

The aforementioned factors, taken together, generate an increasingly complex strategic competition in multiple domains with a significant risk of crisis and deterrence instability in the South Asian region.

Speaker 2: Dr. Rajesh Rajagopalan

Topic: India's Missiles and Nuclear Program: An Indian Perspective

I thank CISS and Ambassador Naqvi for inviting me to this meeting. Strategic stability in the region and how India's missile and nuclear programs fit within that and what the impact is, specifically in terms of US-India strategic partnership that has been developing over the last two decades.

Strategic stability is a function of two factors; both capabilities that Dr. Salik very ably pointed but it is also a function of behavior. We can't just look at capabilities alone. He suggested that we need to look at both capabilities and behavior when you look at strategic stability in the region. Now these are not unrelated obviously. Capabilities can limit or encourage certain behavior but behavior can also, especially presumed aggressiveness of adversaries, drive capabilities and the desire to acquire particular capabilities. So, we have to look at both.

In other words, behavior is an important driver of strategic stability. This is not something new because we have a significant amount of literature going back to Stephen Walt's examination of balance of threat. When talking about threats, it encompasses both capability or relative power as well as perception of threat. Perception of threat is potentially based on the behavior of potential adversaries and so on.

There is not just Stephen Walt but a significant amount of subsequent literature that looks at the impact of behavior on actual relations as well as on variety of areas but definitely on strategic stability also arguing that behavior would matter. It is not to

suggest that capabilities don't matter but strength and weaknesses are, in fact, is an important factor for strategic stability because weakness, of course, can lead to insecurity and insecurity is an important driver of state behavior. Also, we can ignore that part but I would suggest that we need to look at both, capabilities and behavior.

When you talk about strategic stability in South Asia, we firstly talk about a key factor which is that most of the crises over the last two decades have been the consequence of various terrorist incidents that India blames on Pakistan where Pakistan has clearly used terror as a strategy which has been an important problem.

2008 Mumbai terror attack which happens to be an important factor from an Indian perspective about what impacted strategic stability. Going back to post -nuclear tests 1998, whether it is Kargil or Indian Parliament attack, every major crisis in the last 20 years, had been attached to terror attacks against India that came from Pakistan. Hence behavior is an important factor that we need to consider while looking at strategic stability.

Paul Kapur has an excellent book on Jihad as a grand strategy where he has shown that using terror as a strategy has brought some benefits to Pakistan in terms of it being an asymmetric capability for, particularly, a weaker country. But overall, it been much more harmful to Pakistan's strategic situation because it also forces India to increase military spending and capabilities. Also, that rebounds as a classic security dilemma because the more fearful India becomes of such asymmetric attacks the greater is Indian spending on its security and the less trust it has on Pakistan. So, this leads to lack of trust resulting in strategic instability by increasing political competition by

intensifying the arms race leading to tensions and crisis. Hence, we have a whole history of last two decades which I don't think we need to go into. But this illustrates the factor very clearly. We cannot ignore that part of strategic stability.

The other side of equation is, of course, capabilities as Dr. Salik correctly pointed out. If we look at Indian capabilities more specifically nuclear and missile, Indian capabilities have actually grown very slowly. It is true that India has a large missile program but when we talk about all the way from Prithvi to Agni and what not that is obviously legacy programs and so it's been almost four decades since it started. Even though now it's been a very long program and a number of missiles and missile capabilities have been part of this program.

So, five quick points that I will make on this, given the limited amount of time. The first point that I would say is that to the extent the US-India Strategic Partnership has affected India's missile and nuclear capabilities, it has actually limited Indian capabilities. Two parts to this argument; first is that US-India Strategic Partnership itself has grown. There are no two opinions about it that India and US have expanded their strategic partnership primarily driven by China's rise as well as Chinese aggression. I and others in India have argued that US-India Partnership should have gone faster and closer. But it is what it is. This relationship has clearly become fairly solid, even though me and a lot of others are not entirely satisfied at the state of the relationship and we think it should be even closer.

The second part in terms of its effect on strategic stability, I would argue that it has generally been positive because India has wanted closer ties and benefits from the

United States. India did not want to hurt that prospect by worrying the US with a large nuclear program or a large missile program. India has been very concerned since 1998 about presenting itself as a responsible nuclear actor. Hence, if you look at 1999 draft nuclear doctrines which talked about triad, that immediately caused concern in the US about India's plans, and therefore the draft nuclear doctrine remained a draft. Indian government disowned it even though, ultimately, it built a triad but the point is, India has been very concerned about giving an impression of having a large nuclear or missile program.

So, India has, similarly, politically limited missile testing and development again because it was seen as potentially damaging at various points and India's DRDO and other organizations have complained about the fact that they are not being allowed to test. So, the most recent series of tests that both Dr. Salik and Ambassador. Naqvi pointed out, are actually an illustration of that part. They seem to have slightly removed that political restriction on these tests and so we had a lot many more tests over the last two months. But that also indicates that there has been a lot of political control over those tests. The point I am making is that the US-India strategic partnership has actually led to a limitation in Indian capabilities rather than encourage it.

The second point that I make is that the growth in India's nuclear arsenals particularly in terms of nuclear warheads capabilities have been extremely steady but very slow by all open-source calculations. India actually has smaller number of nuclear warheads than even Pakistan. I say even Pakistan because it is, obviously, a smaller country and only has India as its primary adversary, whereas India has both Pakistan and China.

Despite this India has actually smaller number of nuclear warheads than Pakistan. India does have larger reservoir of fissile stocks but this is being kept for India's fast breeder reactors and therefore won't be available for warheads. Thus, India has not built the number of warheads that Pakistan has, for example. The smaller number is particularly surprising because every year there are at least one or two reports that come out saying that Pakistan has more warheads than India, such as from SIPRI or IISS or some other sources and there is zero response from India at official level and no real concern at the popular level either, even in terms of strategic community, partly because I don't think India bothers too much about this fact. Although, there are a few people in the strategic community who may want much larger arsenals. I will come to this part of it in a bit. This tells you something about the growth or the lack of growth in India's nuclear capability. So, this is one aspect. It is surprising because India has two adversaries and it has to divide its forces between Pakistan and China.

The third point that illustrates restraint is when we look at not just warheads but also at the missile delivery capabilities. Again, Indian missile development programs have been steady but extremely slow. It's been almost four decades since the IGMDP (Integrated Guided Missile Development Programme) began but it is only now maybe beginning to field -- if Indian press reports are correct -- beginning to deploy the first ICBMs, the Agni 5. Just to give you comparison: the US and the USSR took less than a decade in developing their first ICBM from the time they pursued a missile program in the post second world war period. Although they were starting with a much smaller technological base and starting with much lower levels of technology. And other countries have done

the same. No country takes 40 years to develop ICBMs once they put their minds to it, especially large countries like India.

So, clearly if you look at the Indian missile development that again has been extremely slow and again if you look at the comparison to Pakistan, it has more ballistic missiles., If you look at the latest Military Balance by IISS (2020), Pakistan has actually more ballistic missiles, when we combine their SRBMs and MRBMs, than India. It's very clear across the board that India does not have more missiles than even Pakistan, let alone China. So, when you talk about the growth part of it (strategic capabilities), I think we need to keep these numbers in mind.

The fourth point that I would make is about why there is low development of capabilities and why there is such lack of concern in India about these low numbers? I think the reason is fairly straightforward: because India sees nuclear weapons as playing a very limited role in its military strategy. India sees nuclear weapons as only useful in deterring other nuclear weapon states and therefore nuclear weapon don't play any military role outside of just nuclear deterrence. Hence, India does not require nuclear weapons to play a role in conventional deterrence and in deterring conventional attacks.

That is why India has a fairly large conventional military force. And it is, itself, a large country and a reasonably strong country and it can defend itself with conventional weapons. India faces no existential threats and countries facing existential threats have to worry about the conventional military balance and about how they will use nuclear weapons but India does not have these worries. I am not going down the moral path that many Indian academics or strategic community members might argue, that India's

slow development is because of any moral or ethical reasons but it is primarily due to the fact that India does not require a very large nuclear force. India's nuclear development has been steady but very slow, both in terms of warheads as well as in missiles, smaller than Pakistan's.

The fifth point that I will make is about the improvements in India's conventional military capabilities and I think that's fair enough. India has a larger conventional military than Pakistan. I can understand how that might be potentially worrying for Pakistan but it also has to be kept in mind that India does have, again, two adversaries with which it has serious problems on the borders, not just Pakistan but also on the other side, China. Ten infantry divisions are basically devoted to the northern border. Hence, when you take into account that India has to have almost a separate army dealing with the northern border, then Indian conventional military capability does not seem that large. Also, to some extent that imbalance can't really be helped because India has an economy 7 to 8 times larger than Pakistan so it is natural that it will spend more even proportionately. And India's defense spending has always been proportionately smaller than Pakistan. The point is that this does permit a larger India a larger military force and allows India to have a much larger force despite a smaller proportion of money being spent than Pakistan. It is also true that India faced the same problem of imbalances with China but Indian response to China has primarily been defensive rather than offensive. India has attempted to build political, diplomatic, economic and even military links with China. We have had military exercises until last year with China. All in an effort to build that strategic stability even on the other side, and not just with Pakistan. Obviously, last

few months demonstrates that none of this effort has succeeded. I think the point is that the strategic stability does require considering more than capabilities, even when you have an imbalance. Engaging in rather offensive strategies does not really help. So, India's response to China, for the same sort of imbalance that Pakistan has with India, has been more defensive and its failure does not obviate that part.

Final point is about where does this all go, what of the future? I know there have been arguments from some good friends in the US about India moving towards counterforce and things like that but I brought out a lot of long rebuttal to that argument about India's counterforce "temptations". I find it difficult to believe that India will go down the path of counterforce considering that India has a smaller arsenal than Pakistan. So, it makes no sense for India to have a counterforce doctrine. It would require India to have a nuclear force that is several times the size of Pakistan's nuclear arsenal. I would expect that India's nuclear and missile development will continue to grow for the simple reason that even 20 years after the 1998 nuclear tests and 40 years after the IGMDP started, we are only just now beginning to deploy the first missile that is potentially capable of targeting a significant chunk of China and even that depending on the range. We even probably need to have even longer range to be able to cover all of Chinese territory from southern India. We can't obviously put it, as some have suggested, in Assam.

And again, Dr. Salik mentioned the SLBMs, they are useless as far as the range goes because currently they are of such low range. Even the next one that we are going to get is of such low range that it will have to be continually developed to have missiles of much longer ranges but I would expect that would be at the same pace that it has been

for the last two decades. Steady but very slow. And no great change in terms of nuclear doctrine because that would remain NFU and minimum doctrine and we will continue to have a small nuclear force.

Let me stop here. I am happy to take questions in the discussion. Thank you.

Speaker 3: Dr. Adil Sultan

Topic: The US-India Foundational Agreements and India's Emerging Capabilities

Dr. Adil started his speech by explaining in detail about the "US-India foundational agreements and India's emerging capabilities". India-US have pre-recently signed this Basic Exchange Cooperation Agreement (BECA) generally known, that is recently concluded 2+2 dialogue which is the last four foundational agreements that will enable India to get this information gather from the US satellites and used the advanced navigationally leads on the US supplied platforms. The other three agreements that India has signed with the US include: General Security of Military Information Agreement (GSOMIA) that was signed in 2002, Logistics Exchange Memorandum of Agreement (LEMOA) in 2016 and Communications Compatibility and Security Agreement generally known as COMCASA in 2018. These agreements together with the growing strategic partnership between the two countries is likely to significantly enhance India's military potential. India claims that this build-up is necessary to counter the perceived Chinese threat and to fight a two-front war with both Pakistan and China. India however is unlikely to involve itself in major military conflict with China as was evident from the recent Ladakh-Skirmish issues which leaves only possibility of India's military potential being used against its principal adversary i.e., Pakistan in the future

military crisis. It is therefore, not difficult to comprehend while Pakistan has signaled its discomfort when India and US signed BEACA Agreement recently which would help improve India's military situational awareness and preparedness for planning strikes against Pakistan. These concerns become more relevant keeping in view India's involving posture of pre-emptive counter force strikes.

Now just giving a brief background from Next Step in Strategic Partnership (NSSP) which was concluded in 2003 to the conclusion of BEACA in 2020. What was the road map? India and US agreed on the roadmap that could help the former build its military potential and the stature of the credible reasonable power to help counter the big growing Chinese influence in the region that was the stated objective. The next step in the strategic partnership that was agreed between the two countries in 2004 provided the basis for expanding the bilateral engagements in the fields of space, civil-nuclear energy and dual use of sensitive technology. The joint statements of July 18, 2005 provided a future framework of building a strategic partnership and included commitment to build closer ties in space exploration, satellites navigation and satellite launch. The most vital component of the strategic partnership was the civil-nuclear cooperation agreement that offered unprecedented concessions to India allowing it to keep at least 8 out of the 22 facilities outside the International Atomic Energy Agency safeguards and these were to be used purely for military purposes. The nuclear cooperation agreement wouldn't have been possible without the help of US amending its own domestic laws that prohibited nuclear cooperation with the non-NPT state. Not only this was achieved to benefit India but the US also closed the 48th member supplier

group to grant India's specific exemptions from the groups export control guideline. So that India could engage in civil nuclear trade with requisite with the members of NSG. US is pushing the NSG members to give another exemption and allow India to become formal member of the NSG. Interestingly, the NSG that came into existence, there is consequence of India's decision to divert civil-nuclear technology for military purposes is now being asked to accommodate the same country that is the reason for the groups very existence. The US has also pay for India's entry in three other export control regimes which included the Missile Control technology regime, the Australian group and the WASSENAR Arrangement. This allows India to exist sensitive dual use technology with relative ease and use it for military purposes without much difficulties. Interestingly when India and US were negotiating the nuclear-civil cooperation agreement in 2005 and 2006, the BJP was in opposition and hard opposed the strategic partnership accusing the then Indian Government of a sell out and compromising on India's strategic autonomy. Almost after 15 years, the same BJP is now championing the strategic partnership and forging new agreements that may formally integrate India into the US led military alliance and as the result of these arrangements, India may no longer be as autonomous as it wanted to be.

Dr. Sultan further described briefly about BEACA. The technical details and scope of the agreement are unlikely to be made public but this agreement will facilitate exchange of geo-special information between US department of National Geo Specific Intelligence agency and India's ministry of defence. This allowing both the countries to share military information including advance supplied topographic data such as maps etc. The data

gathered by the US as a result of this new agreement, is unlikely to be shared with the third party due to the confidentiality clause that was inserted to specify India's concern about the possibility of US sharing information about the Indian military installations or facilities with Pakistan. The excitement within India over the recently concluded BEACA and its associated benefits projected to be a potential game changer as we continue to read literature from India. This may have inverted the exposed inadequacy of India's existence surveillance and information gathering the infrastructure that includes its space based and air borne platforms that are acquired from different sources. India that has been projecting itself to be a space power with the demonstrated capability to shoot down the adversary satellites was apparently lacking the requisite technology to emerge as a real space power. The new agreement besides facilitating the dialogue data will allow India to acquire advance navigational aids and avionics that could be used on US supplied aircraft and drones. India had presented its 9 operating supplied P-8I long wing surveillance aircraft and is likely to acquire another 9 in the near future. The conclusion of BECA has also enabled India to lease 02 predated drones from US that are now being operated by the Indian Navy. These drones could also be used along the LOC to gather geo-special data and to plan precision strikes against Pakistan. This data could be useful to improve accuracy of India's cruise and ballistic missiles that maybe necessary if India contemplates counterforce strikes against Pakistan in the future and one continue to say that contemplating counter strikes because several Indian leaderships have been getting about this possible potential shift in India's nuclear doctrine and possibility of pre-emptive counter force strikes against Pakistan.

Implications for the Region

The US-India comprehensive global partnership as they say, is likely to enhance India's political standing at the international level besides helping the current BJP leadership to restore its credibility at the domestic level. Why the term credibility? This is what we saw at during the 2019 crisis and during the recent skirmishes at LOC also, BJP's credibility has been questioned. The way they were projecting or plotting against Pakistan. So besides signing the four foundational agreements, India and US have also agreed to do bi-lateral military engagements which would include holding of joint military exercises, Training in expert exchanges. These developments are being used as concern by the Indian neighbors. China has already dismissed these efforts to show off and effort to intermediate China. Whereas Pakistan sees these developments as a threat to the regional stability which needs to be countered to assure strategic stability in the region. India has also recently tested hypersonic technology demonstrative vehicles HSDTV that would be able to carry hypersonic cruise missile with speeds mark more than 7 and hit the target with greater accuracy. Hypersonic weapons due to their short air flights time could also be useful against mobile launchers such as NASR missile system that Pakistan is likely to employ as part of its full spectrum deterrence posture to deter India's limited war fighting doctrine of cold start doctrine or pro-operation strategy.

India can also utilize the information acquired from the US satellites and other surveillance equipment as a result of new arrangements for its drone strikes against the LOC or inside the main land Pakistan. This could be used to help produce the risk of

man aerial surgical strikes without putting the credibility of its air force at risk as it was evident in 2019 Balakot crisis.

Now what are the options for Pakistan?

Adverse implication of the growing India-US strategic partnership on the regional stability, this should not be seen as zero-sum game. Pakistan must resist the temptations and shouldn't signal it's willing to join any anti-US alliance to address its India specific threat perceptions. Mainly for two reasons:

a. The new cold war if we all label it as Cold war is unlikely to be similar what we saw as a result of Soviet-US military alliances.

b. Neither the US is going to fight war with China on behalf of India nor would China like to engage in a military conflict with India or US on behalf of Pakistan.

Pakistan therefore, should continue to evaluate its India specific threat perception and take measures that could ensure the credibility of its deterrence posture to help prevent a major conflict with India. Pakistan's full spectrum deterrence posture so far has helped to achieve this objective but India's growing space game capabilities together with its evolving doctrinal thinking which includes the possibility of counter force strike may push Pakistan to review its security perception vis-a vis India. By testing an anti-satellite weapon, India has solemnly demonstrated its military progress in the space. In response, Pakistan would need to development options that may not necessarily be in the Indian form of developing matching capability in the short term but in the long term definitely this aspect has to be thought. But what

Pakistani's need to do about whatever the threat perceptions it feels? It should immediately take required actions to balance that. But this would require resources and access to technologies that are not available for countries like Pakistan mainly for political reasons. To arrest the growing gap in the space domain, Pakistan could also explore expanding its space cooperation with China. Both China and Pakistan are already working on their 8-year plan between China's National Space Administration and Space and Upper Atmosphere Research Commission (SUPARCO) from Pakistan. As part of this arrangement, China is committed to launch communication and Earth's observation satellites from Pakistan. This cooperation nevertheless pleased to further expand focusing more on civilian applications so as to bridge the gap as early as possible. Since the developments in the civilians sphere out based the military development around the globe and also keeping the consideration the fact that technologically advanced countries like US are outsourcing their projects to take chance instead of establishing their military focusing infra structure. It is comparative that Pakistan should also focus on more civilian applications of space technology which would invariably have associated military dividends.

Finally, while the new US administration is unlikely to fundamentally alter its approach towards China and India, while it is expected that it will not be as unpredictable as the previous one and would relatively be more sensitive to the impact growing military imbalance in the region. Pakistan must therefore continue to remain engage with the new US administration and continue to highlight the negative implications of the

growing US-India military collaboration on the reason stability. So, as the US will be equally helpful and responsible if India embolden by its enhanced military capabilities decides to launch military offence against Pakistan to achieve its limited political objectives.

Speaker 4: Dr. Mansoor Ahmed

Topic: Two Decades of India's Nuclear Buildup

Dr. Mansoor spoke on the status of India's nuclear weapons program as it has developed over the past two decades.

"I have always been a proponent of the fact that capabilities lead to intentions and those capabilities need to be factored in the planning of adversaries. Over the past two decades, India has silently undergone a latent nuclear revolution, particularly in terms of latent nuclear capabilities in the full range of nuclear fuel cycle activities outside the safeguards of the IAEA. I am glad that Dr. Rajesh mentioned the point regarding India having fewer warheads than Pakistan. I will be addressing that in my talk today as well. India's program around 1998, was truly a modest program compared to what it is today as was Pakistan's. Both countries over the past 20 years have not only operationalized their strategic nuclear capabilities but have expanded their fissile material production capacities and stockpiles also. But having said that, there exists a huge asymmetry which is growing and is likely to grow in the near future. India's program is unique in the world because its strategic capabilities primarily, are a product of its dual-use nuclear energy program. The fact remains that India has developed its civilian nuclear energy program primarily outside the

safeguards of the IAEA and this was largely codified through the waver it had received by the NSG in 2008 and the principles of separation of civil and military facilities as agreed by the IAEA after the India-US deal, clearly stated that any nuclear plant or facility in India's program that had a linkage with its strategic weapons capability would be placed outside safeguards, whether they were stockpiles or whether they were reactor programs and that is exactly why India kept all of its breeder program, 8 heavy water power reactors outside safeguards, its enrichment program and other fuel cycle facilities. From this vantage point, I would like to emphasize that India has increased its latent nuclear capability and I will quote a few figures also. The figures that I am going to quote are from the International Panel on Fissile Materials, from India's Department of Energy reports, and from other reports published by Princeton University and the Bulletin of the Atomic Scientists. So let's start with India's plutonium production in the dedicated production reactors. India has traditionally produced weapons grade plutonium in two reactors, the 100 megawatt Dhruva I and the 40 megawatt CIRUS reactor which was shut down in 2010.

Now, the fact is that while it shut down the CIRUS reactor, it is already in the process of adding another 125 megawatt production reactor and a 35 megawatt research reactor dedicated to producing weapons grade plutonium. These two additional reactors will come online during the current decade. Most of the estimates on India's nuclear warhead equivalents to the warhead potential stems from its stockpile of weapons grade plutonium. Now very interestingly, India has a very large stockpile of civil plutonium outside safeguards, also known as reactor grade plutonium, produced in its indigenous heavy

water power reactors, specially the 8 power reactors that have been kept outside safeguards. This material is very much weapon usable and India claimed to have conducted at least one test in 1998 using this material. The other point that I would like to emphasize is that this is high quality reactor grade plutonium unlike the reactor grade plutonium produced in other civilian nuclear power plants such as Light Water Reactors. The reason being that Indian Pressurized Heavy Water Reactors operate around 6700 megawatt days per ton burn up in Light Water Reactors that use low enrich uranium as fuel. they operate at burnup in excess of 30000 plus megawatt days per ton so the plutonium produced in India's power reactors, specially the heavy water power reactors, is closer to weapons grade compared to the Light Water Reactors in other countries.

The other point is that the capacity factors of these reactors have been quite low for much of their operating histories. In addition to that, India has been stockpiling this reservoir of civil plutonium outside safeguards in its heavy water power reactors ostensibly to fuel a breeder program. So far, over the past 15 years, India has failed to commission its first, 500 megawatt Prototype Fast Breeder Reactor. It has suffered delays 8 times in the past 15 years and very interestingly in March 2018, in response to a query, the Indian Department of Atomic Energy submitted a detailed reply in India's lower house of parliament i.e. Lok Sabha in which it stated that India's Department of Atomic Energy was only aiming at commissioning the first Prototype Fast Breeder Reactor and the other planned reactors, India originally had 5-6 planned reactors, maybe built later on. Earlier it was more of a definitive proposition that India will be able to or will be embarking on the construction of the second, third and the fourth breeder reactor. Naturally that would

depend on the commissioning of its first breeder reactor. India has already fabricated the 2 tons of fuel required for its prototype fast breeder reactor. While it has been adding its capacity in the fuel cycle, the front end of the fuel cycle, it is also increasing the size and the efficiency of its fuel reprocessing program and that fuel reprocessing program has a direct linkage with its breeder program and the plutonium stockpile it has accumulated, which is designated as a strategic reserve. The stockpile I am talking about is the civilian plutonium, the reactor grade plutonium that has been produced in India's indigenous heavy water power reactors and this strategic stockpile of civil plutonium has been designated by the Indian government as a strategic reserve. That is why it was kept, along with the breeder program, outside the safeguards of the IAEA. While all this has been going on, India has and is increasing the size and efficiency of its reprocessing capability which is required to separate or reprocess the plutonium from its spent fuel. I will just give rundown of figures of the stockpiles and the capacities in a while.

Suppose India is unable to commission the first fast breeder reactor, this reprocessing capability will be completely free to separate greater amounts of civil plutonium than ever before. If the first prototype fast breeder reactor goes on line, it will be a ready source of weapons grade plutonium production and this reprocessing capability can be used and will be used for separating far greater amounts of weapons grade plutonium than ever before and same is the story of India's uranium enrichment program which is said to have been developed primarily for India's naval propulsion requirements but IHS Janes released a report couple of years ago in which it said that India was expanding its centrifuge enrichment program that would give it the capacity to produce highly enrich

uranium even up to weapon grade levels, far in excess of the requirements of its naval propulsion program.

I will just like to go through some of the figures and these are from the IPFM and from the Institute of Science and International Security led by David Albright. At the end of 1999, India had an estimated stockpile of weapons grade plutonium of about 310 kilograms. At the end of 2019, this increased to about 752-900 kilograms. In terms of reactor grade plutonium, the civil plutonium outside the safeguards that I have been talking about, at the end of 1999, it was estimated to have been around 3400 kilograms, now it is in excess of about 15 tons. In 1999, 800 kilograms of this material was separated which means it was available for weaponization but now in 2019, about 6-10 tons of this plutonium has already been separated. In terms of highly enriched uranium around 1999, India's stockpile was negligible, only a few hundred kilograms and now it is said to have produced at least 5 tons of highly enrich uranium, although this is enriched to 30-35 percent for the naval propulsion program, but this capacity can be quickly up scaled to weapons grade level. It's just a question of reconfiguring the centrifuge cascades. So in terms of percentages, in terms of weapons grade plutonium, India has registered an increase of about 142% in its weapon grade plutonium stockpile; in terms of separated reactor grade plutonium, it has registered an increase 1150% and in terms of highly enriched uranium and in this I would like to say that India has embarked on a much greater expansion program, it has already registered an increase of 5000%. In terms of capacities, the 8 power reactors that India had kept outside the safeguards under the India-US deal under the separation plan in 2008, that was around 2350 megawatt and India has just approved

the construction of 10-12 additional heavy water power rectors outside safeguards. That would mean that its power generation capacity of heavy water power reactors outside safeguards, would increase by about 282%. If India is able to commission its first fast breeder reactor, then its weapons grade plutonium production capacity would increase from the current 24 kilograms to about 160 kilograms and that would mean that this would register an increase of about 460%. With respect to highly enriched uranium, in 1999, the production capacity was around 3000 separative work units and according to Janes, during this decade, India is going to increase it to about 126000 separative work units which means that there would be an increase of about 4100%. In terms of reprocessing, the current capacity stands at about 350 tons of heavy metal per year, and by the end of this decade, India's Department of Atomic Energy, secretaries of India's DAE and the directors of Bhabha Atomic Research Center have been saying that India is working on increasing this reprocessing capacity from 350 tons to about 1900 tons of heavy metal per year."

Dr. Mansoor emphasized two things, "the first is that neither India nor Pakistan have actually declared their stockpiles, nobody actually knows how much material has been converted or into warheads or has been weaponized. The IAEA believes that it takes only a few weeks to weaponize stockpiles of fissile material outside safeguards. The other point that I would like to make is the fact that the Bulletin of Atomic Scientists in its latest report on India's nuclear forces and the International Panel on Fissile Materials are now accounting India's unsafeguarded civilian plutonium stockpiles that is produced in India's heavy water power reactors as part of its military plutonium stockpile. In addition to the

fact that the Indian government and the DAE have kept this stockpile and the breeder program outside safeguards under the separation plan and had stated that this is the strategic reserve, the stockpiled strategic reserve means that this latent capability is there for the taking if and when Indian political leadership make such a decision. Will they make a decision or not, nobody knows. What we do know, however, is that there is a subtle but a clear shift in India's doctrinal thinking and its force posture developments.

The question of India having more warheads or Pakistan having less warheads or vice versa, Dr. Mansoor thinks this should be seen in terms of fissile material stockpiles and production capacities as they exist now and as they are likely to exist over the next decade and their stockpiles of fissile material holdings outside the safeguards of the IAEA. That can only be the yardstick to determine weapons equivalent stockpile, weapons equivalent capacities in the absence of any verification mechanism. India's existing strategic missile forces that it has been working on clearly shows the types of missile systems can be deployed. India's land warfare doctrine clearly states that India is planning for a two front conflict and for a full-spectrum conflict simultaneously against China and Pakistan. The fact that India is now developing certain kinds of dual-use systems for example, Pakistan got a lot of flak for having developed the 60 km range nuclear capable NASR missile because the statement came out by the ISPR was more explicit, when in fact the Indian government conducted a test of the PRAHAR nuclear capable system a couple of months later and the DRDO statement said that it can carry all types of warheads. The NIRBHAY is said to be underdevelopment and would be the backbone of Cold Start. A new light weight version of the nuclear capable BRAHMOS is being tested that is being integrated

to the Sukhoi SU-30 MKI for possible counter force strikes under India's Strategic Forces Command which means that they can have a potential nuclear role. The fact that the Rafael, in addition to the Mirage 2000 aircraft, have a capacity of carrying these dual-use missile systems, in addition to canisterized versions of India's ballistic missiles and the triad of dual-use cruise missiles means that India is developing a counter force capability based on cruise and ballistic missiles that can potentially be used against Pakistan and China. From a Pakistani view point, anything that India has against China is available for deployment and employment during a crisis against Pakistan. The fact that India had pre-emptively deployed the Arihant which is a second strike platform, during the Balakot crisis also points in this direction. So, in the final analysis India is at the cusp of a nuclear breakout. The debate on nuclear latency is centered on what Iran is doing but Iran is a signatory of the NPT and there is a verification mechanism in place. India is a declared nuclear weapon state outside the NPT and much of its civilian energy program exists outside the safeguards of the IAEA. The fact that India's separation plan and the principles of separation which is available on the website of the Indian embassy in Washington DC at least 4 years ago as far as I can remember, I don't know if it's available there or not today, but that clearly stated that anything that is kept on the military list outside safeguards under the 2008 nuclear separation plan, has a dedicated role in India's strategic program. Therefore, a latent, hedging capability that is being building up over the past 20 years is simply unprecedented. The extent of growth in capacities of existing production facilities in India's military fuel cycle shows that it is probably the largest single expansion in anywhere outside the NPT states. The estimates of fissile material stockpiles available in the IPFM reports and the DAE's own annual reports clearly

contradict the assertion that Pakistan has the greater nuclear warhead numbers or potential than India has. India's expanding nuclear capabilities is now beginning to generate greater anxieties, as earlier it was only Pakistan but recently, the US Department of Defence in its latest report on China's military capabilities states that India's nuclear capabilities are now a factor in China's nuclear planning.

In the final analysis, Pakistan is embarked on its own full-spectrum deterrence development program and in no way Pakistan's program, in terms of its existing and projected stockpiles of fissile material or production capabilities, is able to outpace India. In fact, the asymmetry that exists today is likely to exacerbate manifold over the next decade but as long as Pakistan is able to maintain the credibility of its deterrent and an effective triad for a survivable nuclear force, the existing trajectory and planning should be sufficient for maintain an effective deterrent.

Highlighted Questions and Responses

Main questions and points that emerged from the discussion are as follows;

Question: When the US under Trump was pressing for ever closer US-Indian military relationship few months ago, Modi appeared quite reluctant to go for such a relation. Do you think that this is due to concern with India's economic relationship with China or is India somehow suspicious of US intentions? In other words, is India looking at the US-Pakistan relationship, especially since 9/11 and taking its clues from this case study.

Response: I am not exactly sure about this particular episode but irrespective of that, India does have the tradition of being reluctant to partner with the militaries of other

countries so I think it is not so much about US doing something to India. The post 9/11 Pakistani experience is not necessarily something that we are looking at.

I think that Indian strategic culture is such that India tends to be a lot more reluctant to go beyond a point in terms of partnering with other countries. India never had a common alliance or have even a military relationship even though we did get close to the US and the Soviet Union in past but we quickly got out of that as soon as he crisis was over.

I think the reason is that India has signed all these foundational agreements but foundational agreements took 10-12 years. They are routine agreements and not even significant agreements so it indicates the same point that India needs to be quite reluctant about these kinds of partnerships. If India, nevertheless, is moving in that direction, China sort of helped India moving in that direction otherwise its entirely a domestic reluctance to partner with other countries and anything in a form that might appear to be an alliance so strategic autonomy is strongly viewed in India.

Question: If there is a prospect of thaw in relationship between China and US after President Biden assumes the presidency. Will this have any effects on the ongoing India-China crisis in Ladakh? Is India likely to be at a disadvantage when negotiating with a possible de-escalation or disengagement with China in Ladakh?

Response: The position that Biden might take once he becomes president on January 20th, 2020, remains an issue of concern. I think that we have to wait and see how it will be. It's too early to know about exactly how his policies would be. There are disagreements within the Democratic Party about what sort of relationship they should

have with China. Should it be a conflictual relationship because of various reasons like trade, technology theft etc or some other more progressive elements in the party such as that they need China to deal with climate change issues. So that remains to be seen as to where that would go. If US makes a new kinds of a G2 approach, that would definitely have an impact on US-India relations and it possibly have an impact on India's posture in Ladakh. I think it's too early to say that because even though India doesn't expect US to fight alongside it in Ladakh so it doesn't have a direct impact in this sense but India does expect that US will support it diplomatically and militarily, not in terms of troops but in terms of technology, intelligence and overall building of India's capabilities for several years. So it definitely have an indirect impact on that.

Question: Considering what you said about India's conventional capabilities being sufficient against Pakistan, how do you justify India's use of dual-use platforms and early deployment of its naval flotilla alongside its nuclear submarine early in Balakot crisis and threats by Indian Prime minister Modi of qatal ki raat and nuclear weapons not kept for Diwali? Secondly, if India's nuclear deterrence is not apprised of conventional and sub-conventional threats then what qualifies that vast expansion of India's strategic forces, given as you said that India does not intend to fight a war with China?

Response: On the first question, I think there is only one report about the deployment of submarine Arihant, it's not even very clear that is it actually deployed or not so I am not sure that it had its missiles on board. I think we will have to wait and see what that was. But in any case, I can understand the wand reason for such a deployment. One

can understand that you would not want to have your only nuclear submarine get caught in a port. If you had a crisis and you don't know whether it would escalate or not. So I think in the precautionary nature of these things, it is understandable that Indian port sent its nuclear submarines out.

As regards to the second question, I am not sure that I said that India is expanding its strategic forces greatly, I said exactly the opposite like it was growing but it was very slow and very steady, barely matching even Pakistan's deployed forces as of now. So I never said that India's forces are growing with any great rapidity.

Question: Keeping in view the latent nuclear capabilities and the BMD program as elaborated what will be the viable options for Pakistan since this extremely slow missile development proves detrimental to the strategic stability in South Asia?

Response: My first observation is that I would respectfully disagree because this is not extremely slow. We can have a separate webinar on comparative developments on the missile and nuclear programs of India and Pakistan in terms of the kinds of capabilities that have been growing over the past 20 years. I reemphasize that the key is to have a survivable deterrent. Pakistan simply has a deterrent posture, it is not a war fighting posture even with the addition of short range low yield nuclear weapons systems such as the NASR because Pakistan simply does not have the luxury of fielding a very large number of these small weapons, low yield weapons, short range weapons for war fighting roles because of fissile material in comparative terms to what India has. Whether the Indians go down that road or not, we don't know the route of developing a short rang tactical nuclear weapons. The instability essentially generates from new

kinds of conventional technologies in addition to the nuclear built up such as hypersonic systems. A conventional, a well-timed, targeted, coordinated, saturated attack using conventional precision guided cruise missiles against Pakistani command and control strategic assets or deployed strategic systems low yield short range missile systems in the field, can have potentially escalatory consequences. That can be misconstrued by one side. I think the credibility of Pakistan's arsenal can be assured and Pakistan really does not need to go and get into this tit for tat nuclear race or get into war fighting. I consider that has never been Pakistan's position even though much of the debate outside has wrongly or inaccurately projected Pakistan's deterrent posture as a war fighting posture and also wrongly attributed Pakistan's program as being fastest growing and India's program as being slow growing.

Question: How would BECA contribute to interoperability between US and India? Will this agreement give US access to Indian command and control systems? If yes, what could be the potential utility in crisis management in South Asia?

Response: The technical details of the BECA Agreement not made public and are not likely to be made public. But that was one of the apprehension by the Indians once they finalize the agreement. Some of the data which is accessible to the United States and can be shared potentially to Pakistan, so they have inserted the clause that even if data is available to US. It will not be shared with Pakistan and we all know they will would have never shared it. But, it will also indicate probably yes they will have access to the sensitive information from the Indian military not necessarily from nuclear command and control systems.

Coverage of the Webinar Event and Press Release

CISS webinar on 'Two Decades of India-US Strategic Partnership: Impact on Strategic Stability in South Asia' was well covered by the following newspapers:

1. **Express Tribune**

   https://tribune.com.pk/story/2273962/shifting-indian-posture-destabilising-region?amp=1

2. **Dawn**

   https://www.dawn.com/news/1592951

3. **The Baluchistan Times**

   https://bexpress.com.pk/2020/11/india-us-strategic-ties-weakened-deterrence-stability-experts/

4. **Media Coverage on News**

   VID-20201128-WA0004.mp4

5. **Press release text on CISS website**

   https://ciss.org.pk/ciss-webinar-on-two-decades-of-india-us-strategic-partnership-impact-on-strategic-stability-in-south-asia/

6. **CISS webinar full length source**

   https://www.youtube.com/watch?v=bJfuGe4aPr4&feature=emb_logo .