

SVI In-House Seminar/Panel Discussion January 31, 2017: Report
“Pakistan’s Perspective on FMCT Debate in CD and Ballistic Missiles Tests and Implications for Strategic Stability”



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Strategic Vision Institute (SVI) organized a monthly In-House seminar/Panel Discussion on the topic titled “Pakistan’s Perspective on FMCT Debate in CD and Ballistic Missiles Tests and Implications for Strategic Stability” held on January 31, 2017 at the SVI premises. Mr. Muhammad Kamran Akhtar, Director General Disarmament (MOFA) and Dr. Mansoor Ahmad, Lecturer at the Department of Defense and Strategic Studies (DSS), Quaid-i-Azam University were the guest speakers. The discussion was chaired by Dr. Zafar Iqbal Cheema, President/Executive Director SVI. Dr. Cheema in his opening remarks and welcome address thanked the guest speakers and participants for affording valuable time for the In-House. He elucidated that it is inferred that there may be some discussion on the prospective conclusion of the FMCT in Conference on Disarmament (CD), on which Pakistan holds a unique stance. This carries serious implications for Pakistan’s security and deterrence capability, hence the SVI felt the need to hold a panel discussion in this regard. He stated that in the current period of time, more than two Ballistic Missiles have been test fired by India and Pakistan. India test fired the Agni-V a month ago having a long range about 5500-8000 kilometers which has implications not only for China and Pakistan but for the whole region at large. While Pakistan has test fired Babur-III which is a Submarine-Launched Cruise Missile (SLCM) and Ababeel which is Surface-to-Surface Ballistic Missile (SSM) having a maximum range of 2,200 kilometers. It is capable of delivering multiple warheads using Multiple Independent Re-entry Vehicle (MIRV) technology. While honoring the presence of the distinguished speakers, Dr. Cheema announced that Mr. Kamran Akhtar would deliberate on FMCT and Dr. Mansoor Ahmad, who has written extensively on the issues of nuclear deterrence, nuclear weapons and ballistic missiles, would be expressing his thoughts on ballistic missiles and its implications resulting in the arms race between India and Pakistan.



It was followed by the view point of Mr. Kamran Akhtar, who first acknowledged the presence of Mr. Pervaiz Butt, the former Chairman of PAEC and Dr. Shaukat Hassan, Representative of PAEC at Conference on Disarmament in Geneva as an expert. Mr. Akhtar stated that FMCT has long been on the agenda of the United Nations because as early as 1960s nations were considering the need to ban further production of fissile material for developing nuclear weapons. However, it was in 1978 at the first special session on disarmament of the UN General

Assembly, which was considered as the Bible for the disarmament by the Diplomats of the developing countries, that the document was established in the Conference on Disarmament and the disarmament machinery of the UN laid down the agenda for disarmament for the long term. Among other steps taken, FMCT was recognized as the most essential step towards nuclear disarmament. He elaborated that in order to have a clear perspective, one must be aware of the historical background. FMCT was not conceded as the nuclear non-proliferation step but as the disarmament step. The treaty was meant to lower the nuclear holdings at the global level and did not intend to stop further production of fissile material. This item was included in the agenda of developing countries. The manifestation came after the 1978 disarmament session when the five major nuclear powers refused to start negotiations on FMCT because they still required fissile material. It was only in 1993 at the end of the Cold War that an agreement was reached to start negotiations on FMCT. By then these major powers had amassed enough fissile material even for their future requirements.

Accordingly, in 1995 due to the support of former US President Bill Clinton, the Conference on Disarmament agreed on the Shannon Mandate. The Shannon Mandate laid down the broad framework for negotiations on Fissile Material Cut-off Treaty (FMCT) but it did not cater to the inclusion of existing stocks in its scope. However, it also did not exclude the stocks from negotiations as it contained a provision that if any state wants to raise any other issue besides the cessation of production of fissile material, it can do so. That gave space for introducing the issue of existing stocks without any explicit reference to the existing stocks. This resulted in an agreement which took place in 1995 but still it could not persuade the CD to start negotiations on FMCT because some of the developing countries demanded the initiative on the parallel negotiations for nuclear disarmament. Likewise, the stance of Russia and China was to take the issue of Prevention of an Arms Race in Outer Space (PAROS) simultaneously at the CD. Since, the US was not agreeable to this proposal, the CD got held up. Till 2006 there were no further developments on FMCT. US did not favor a verifiable treaty initially which was against the position of many developing countries who wanted an effectively verifiable FMCT.

In 2009, when the Obama Administration took office, the nuclear disarmament agenda was prioritized and some real considerations were brought on CD. US showed willingness to enter in top negotiations for a verifiable treaty on the basis of Shannon Mandate. As Pakistan has always been told that it should not put the issue of stocks as a pre-condition for the negotiations but it can later on bring this issue during the negotiations, Pakistan agreed to start negotiations on FMCT in 2009. It was the first time ever that the CD agreed upon a program of work. Yet, the very next day the Indian Permanent Representative (PR) in Geneva made a hard

hitting speech in which he clearly stated that India will not agree to any fissile material treaty and the inclusion of existing stocks in the scope of the treaty which undermines India's strategic interests. That is when Pakistan decided to put a hold on the CD. If Pakistan had not given this reaction, the negotiations would have started. However few months down the line Pakistan again would have felt the need to stop the CD because no country had agreed to the inclusion of the stocks as it was not explicitly mentioned in the Shannon Mandate. The blame would have sit with Pakistan in any case. That's why Pakistan stopped CD back then.

Mr. Akhtar further discussed that in 2015, the US came up with another proposal in which it apparently wanted to placate Pakistan by showing willingness to start negotiations on fissile material treaty that would include the issue of stocks. However, this time many countries along with the P5 opposed the inclusion of stocks' issue in the scope of the treaty. India also explicitly opposed it. So the above mentioned argument that Pakistan should not hold up the CD becomes a moot argument because Pakistan's stance on it has always remained clear and direct. The US Permanent Representative in Geneva was candid enough to share with the Permanent Representative of Pakistan that the US has changed its position in terms of mandate in words, but it is not in the favor of inclusion of the existing stocks in the scope of the treaty. He further added that there was a group of governmental experts (GG), which was established outside the CD to identify the common elements which can form the basis of a future treaty. This group met in 2013 and 2014 but Pakistan did not participate in the workings of this group. Since Pakistan was not a member of this group, no consensus was reached by Governmental Group (GG). Therefore it becomes an invalid argument that Pakistan holds up a CD. Rather, this group brought to the fore many issues on which the member states do not agree. This demonstrated that Pakistan is not the only country that has reservations on FMCT. There were many other fundamental differences on the issue of verification as to what kind of verification regime will be implemented for FMCT? Will there be baseline declarations or not? It was clear that any treaty which does not include baseline declarations will not be effectively verifiable. Another Issue was the US' insistence that verifications will not include those facilities which have been producing fissile material stocks in the past military purposes because inspection of those facilities might compromise the proliferation sensitive information. Scientists of the Strategic Threat Reduction Initiative (STRI) pointed out that it is possible to verify material production at fissile material production facilities without intrusive inspection. It can be done through nuclear forensic analysis of samples from the structural and the base material substances which can reveal the history of the operation of the fissile material production facilities. Again, it was clear that the impediments in the way of verifiable treaty are not technical but political and once there is a

political will to move towards the actively verifiable treaty to include the issues of stocks, it can be done easily in a technical way. One other concern was about why countries still need Highly Enriched Uranium (HEU) or Plutonium? Should there be a ban on any enrichment of Uranium beyond 5% and separation of Plutonium because there are now new techniques available whereby the new generation of power reactors is based on Low Enriched Uranium (LEU). Theoretically there is no need for HEU production anymore. Even submarine reactors can run on LEU. Although, this technology needs further advancements but this can be done. Mr. Akhtar further added that as far as separation of Plutonium is concerned, right now Uranium prices are very low at the international level and are likely to remain low for the next 70 to 80 years. That is why there is no economic rationale for producing electricity through Plutonium. This process however is quite complicated as it has its own implications in terms of operations, safety and security. Pakistan raised another issue regarding the exemption granted to India by the Nuclear Suppliers Group (NSG). Eight power generation reactors which India kept outside the safeguards are suspected by Pakistan as there is no assurance that no clandestine production of Plutonium is taking place on those reactors because the spent fuel was not supposed to be under safeguards. Similarly, it was the issue about fast breeder reactors too, which are also outside the safeguards. According to the International Panel on Fissile Materials (IPFM) estimate, in 2008 India had 5 tons of reactor grade Plutonium. The intent of that material was declared to be civilian yet it was not placed under the safeguards. The scientific community was of the view that this material could be used for the manufacturing of nuclear weapons. Pakistan was not sure if this material was used for non-peaceful uses or not. France dismantled its nuclear weapons and brought down the numbers from 600 to 300. The fissile material released from these nuclear weapons was not declared civilian but a military material. This further created an issue as to how this material should be treated under FMCT. Since it will not be under the safeguards, if France ends up re-weaponizing using this material then FMCT will have a reverse effect. Instead of reducing the number of nuclear weapons, the numbers will increase. Likewise, if India ends up declaring the 5 tons reactor grade Plutonium as military utility material, it will have a reverse effect too. He emphasized that these are some of the issues which need an immediate attention but no member is paying heed to these serious concerns of Pakistan. If NSG countries provide an assurance that India's 8 reactors along with the fast breeder reactors will be put under the safeguards, only then Pakistan would be willing to look at the FMCT. He clarified that Pakistan should not be asked to agree to something that is not in its strategic interest as Pakistan is committed to protect its national interest. It is a widely known fact that agreeing to FMCT is against India's interests because it has fissile material requirements. India

has tested 23 kinds of missile systems and plans to weaponize these systems for which it will require more fissile material. So if Pakistan does not stand at the fore front, this will expose other countries who are opposed to FMCT. Here, Pakistan as a sovereign nation has the perspective that it is incumbent upon Pakistan to stand up for its own interest and that it should not hide behind other countries. Finally, there are issues of definition as well because the fissile materials like Neptunium and Americium can be used for the production of nuclear weapons apart from separated Plutonium and Uranium. Pakistan, more importantly wants an assurance that the whole third stage program of India regarding the use of Thorium should be under safeguards as well. Until and unless Pakistan gets these assurances, it will not agree to FMCT. Mr. Akhtar finally elaborated that now the IPFM has included in its latest report that the 5 tons reactor grade Plutonium stocks of India are being considered in their calculations for India's military nuclear material. If the same approach is adopted by the CD member states and the NSG countries, Pakistan would be willing to go ahead with the FMCT.

The discussion continued with the primer on Recent Missile Developments in South Asia presented by Ms. Maimuna Ashraf (Research Associate, SVI). She shared that the final successful testing of Agni-V ranks India among the exclusive states possessing ICBMs. The significant and noteworthy aspect of this development is the incorporation of few technologies in the Agni-V missile that hints toward future trends, strategies and aspirations. The range of missile brings a major portion of Asia and Europe (reportedly includes Moscow and Tehran) within its sweep. Ms. Ashraf further discussed the technologies incorporated in these missiles and their significance. Firstly, it is a Canister Based Launch System that supports the storage of missile until the desired launching time. It is a mated form of warhead and missile that enables much lesser time for missile preparation/deployment. It eases the reloading and increases the readiness. Secondly, it is a Road Mobile Launcher, enabling high mobility for the missile which allows it to be launched from anywhere in the country. This technique ensures safety and frequent mobility while at the same time it declines the adversary's capability to continuously monitor and track them with the aim to hit accurately. Thirdly, it is a Solid Fuel Propelled Missile in which the solid fuel offers longer storage life as compared to the liquid fueled missile. It demands less time before launching and has increased accuracy and improved readiness level. In addition to all these features, it facilitates the launch of missile in a depressed trajectory and is significant for India's weapons capability in space. Simultaneously Agni-V is expected to be incorporated with MIRV technology. The coupling of



ICBM with MIRVs looks more dominant posture for minimum deterrent. From these developments it is implied that India is moving from its minimum deterrent posture to a higher state of readiness and war-fighting capabilities. India might be developing most of its capabilities to counter China, yet a variety of capabilities can allow India in future to adopt an aggressive strategy towards Pakistan.

Ms. Ashraf while explaining the missile development of Babur III SLCM, shared that it is capable of carrying a nuclear warhead up to 450km and gives Pakistan the much needed Second Strike Capability. In 2012, Pakistan set up a Naval Strategic Force Command wherein it was presumed that country has been working towards this capability since then. Last year, the testing of Indian SLBM K-4 and commissioning of its submarine INS Arihant provided India a seaborne nuclear deterrent & elevated India's rivalry with Pakistan in maritime domain. After the successful test of Babur-III from a submerged platform, Pakistan declared to have achieved the second strike capability. Babur-III has been incorporated with the state of art technologies that include sophisticated guidance system, highly advanced navigation features, and underwater controlled propulsion. It carries stealth technologies which will dodge air defences and radars. The land attack mode of Babur-III would be able to deliver numerous types of payloads. With regards to future proposals Pakistan has approved the purchase of eight modified diesel-electric attack submarines from China. With the purchase of these submarines, it is hoped that Pakistan's burgeoning second strike capability will be further strengthened. She stated that after the two operational MRBMs Shaheen-I and Shaheen-II, the Ababeel MRBM with the range of 2200km is capable of launching multiple warheads using Multiple Independent Re-entry Vehicle (MIRV) technology. Pakistan is now among the few states, including US, China and Russia, to possess this technology. It is built-in with stealth technologies to escape hostile air defences. It is said to have an additional feature of solid-fueled rocket motors that ensure high precision and reduce missile operational timings.

Ms. Ashraf concluded with the three evident and instant implications of these two missile tests. She maintained that theoretically, it provides Pakistan with a seaborne nuclear deterrent while India already possesses it. Since Indian BMD had reduced India's vulnerability to Pakistani ballistic missiles strike that undercuts Pakistan's offensive posture yet strengthened India's defensive capabilities. Also, the strategic equilibrium is at play; the concept of mutual destruction functions and completion of nuclear triad on both sides assures credible second-strike capability and stabilizes the nuclear relationship between the two South Asian nuclear states.

After this comprehensive primer on recent missile developments in South Asia, the debate was handed over to Dr. Mansoor Ahmad. He appreciated Pakistan's recent testing of



Babur III and Ababeel as one of the most important milestones achieved in its quest for acquiring the second strike capability. He stated that the drivers behind Pakistan's development of the MIRV capable Ababeel system were primarily India's acquisition of BMD technologies. India is known to be investing in developing a multi-layered Theatre Missile Defense Systems. Recently, India concluded an almost \$5 billion deal with Russia for the acquisition of the S-400 missile system. India's DRDO is known to have been pursuing the development of MIRV warheads for its Agni series missiles especially Agni V and Agni VI. Along with this, India's acquisition, induction and integration of modern force-multiplier technologies provides it with a conventional counter-force capabilities such as the Brahmos, Nirbhay and fifth generation aircraft. All of these developments resulted in destabilizing the strategic balance in the region. The MIRV capability is designed to provide the assured first strike capability against high value targets. The P5 countries having MIRV capabilities have developed it as a hedge against enemy's missile defences such as Hyper Glide and Hypersonic conventional weapons which are essentially designed to decapitate the arsenal. In India-Pakistan scenario, India's emerging counter-force capabilities were meant to strike Pakistan's deployed strategic systems during a crisis situation. Dr. Ahmad presented his views that in this scenario, the test of Ababeel is actually a technology demonstrator. Pakistan will need to conduct several more tests and the gaps must be filled especially in the acquisition of intelligence, surveillance and reconnaissance (ISR) capability in which India has the clear edge over Pakistan. India has an ambitious and fast growing program on space weaponization and Pakistan needs to catch up. It is noteworthy that Babur III provides Pakistan with a cost effective solution in the situation of resource constrains and Pakistan would continue to invest in augmenting its conventional naval capabilities. It is significant that Pakistan's strikes are balanced between conventional force modernization and the strategic force modernization. Babur III is the manifestation of such a balance and it reflects that the decision makers are trying to maintain that balance without falling into the trap of a classical Cold War arms race. If Pakistan wants to maintain some level of deterrent credibility, it is substantial that it continues to invest in the qualitative and technological improvement of its existing capabilities in its missile systems.

Furthermore, Mr. Ahmad linked these viewpoints with the FMCT debate. He elucidated that Pakistan is also seen as a country which has the fastest growing nuclear arsenals because Pakistan has not effectively countered this narrative. In the estimate of The International Panel on Fissile Materials (IPFM) it is found that Pakistan's missile and nuclear program are entirely India centric while India has regional and global ambitions. If India succeeds in deploying MIRV system on its SLBMs and ICBMs for which it has sufficient fissile material to produce several hundred low to very high yield thermo-nuclear warheads, it can easily develop tactical weapons. Dr. Ahmad made it clear that India has at least 15 tons of weapon usable reactor grade Plutonium and if that is used to start a fuel for the prototype fast breeder reactor of 500 Mega Watt, India would be able to produce about 140 Kg of weapon grade Plutonium every year. Talking about India's reprocessing capacity he shared that currently India's reprocessing capacity is around 350 tons of heavy metals per year and India is already on its way to increasing it to more than 900 tons heavy metals per year.

Dr. Ahmad raised a valid question asking if Pakistan should allow India to hide behind its position on FMCT at the CD and let it stockpile huge amount of weapon useable fissile material outside safeguards. He pointed out that the next emerging proliferation threat viewed in the US and elsewhere is Japan's commercial scale reprocessing of reactor grade Plutonium. China and South Korea have threatened that if Japan were to commission that reprocessing facility then they would also start reprocessing their own stockpiles. This issue has prompted the leading non-proliferation experts to urge the US not to get involved in the same pursuit as it would result in a cascading effect where nobody would be able to stop China, Japan and South Korea from initiating their own reprocessing activities. He further suggested that Pakistan needs to look at the FMCT policy in a more holistic way. Dr. Ahmad came to the conclusion that while Pakistan is responding to India's threats in a cost effective manner, unless its expansion is brought under some kind of multilateral control, it will be difficult for Pakistan to compete because its existing reprocessing, enrichment and Plutonium production capacity is much lesser to what India already has in the pipeline. Same is the case with the missile capabilities.

Dr. Zafar Iqbal Cheema acknowledged the insight of both the honorable professional experts for making eminent and scholarly presentations on FMCT, Ballistic Missile and the Arms Race between Pakistan and India.

Dr. Cheema then opened the house for an extensive Question & Answer session. Mr. Lokhaiz Ali, the Senior Environmentalist, asked if there is any logical ending to the arms race going on in the South Asian region as Iran can also threaten to spark a new kind of arms race at any time. Mr. Kamran Akhtar responded by rephrasing the question as to from where should an end to the arms race start. He commented that it has to start from P5 as they have larger holding of nuclear arsenals which leads to other states following in the same footsteps. It has direct repercussions first for China, then India and then for Pakistan. Only if the states agree to the proportional reductions with clearly defined objectives, the concerns arising from the chain reactions will be addressed. In this scenario, the states would be willing to move towards disarmament. In parallel to that there has to be an effort to resolve the outstanding disputes. Dr. Cheema posed a question if India and Pakistan are following the same line as that of the United States and the former Soviet Union from 1992 to 1997. Dr. Pervez Butt commented that the history of the world is replete with the incidents of arms race. It is important to ponder upon what would really happen if a nuclear war starts in the contemporary era. He opined that it would only be a two day nuclear war,



because all other countries would unite against the country that used the weapons and the phenomenon of embargoes would emerge. Arms race is an act of a deranged which should not be followed by the economically downtrodden country. He said that at the end of the Cold War, the USSR was eventually destroyed and the Soviet economy that had spent millions of dollars in enriching the Uranium were dissolved by the US and supplied to other power plant owners at much cheaper rates. Although Pakistan cannot avoid taking part in the arms race, it should vigilantly devise a strategy of not getting involved too much into it.

Dr. Cheema opined that Pakistan's policy is reactionary to India's where Pakistan has never initiated the race itself. Mr. Akhtar further added that if one looks at Pakistan's nuclear history program, it started as a purely civilian nuclear program and did not have any nuclear weapon ambitions. Pakistan had to develop the military nuclear capability in response to the Indian action. The trajectory of Pakistan's nuclear program shows that it is responding to the certain developments which could otherwise undermine the credibility of its deterrence. The 1999 Lahore MoU provided the platform for discussion between the two states on their respective threat perceptions. If the two states agree to negotiate the defence and security doctrines which are exclusively defensive in nature, both countries would be able to avoid an

unnecessary arms race. Pakistan is not working solely on a military security. Its holistic view of security includes food security, water security, climate change etc. Mr. Akhtar mentioned at the end, that Pakistan is also engaged in devising a plan for the nuclear waste management.

Ambassador (Retd.) Ali Sarwar Naqvi opined that NPT is perhaps the most discriminatory treaty that has ever been created because it puts all those countries who had acquired nuclear weapons capability before 1968 in one group and the rest of the world falls in the “other” group. Pakistan endeavored to convince that the issue of disarmament along with Article VI of NPT, negative security assurances, and PAROS must be worked upon simultaneously in CD. But the US only focused on FMCT and created all kinds of hurdles like they raised an issue of verification for more than a decade but there was no progress on it. Pakistan has taken principled stance on FMCT and unless there is some effort on part of the Western countries to work on the contentious issues, there will be no further progress.



Ms. Puruesh Chaudhary, Founder and President of AGAHI Foundation questioned if Pakistan’s nuclear program is bound to have the same fate/face humiliation as that of the USSR? Mr. Kamran Akhtar remarked that it was the economic collapse which caused the disintegration of the USSR. Pakistan has not violated any international law as Pakistan never signed the NPT so there is no point of getting humiliated. Nevertheless, Pakistan is mindful of the fact that entering into the arms race might put a lot of burden on Pakistan’s economy.



This deliberation was followed by a question from Dr. Cheema that how effective is the Ballistic Missile Defense and what is the efficacy of MIRV technologies to penetrate those kind of defence systems? Dr. Ahmad responded that in terms of BMD, if it is supposed to intercept an incoming warhead on a missile, it is extremely challenging and difficult. But if one wants to provide a Theatre level missile defense capability, there would be a need to have a fool proof radar coverage. US is now launching a dedicated infrared satellite which is designed to detect missile launches. But in the real time environment the efficiency of the system will be extremely doubtful because there are several ways of defeating missile defences such as saturation attacks, MIRVs, MRVs, and Cruise Missiles. In the context of India and Pakistan in addition to MRVs the Cruise Missile program is one area where Pakistan can really have another cost-effective solution to an expensive BMD system that India might want to put up. Efficiency of any system,

whether it is conventional or strategic, or a highly advanced technology of force-multiplier system, can only be gauged in times of conflict when it is actually deployed. India is aiming to secure its Command and Control center against Pakistan's first strike. There are several ways of easily dodging that capability. The tests of Ababeel and Babur III are the means to restore the credibility of Pakistan's deterrence. Dr. Ahmad recommended following areas where Pakistan needs to invest:

- Offensive and defensive cyber security technologies
- Space based Intelligence, Surveillance, and Reconnaissance(ISR) Program
- Laser Weapon System

Mr. Zeeshan, National Defense University (NDU) asked about the relevance of conventional deterrence in the nuclearized environment of South Asia. Dr. Ahmad replied that the conventional deterrence is perhaps more important than the nuclear deterrence because that is the only area where a country actually fights and win a war. In South Asia, India has already earned the unique title of the biggest net importer of the conventional arms. India is expected to increase its defense budget from around \$50 billion to \$300 billion by 2030 if India is able to sustain its present GDP growth. Therefore, Pakistan needs to invest in its own domestic armaments industry and it must open up a private sector for bringing more investment. Most importantly, Pakistan must be able to project and mobilize its soft power. In his final remarks, Dr. Ahmad concluded that while Pakistan continues to augment its credible deterrent posture, Pakistan ought to understand that it's a technological arms race and not a classical Cold War arms race. Pakistani society must be reformed and more money should be invested to build the man power running on the principle of market forces.



Mr. Kamran Akhtar in his concluding comments disserted that Ministry of Foreign Affairs (MOFA) is now engaging with more think tanks and trying to build the narrative but still there are the constraints of man power. It is the need of time to reflect upon Science Diplomacy because under its scope, MOFA is now dealing with issues of climate change, health etc along with the collaboration of international communities to instill a positive perspective regarding Pakistan's security considerations.

Subsequently, Dr. Zafar Iqbal Cheema disclosed that the Strategic Vision Institute (SVI) and AGAHI Foundation headed by Ms. Puruesh Chaudhary have signed a MoU for developing Pakistan's State of Future Index. He invited interested professionals with relevant expertise to

contribute in the initiative. While concluding the session, Dr. Cheema profoundly thanked the august audience and mentioned that their presence made this seminar a successful endeavor. He offered special thanks to the guest speakers and expressed his appreciation to all the guests for actively participating and making the discussion interactive.