Nuclear Stability in South Asia, Missile Transparency and Confidence Building

General

A Round-Table discussion on “Nuclear Stability in South Asia: Missile Transparency and Confidence Building” was held at CLAWS on 19 September 2012. A team each from Lawrence Livermore National Laboratory (LLNL) and Sandia National Laboratories, USA participated in the discussion. The Round-Table discussion was chaired by Amb Arundhati Ghose, former Permanent Representative to the UN and attended by select defence forces personnel and members from think tanks and academia.

Amb Arundhati Ghose

The government policy today is to have CBMs with Pakistan. This round-table provides us an opportunity to explore the security implications of a CBM in the nuclear field and whether it is an effective measure and can be achieved without compromising our national security. It is an opportunity for us to learn from the best practices of western countries in this field and adapt to our needs.

Dr Zachary Davis

Strategic forces have a primacy in nuclear deterrence. As India re-structures its forces to build an effective triad for achieving credible minimum deterrence, there is a need to examine where to stop. India faces a complex threat with the complexity to maintain deterrence against two forces, China and Pakistan. The question that needs to be asked is what constitutes deterrence and whom are you trying to deter. There are some limits in terms of what quantities are required and how much is enough to achieve deterrence. Can mutual deterrence be understood in a similar way by the adversaries? It is probably good to have some mechanisms in place. The Colombo group developed a common concept on evolving transparency measures on nuclear testing, setting liabilities, etc between India and Pakistan as a nuclear CBM. Under the mechanism, mutual information would be provided by exchanging information and data on first generation SRBMs (which have already passed their service life) for retirement. The CBM would require no formal agreement and the purpose can be achieved by mutually agreeing upon limits for eliminating a certain class of weapons. The mechanism would be an experiment in achieving transparency in a joint and mutual manner.

Douglas Tichner, Sandia National Laboratories

The process of storing warheads has several complexities. Even a minor fault can induce catastrophic failures. Several threats can be posed to the safety of warheads due to the energetic materials ageing and it is better for ageing warheads to be destroyed than be given periodic life extensions. Failure can occur at any stage. Traditionally, liquid fuel components are more stable than solid ones and have longer life spans.Degradation is not just a propellant problem; it can occur with time, are structured and aged-out quids can also cause degradation. India's first generation SRBMs – Prithvi I and Dhanush I are in service since 1983 and have passed their service life. Similarly, Hatf I and Hatf 2 of Pakistan (commissioned in 1987) have also crossed their life-spans. Abdali V and Abdali VI have can also be considered for retirement. The obsolescent systems just need to be retired as they can have a huge impact on safety and can be replaced by newer ones which have better accuracy, reliability, survivability and operability.

Dr Geoffrey Forden and Eric Wallace, Sandia National Laboratories

A demonstration of a simulation exercise to exchange data and functioning of the virtual reality tool in achieving missile transparency was presented.

Achieving missile transparency can pass through various stages of low, medium and high. Declarations and advance notifications can be provided at the medium stage while data exchange and transparency visits and on-site inspections by both sides can be carried out in the final (high) stage.

The applicability of the above arms control principle based on the US-Soviet model can be re-examined for suitability in an Indo-Pak context.

Brig Gurmeet Kanwal (Retd)

There are inherent dis-advantages in SRBMs being nuclear capped. It poses several detection dilemmas as it is difficult to interpret whether an SRBM is nuclear or conventionally tipped. They pose greater danger to the crew than to adversaries. When adequate numbers of Agni I (with a range of 700-800) are inducted, then the Prithvi I missiles can be retired. Such a step would make technical and operational logic. The Prithvi II was not nuclear capped. Similarly, Pakistan should also retire Hatf I and Hatf II from their arsenal. If both countries can do it together, then it would make a good Nuclear Risk Reduction Measure (NRRM). SRBMs can be easily destroyed by plugging holes in the air-frames or by strapping Heavy Explosives on them. As part of the CBM, a missile should be symbolically destroyed at Pokhran and the Defence Minister of Pakistan should be invited to witness the missile destruction ceremony. Subsequently, representatives from both sides could visit each others' facilities to see if the missiles are being dismantled.

The arguments against phasing out SRBMs include the question whether enough numbers of Agni I are being produced or not and that SRBMs have better CEPs (16 m) than long-range missiles. It is likely though not confirmed that Pakistan has already done away with Hatf I and Hatf II for nuclear use.

Discussion

• Deterrence is a mind game and numbers do matter. The mere presence of TNWs in the battlefield increases the importance of Prithvi I in the battlefield.

• What is the hurry in retiring first generation SRBMs ? The Indian Armed Forces do deploy weapons in a mated condition. No nation keeps a weapon for more than 10 years (and their life-spans are extended after every five years); hence there are no safety issues. It would therefore not be appropriate to cloak technical requirements with a CBM. The matter should be best left to the experts and India must be having a missile ageing policy.

• It is difficult to understand whether Pakistan is threatened by India. For India, the real threat comes from China. In any case, nuclear missiles will be introduced in the later stages of a war.

• The Army requires to factor in all types of weapons and firepower in battlefield scenarios. The capacity of air-power is limited in mountainous terrain where all-weather weapons like artillery and SRBMs are required. China has so many SRBMs in its inventory and many of them are now deployed in Tibet. Military requirements would determine such steps.

• Pakistan's development of the Nasr is a worrying step and would add to the nuclear instability in the region. Pakistan's motive behind developing TNWs has been guided by its perception that India's so called 'Cold Start Doctrine' can be executed on the ground. It believes that TNWs can plug a gap in its deterrence against India.

• Does India want to compete with DF-I and DF-II with Prithvi I when it has superior cruise missiles like Brahmos and newer and technologically superior missile systems are available?

• The role of Prithvi I in conventional military operations and a cost to benefit analysis overrides other missiles for this purpose.

• If this NRRRM has to be successful then it is imperative to bring China in its ambits as well.

• The larger question that needs to be asked is whether India threatens Pakistan's existence? If India had offensive designs on Pakistan then it can easily dismember it by

inducting four or five more infantry divisions to its orbat. India does not require nuclear missiles to break Pakistan. India requires nuclear weapons for its national defence and not for prestige. The logic behind proposing this nuclear CBM is a non-starter. Will the US agree to an Asian Intermediate-Range Nuclear Forces (INF) Treaty? Such a step would make more sense.

• India's options are to retain a capability to convince Pakistan to give up on terrorism as an instrument of state policy and at the same time keep it engaged in a dialogue process.

• Long-range missiles can carry out tasks of SRBMs. It would also remove the ambiguity of dual-use of SRBMs.

• Arriving at a decision to retire SRBMs will take a long time and a calculation of the overall security spectrum will have to be carried out. The CBM is kind of a gesture and a joint-experiment in talking about nuclear strategy.