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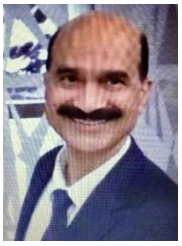
Understanding Pakistan's Zero-Range Nuclear Strategy



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Background

In 1965, the then Foreign Minister of Pakistan, Zulfikar Ali Bhutto, said very vociferously on the floor of the United Nations, "We will eat grass and leaves or even go hungry if required, but we will get the bomb."[1] Pakistan's chequered history of stolen and proliferated nuclear weapon acquisition is well known to the entire world. In the early 1990s, the Chinese has provided technological assistance to Pakistan through the export of M-11 missiles stored at Kirana Hills. During this period, the Chinese experts also carried out zero yield experiments. This had become an open secret of the decade, something that the US had strongly objected. Proof of the proliferation became evident when Chinese vessels were intercepted carrying 15 tons and 10 tons of ammonium percolate, by Taiwan in March 1996 and Hong Kong in December 1996, respectively.

The world has come a long way from those days. Yet, Pakistan has not moved on from that so-called point of infliction. Pakistan's nuclear and ballistic missile efforts are solely India-centric. Pakistan has always vehemently claimed that it is amassing scores of nuclear weapons to equalise the asymmetry in conventional forces with India. The most worrying part of this tumultuous situation is that all Pakistani nuclear weapon acquisition efforts are prompted by religious zeal and hatred towards India.

Lieutenant General Khalid Kidwai (Retd), Advisor, National Command Authority of Pakistan, and former Director General of Pakistan's Strategic Plans Division Force, has become infamous for his anti-India rhetoric. He has been found making statements on behalf of Pakistan's strategic

forces. Previously, he had made statements about the triad's capability when Pakistan was nowhere near it.[2] He has also been claiming the employment of nuclear weapons on strategic, operational, and tactical battlefields, which is only partially correct. In his recent speech on the 'Youme-E-Takbir' day, or the day Pakistan tested its first nuclear device, is being analysed in Pakistan and India by many experts. However, any analysis must be understood and compared with the previous experiences, especially with Pakistan's zealot polity, otherwise the conclusion shall go awry.

The Zealots

Many experts in Pakistan feel that the Pakistani nuclear arsenal is safe and secure. Yet everybody outside Pakistan feels exactly the opposite. In 2009, the US Central Command Commander felt that "Pakistani state failure would provide transnational terrorist groups and other extremist organisations an opportunity to acquire nuclear weapons and a safe haven from which to plan and launch attacks."[3]

The Pakistan Army has been digging deeper into mountains and building hardened facilities for the storage of nuclear weapons. However, physical security will not prevent a religiously subverted mind from taking drastic measures. Many universities teaching nuclear science and metallurgy also teach Hadith, Seerah, and Islamic thought. The scientists in Pakistan like Bashiruddin Mahmood, AQ Khan, and others will not dither even for a second to proliferate at the slightest ecclesiastical stimulus. What gives credence to the theory of proliferation among non-state actors or terrorists is the corruption at the highest level of their military. The Chief of Army Staff getting either an extension of tenure or usurping power to become Chief Martial Law Administrator (CMLA) has become a common practice in Pakistan.

Tactical Nuclear Weapon

Pakistan has deployed nuclear weapons, especially tactical nuclear weapons (TNW), very close to Indian borders. Pakistan's Strategic Plans Division Force (SPDF) has deployed Nasr batteries at Gujranwala and Pano Aqil.[4] It has also created a large number of storage facilities all along the border, although experts are not sure whether they contain any nuclear weapons at all.

Figure 1: Pakistan's TNW Facility at Gujranwala

***Source*:** Author Articulation

The nuclear environment between India and Pakistan can hardly be understood by Western nations. The flight time of less than five minutes is difficult to comprehend for a Westerner. The risks involved in an accidental event increase manifold in such a situation. It is also difficult for Western nations to follow or perceive the no-first-use (NFU) principle since they follow a first-use policy. They also fail to fathom the reasons for a massive counter-strike culminating in unacceptable damage to any country dropping a nuclear weapon on India.

The SPDF has purposely designed and built TNWs so that India is forced to follow the escalation ladder instead of the stated response of massive retaliation, assuring mutual destruction unacceptable to Pakistan.

Figure 2: Pakistan's TNW Facility at Pano Aqil

***Source*:** Author Articulation

The intelligentsia and think tanks of the UK and US have been writing papers trying to convince India that the Indian Army should display restraint since Pakistan is only using TNWs. They are of the opinion that India should develop TNW to follow the rungs of the escalation ladder, which will then certainly be at the whims and fancies of Pakistan and obviously unacceptable to India.

Zero Range Concepts

Understanding zero range theory is extremely important for not only India but also the entire world. Lt. Gen Kidwai, in his speech about Pakistan's full spectrum deterrence capability, said, "Vertically the spectrum encapsulates adequate range coverage from 0m to 2750m as well as nuclear weapons' destructive yields at three tiers strategic, operational and tactical."[5]

In order to understand what Lt. Gen. Kidwai exactly meant by 'zero range,' one has to read between the lines. Many Western experts have claimed that Pakistan has developed nuclear artillery shells, which have been speculated about for some time. Some Indian authoritative intelligentsia considered it to mean Pakistan's success in miniaturising the warhead and converting it into nuclear landmines that could stop Indian strike corps at the borders itself. It is possible to hypothesise that Pakistan could be thinking of what the USA in the 1950s tried and tested – a small TNW dropped with a paratrooper. Hence it can be argued that 'zero range' in Pakistan's nuclear weapon capability is probably an abundantly clear threat of using terrorists as the delivery system. Thereby, there are four possible delivery systems which must be looked at to discern their viability as well as their pros and cons in terms of storage, delivery, and employment.

Nuclear Artillery

There is no convincing evidence that Pakistan's Nasr missile is functional. The warhead, if miniaturised to 200-300cm, definitely would have been tested before any operational deployment.[6]

The artillery shells needed to contain a nuclear weapon would require a gun of minimum 155mm calibre. That further complicated miniaturised designs, which seem to be beyond Pakistan's technological prowess. It was widely doubted in the last decade that Pakistan could be using the technology developed by AQ Khan in the production of artillery ammunition with nuclear warheads. However, nobody with technical knowledge believed it to be true.

Hypothetically, the nuclear artillery can fire a shell set to detonate at a low airburst delivered to a distance anywhere from 25km up to 35km depending upon the charges used. Considering that the nuclear artillery shot is fired at the incoming strike corps elements, which in any cold start scenario would be the forward echelons of an integrated battle group (IBG), these combat formations are highly mobile, agile, flexible, and well-dispersed armoured and mechanised infantry columns. They would sail through easily by taking nuclear countermeasures and carrying out assigned tasks without much damage to the pincer.

Landmines

According to few experts[7] 'zero range' means land mines that could be used in an emergency against India. For a few years, Pakistan toyed with the idea of thermonuclear landmines. However, this would have multiple disadvantages, especially in terms of the risks involved.

(a) The command and control of nuclear weapons would be in the hands of the lowest rung of the army.

(b) Once mines are laid, they will be very difficult to recover. The vagaries of weather, especially the rivers' course, which keeps changing almost 3-4km during monsoons, would certainly drift the mines and make it extremely difficult for the host nation to find the locations.

(c) Inadvertent triggering of the device during minelaying is a dangerously high risk.

(d) Unprecedented security perimeters enforced for the safety of the device at the unit level will be noticed by Indian forces.

(e) Rouge elements in the Pakistan Army could easily remove these mines after they are laid, and the device may fall into the wrong hands.

Paratroopers

The US developed W-54, a TNW called Special Atomic Demolition Munitions (SADM), small enough to be carried in a hard-cased backpack. A paratrooper could carry it to the point of delivery in a high-altitude airdrop opening (high or low) depending upon the distance to be covered and prevailing weather conditions. Pakistan has enough religiously motivated ranks among its paratroopers who will volunteer to carry out such special missions across the borders on any counterforce or counter value target. This method of delivery again has the disadvantage that once the package is dropped,

it will be impossible to recover. A fanatical Islamist paratrooper may never return without accomplishing the mission, even if ordered not to trigger the device.

Terrorists

This option of a device carried by a terrorist, or as Pakistan prefers to call them, a non-state actor, has the added advantage of inherent deniability of any responsibility for the act, even if captured alive. It provides Islamic fanatics with an easy and cheap delivery system to employ.

The cost of this system of launch or delivery is minuscule compared to that of a ballistic missile. Such delivery systems would be highly motivated and could reach any area or location in India. It would be difficult to intercept or monitor as compared to ballistic missiles without being detected by radars since they can move at ground level. The main disadvantage of this kind of terrorist delivery would be that once launched, it would be very difficult to recover or cancel the launch.

Command and Control

The biggest disadvantage of all the options discussed above is the command and control of the devices, which would have to be with very low-level ranks of the Pakistan Army. A young brigadier or colonel would certainly have the power to change history, which may affect decision-making. A number of Pakistani leaders, like General Parvez Musharraf, have vociferously threatened India time and again. Imagine the plight of the young Brigade Commanders or Commanding Officers of the Pakistan Army with the so-called 'zero range' nuclear weapon at their disposal, especially when:

(a) The fog of war becomes overbearing when their communications are cut off and they have to take decisions in their own stead.

(b) The religious animosity ingrained in him over decades gets an avenue for practical expression.

(c) The overwhelming emotion of avenging the dismemberment of erstwhile East Pakistan doesn't allow him to think sanely.

(d) The political leaders' sabre-rattling reaches a frenzied pitch.

Strategic decision-making, despite clear written orders, may not remain unaffected.

The Trust

Physical separation of the warhead and delivery system in such scenarios is not possible. Hence, nuclear weapons will always need to be kept on high alert. Any such use of a so-called 'zero range' nuclear weapon against India will undoubtedly espouse a massive retaliatory second strike from India that will inflict unacceptable damage on Pakistan. After Lt Gen Kidwai's 'zero range' statement, trusting Pakistan in such a precarious political and economic situation is extremely difficult.

Assessment

Pakistan as a nation is on the brink of breaking into pieces, and yet Lt Gen Kidwai has the gumption to threaten India. This speech needs to be unequivocally condemned by the world community. The untrustworthy Pakistani polity and military leadership simply want to threaten India and blackmail the USA and the rest of the Western world into pressuring India. The Pakistani government has time and again conveyed the consequences of any use of nuclear weapons by Indian authorities very credibly. However, Pakistanis still want to pressurise India somehow to retaliate against Pakistani's use of TNW by following the escalatory rungs. The main question is whether Pakistan will take recourse to such blatantly unethical nuclear weapons usage against India, knowing fully well that India's credible second strike will ensure the complete destruction of Pakistan?

Considering all the above, especially the risks involved, the answer is a most vehement 'no!' This is yet another nuclear bluff by Pakistan!

(Disclaimer: The views and opinions expressed in this article are those of the author and do not necessarily reflect the position of the Centre for Air Power Studies [CAPS])

Notes:

[1] Maleeha Lodhi "Independent foreign policy?" Dawn, May 2, 2022, https://www.dawn.com/news/1687884. Accessed on August 16, 2023.

[2] "A Conversation with Gen. Khalid Kidwai - 2015 Carnegie International Nuclear Policy Conference" Youtube,Carnegie Endowment. https://www.youtube.com/watch?v=CNZCw0BXKyE Accessed on August 16, 2023.

[3] Abdul Basit "A Taliban Takeover Will Strengthen Pakistan's Jihadis"S. Rajaratnam School of International Studies in Singapore. https://foreignpolicy.com/2021/08/18/taliban-afghanistan-pakistan-jihadis-al-qaeda-terrorism-extremism/ Accessed on August 16, 2023.

[4] Vinayak Bhat. "Rare images show Pakistan's tactical nuclear weapons that may be used against Indian troops" The Print, 29 March, 2018 Images show Pakistan's tactical nuclear weapons may fail to stop India (theprint.in) Accessed on August 16, 2023.

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[6] Hans Kristensen. "Pakistan's Evolving Nuclear Weapons Infrastructure" Federation of American Scientist. November 2016. Pakistan's Evolving Nuclear Weapons Infrastructure - Federation of American Scientists (fas.org) Accessed on August 16, 2023.

[7] Manpreet Sethi Radm Sudarshan Shrikhande Arun Sahgal. "Pakistan's New Nuclear Strategy Is a Crisis in the Making" The National Interest. https://nationalinterest.org/feature/pakistan%E2%80%99s-new-nuclear-strategy-crisis-making-206646 July 15, 2023 Accessed on August 16, 2023.