

NUCLEAR CAPABILITIES OF CHINA AND INDIA

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ABSTRACT

The Chinese acknowledged that, their nuclear programme would have been impossible to complete, without the Soviet's help. China's first test of a nuclear device took place on October 16, 1964, at the Lop Nur test site. China's last nuclear test was on July 29, 1996. According to the Australian Geological Survey Organization in Canberra, the yield of the 1996 test was 1-5 kilotons. This was China's 22nd underground test, and 45th test overall.¹

The opening of the door, through economic reforms in the late 1970s, however, once again brought to the fore, the key issues of foreign policy, focused on China's proper place in the world. Its leaders claim that, their foreign policy over the past half-century has always been consistent. Changes in its foreign policy have led to dramatic changes, in its major alliances. In 1950's, they were closely allied with the Soviet Union, but in 1960's became hostile to both Soviet Union and US. In the 1970's, the Soviet Union was an arch enemy, but an alliance with US was guaranteed, counter to the Soviets. In 1980's a drastic diminution of hostility towards the Soviets, led to normalization of relations. Now, although China still declares itself, as a part of the "Third World", its foreign policy is closely allied, with its desire for economic expansion.

The emphasis is on Omni-directional diplomacy that can be summed up as being nice to everyone, who is nice to China. Settle the prolonged disputes with neighbors, from a position of strength.

Since the late 1980's, Beijing has seen US as a chief obstacle on its own strategic ambitions. It wants to prevent the "contain China" front, of building a military with force projection capability and extend its presence in South China and East China seas, to control the important sea lanes.

KEYWORDS: China, India, Nuclear Capabilities, Nuclear Ambiguity, Missiles Etc.

INTRODUCTION

China Threat Theory

This theory started in the 1990's, when its economy and comprehensive national strength experienced fast growth. In August 1990, Professor T Murai at Tokyo Defence University raised it, but did not attract much attention. In Feb1992, following two events in China gave momentum to the theory:

- On 25th February, the National People's Congress adopted the law of the territorial sea of the Peoples Republic of China, confirming a claim of sovereignty over some offshore outcrops of rock; including Nansha Islands and Daiyou Islands. It was interpreted as a sign that, China was pushing for military expansionism and attempting to become a regional Hegemony. The Japanese and US media termed it as China's marine hegemonic strategy, and that it was expanding outside its territory, its military was growing fast, and that China aimed to dominate East Asia.

¹ Burr, W.; Richelson, J. T. (2000–2001). "Whether to "Strangle the Baby in the Cradle": The United States and the Chinese Nuclear Program, 1960-64". *International Security* 25(3): 54– doi:10.2307.2F2626706. JSTOR 2626706. edit

- In the same year, Deng Xiaopings tour of Southern China provided the launch pad, for the robust economic growth that shows little sign of diminishing. The western media are worried that, it would become a competitor in world markets, funds and resources, and even worse, to provide more resources for China's military expansion

India – China Nuclear Perspective

Two giant fishing in the same waters can generate adequate scope for conflict, coupled with the existing difficulties between the two, and the increasing arena of their influence and interests, the rise in economic, political and strategic dynamics could further enhance the scope for conflict. India's future strategy must therefore, appreciate that, she needs to be on a level playing field, or vis-à-vis, for China to ensure that, her interests both political and economic are not jeopardised. China has not officially released details about the size or composition of its nuclear arsenal, making estimates difficult to develop. China's nuclear capabilities are not unsubstantial. She already has in place, a triad consisting of long-range bombers, one nuclear ballistic submarine, and several classes of nuclear-armed ballistic missiles, ranging from theatre to intercontinental systems.

Future Envisaged Threat

The unsettled border disputes for a long time and its reluctance to show urgency can be assigned to the fact that, China solves disputes from a position of strength. This could manifest by 2008, when it becomes a military power and will try to wrest Arunachal Pradesh of India, by the use of military aggression. It may try to dismember Sikkim. The porous North Eastern borders can be used, to foment unrest in seven sisters. The process of encirclement of India has been already on. China, with blue water navy will be a potent threat in Indian Ocean, by 2015. Its ballistic missiles can target any part of India, in a very short time. It possesses nuclear weapons of all types and triad of delivery systems. The economic and industrial boom and cheap labor resulted in cheap goods flooding Indian markets illegally. This has threatened the domestic market and Indian industry. A belligerent Pakistan, with active military and economic support from China, is an indirect threat to India's security. China's political and diplomatic efforts can thwart India's claim, for UN seat and in the long run, adversely affect its aspirations of a regional economic and military power.

India's Response to Counter China Military

- Maintain strong dissuasive land, air defensive posture on LAC with a land-air counter offensive capability, to hit limited depth in selected areas of Tibet.
- A strong, multipurpose land, air resources, suitably positioned that can defeat any deep Trans Himalayan penetration, into the plains of India.
- A potent navy to frustrate Chinese sea borne threats to India's island and mainland territory.
- Development of force multipliers in three services, like integrated strategic and tactical C⁴I² systems, radars, SAM, SSM, UAV, AWACS and Strategic airlift capability (Airborne division), Air to Air refuelling and Integrated logistics.
- Shift to greater reliance on Information Warfare.

Strategic

- Possess adequate (approximately 200-250) nuclear warheads of all types.

- Develop survivable, reliable and accurate triad of delivery systems, to target the centre of gravity of China.
- Launch exclusive military satellites, for surveillance and targeting of Chinese strategic targets by missiles.

China's Emerging Stand on Disarmament / Arms Control & non-proliferation: Implications & Options for India

China, being a permanent member of United Nations Security Council (UNSC) and a recognized Nuclear Weapon State (NWS), as per the Nuclear non-Proliferation Treaty (NPT), has an important say in the evolving global architecture of Disarmament, Arms Control and Non-Proliferation. Besides, it is a part of various non-proliferation regimes like the Nuclear Supplier's Group (NSG), Missile Technology Control Regime (MTCR) etc.

China's Stand on Non-Proliferation

China was a late starter to join international disarmament and non-proliferation regimes. It joined the International Atomic Energy Agency (IAEA) in 1994, MTCR in 1996, Zangger Committee in 1997 and the NSG in 2004. However, its stand on disarmament and non-proliferation issues made a subtle shift, consequent to India's nuclear tests of 1998, and the abrogation of Anti Ballistic Missile Defense (ABM) Treaty, by the US and subsequent announcement of plans for deployment of National Missile Defence (NMD) and Theatre Missile Defence (TMD) systems. China's emerging stand on Disarmament and Non-Proliferation is important to India, due to following reasons:-

- China continues to modernize its strategic capabilities at a time, when US and Russia are cutting down the strength of their nuclear arsenals.
- China is not only a recipient of nuclear technology, but is also a prospective exporter. China had in the past exported sensitive technology to Pakistan, Saudi Arabia, Iran, Iraq and North Korea, all of which lies in Asia and have been on the global non-proliferation watch list.
- Before acceding to the NPT, or becoming a member of MTCR regime, China had assisted Pakistan to acquire both nuclear and missile capabilities, with a view to narrow down India's strategic horizon to the South Asian region.
- China has recently carried out Anti Satellite (ASAT) missile tests, while professing its stand to prevent an arms race in outer space.
- As an emerging global economic and military power, China would not perceive India's growth as a strategic competitor in the correct perspective.

China also does not consider the use of nuclear weapons, on its 'own territory' as a violation of its NFU commitments. The latter caveat, though ostensibly meant for Taiwan, has portends for Arunachal Pradesh, which is still considered by China as its own territory.

SIZE OF CHINESE NUCLEAR WEAPONS (Size of Chinese Nuclear Bomb)

China has made significant improvements in its miniaturization techniques, since the 1980s. There have been accusations, notably of the Cox Commission, that this was done primarily by covertly acquiring the U.S.'s W88 nuclear warhead design, as well as guided ballistic missile technology. Chinese scientists have stated that, they have made advances in these areas, but insist that these advances were made without espionage.

The same Usenet post that, previous dubious assertions of 2,000 or more nuclear warheads stemmed.² As of 2011, the Chinese nuclear arsenal was estimated to contain 55-65 ICBM's.³ In 2012, Strategic Command (STRATCOM) commander C. Robert Kehler said that, the best estimates were "in the range of several hundred" warheads and FAS estimated the current total to be "approximately 240 warheads".⁴

The U.S. Department of Defence 2013, report to Congress on China's military developments stated that, the Chinese nuclear arsenal consists of 50-75 ICBMs, located in both land-based silo's and Ballistic missile submarine platforms.

In addition to the ICBM's, the report stated that, China has approximately 1,100 Short-range ballistic missiles, although it does not have the warhead capacity to equip them all with nuclear weapons.⁵

ESTIMATE OF CHINESE DELIVERY WEAPON SYSTEMS

Delivery Systems Estimate

The following are estimates of China's strategic missile forces, from the International Institute of Strategic Studies Military Balance 2015. According to these estimates, China has up to 90 intercontinental range ballistic missiles (66 land-based ICBMs and 24 submarine-based JL-2 SLBMs), not counting MIRV warheads

2006 FAS & NRDC Report

The following table is an overview of PRC nuclear forces, taken from a November 2006 report by Hans M. Kristensen, Robert S. Norris, and Matthew G. McKinzie of the Federation of American Scientists (FAS) and the Natural Resources Defence Council (NRDC), titled Chinese Nuclear Forces and U.S. Nuclear War Planning.⁶

Nuclear Security Situation in 2016

After increasing under Bush, the number of Chinese nuclear armed missiles, capable of reaching North America levelled off under Obama, with delays in bringing forth new capabilities such as MIRV and operational sub launched missiles.⁷ The U.S. Department of Defence 2013 report to Congress, continued to state that, China had 50-75 ICBM's. However, the United States-China Economic and Security Review Commission stated that, it was possible for China to finally have an operational Submarine-launched ballistic missile capability, by the end of the year.⁸

Type of Missiles

Land-based Intercontinental Ballistic Missiles

Although, unconfirmed most Western analysts believe, China has deployed anywhere from 18 to 36 Dongfeng 5 ("East Wind") intercontinental ballistic missiles (ICBM), since the 1980s. The Dong Feng 5A is a single-warhead, three-stage, liquid-fuelled missile, with a range of 13,000+km. In 2000, General Eugene Habiger, of the U.S. Air Force, the then-commander of the U.S. Strategic Command, testified before Congress that, China has 18 silo-based DF-5s. Since the early 21st century, the Second Artillery Corps has also deployed up to 10 Solid-fuelled

²Robertson, Matthew (June 28, 2012). "Nuclear Arsenal in China Much Bigger Than Believed, Says Expert Strategists and arms control experts disagree over recent report". *Epoch Times*. Retrieved 25 March 2013.

³<http://lewis.armscontrolwonk.com/archive/5460/yesin-on-chinas-nukes>.

⁴http://www.defense.gov/pubs/pdfs/2011_cmpr_final.pdf

⁵Kristensen, Hans. "STRATCOM Commander Rejects High Estimates for Chinese Nuclear Arsenal." FAS, 22 August 2012.

⁶Office of the Secretary of Defence - Annual Report to Congress: Military Power of the People's Republic of China 2010.

⁷Kristensen, Hans M; Robert S. Norris; Matthew G. McKinzie. *Chinese Nuclear Forces and U.S. Nuclear War Planning*. Federation of American Scientists and Natural Resources Defence Council, November 2006.

mobile DF-31 ICBMs, with a range of 7,200+ km and possibly up to 3 MIRVs. China has also developed the DF-31A, an intercontinental ballistic missile, with a range of 11,200+ km, with possibly 3-6 multiple independently targetable re-entry vehicle (MIRV) capability. China, stores many of its missiles in huge underground tunnel complexes; US Representative Michael Turner, referring to 2009 Chinese media reports said “This network of tunnels could be in excess of 5,000 kilometers (3,110 miles), and is used to transport nuclear weapons and forces,”⁹ the Chinese Army newsletter call this tunnel system an underground Great Wall of China.¹⁰

Medium Range Ballistic Missiles

Approximately, 55% of China's missiles are in the medium range category, targeted at regional theatre targets¹⁵²e. g. DF-3A/CSS-2, DF-21/CSS-5.

Tactical Cruise Missiles

The CJ-10 long-range cruise missile, made its first public appearance, during the military parade on the 60th Anniversary of the People's Republic of China, as a part of the Second Artillery Corps' long range conventional missile forces; the CJ-10 represents the next generation in rocket weapons technology, in the PLA. A similar naval cruise missile, the YJ-62, was also revealed during the parade; the YJ-62 serves as the People's Liberation Army Navy's latest development into naval rocketry.

Long Range Ballistic Missiles

The Chinese, categorize long-range ballistic missiles, as ones with a range between 3000 and 8000 km.¹⁵² DF-4/CSS-3, the Dong Feng 4 or DF-4 (also known as the CSS-3) is a long-range two-stage Chinese intermediate-range ballistic missile, with liquid fuel (nitric acid/UDMH). It was thought to be deployed in limited numbers, in underground silos beginning in 1980.¹⁵² The DF-4 has a takeoff thrust of 1,224.00 kN, a takeoff weight of 82000 kg, a diameter of 2.25 m, a length of 28.05 m, and a fin span of 2.74 m. It is equipped with a 2190 kg nuclear warhead, with 3300 kt explosive yield, and its range is 5,500 km. The missile uses inertial guidance, resulting in a relatively poor Circular Error Probability (CEP), of 1,500 meters.

Chang Feng Missile Family

There are 2 missiles in the Chang Feng (or Long Wind) family: CF-1 and CF-2. These are the first domestically developed long-range cruise missiles, in China. The CF-1 has a range of 400 km, while the CF-2 has a range of 800 km. Both variants can carry a 10 kt nuclear warhead.¹¹

Sea-Based Weapons

The submarine-launched ballistic missile (SLBM) stockpile of the People's Liberation Army, Navy (PLAN) is thought to be relatively new. China launched its first second-generation nuclear submarine in April 1981. The Navy currently has a 1 Type 092 Xia class SSBN, at roughly 8000 tons displacement. A second Type 092 was reportedly lost in an accident, in 1985. The Type 092 is equipped with 12 JL-1SLBMs, with a

⁹ [\[4\]](#)^[dead link]

¹⁰“Dong Feng 31A (CSS-9) Intercontinental Ballistic Missile”. Sino Defence.com. Retrieved 06 Apr 2010

¹¹ · Mil.huanqiu.com. Retrieved 2010-04-06.

range of 2150–2500 km¹². The JL-1 is a modified DF-21 missile. It is suspected that the Type 092 is being converted into a cruise missile submarine. The Chinese navy has developed Type 094 ballistic missile submarine, open source satellite imagery has shown that at least 2 of these have been completed. This submarine will be capable of carrying 12 of the longer ranged, more modern JL-2s with a range of approximately 14000 km.

China is also developing the Type 096 submarine, claimed to be able to carry up to 24 JL-2 ballistic missiles each. Some Chinese sources states that the submarine is already undergoing trials.¹³ Also a new nuclear attack submarine is under development, the Type 095 submarine.¹⁴

Heavy Bomber Group

China's bomber force consists mostly of Chinese-made versions of Soviet aircraft. The People's Liberation Army Air Force has 120 H-6s (a variant of the Tupolev Tu-16). These bombers are outfitted to carry nuclear as well as conventional weapons. While the H-6 fleet is aging, it is not as old as the American B-52 Stratofortress. The Chinese has also produced the Xian JH-7 Flying Leopard fighter-bomber, with a range and payload exceeding the F-111 (currently about 80 are in service), capable of delivering a nuclear strike. China has also bought the advanced Sukhoi Su-30 from Russia; currently, about 100 Su-30s (MKK and MK2 variants) have been purchased by China. The Su-30 is capable of carrying tactical nuclear weapons. China is alleged to be testing new H-8 and H-9 strategic bombers, which are either described as an upgraded H-6 or an aircraft in the same class as the US B-2, able to carry nuclear weapons.¹⁵ China is also testing the JH-7B strike fighter, a stealthy variant of the Xian JH-7.¹⁶

China's nuclear capabilities are not unsubstantial. She already has in place a triad, consisting of long-range bombers, one nuclear ballistic submarine, and several classes of nuclear-armed ballistic missiles ranging from theatre to intercontinental systems. The current up-to-date list of Chinese nuclear weapons and delivery systems has been compiled.

The bombers and the sea-based nuclear force should be of less concern to India. The Chinese bomber fleet mainly consists of H-6 bombers, which are older aircraft carrying gravity weapons. These aircraft will probably be unable to penetrate alerted Indian defence systems across the border. This force also lacks the technology and training to use nap-of-the-earth flying techniques, the only manner in which they can avoid detection by using dead zones in the Indian early warning (EW) radar network. This situation is unlikely to change till China's new tactical bomber; the B-7 enters service in the near future.

China's only nuclear missiles capable submarine also has limited capability. Its principal weapon system the JL-1 would not be able to reach any of the targets in India from its standard deployment area in the East China Sea. It is also unlikely that China will deploy its only submarine nuclear capability in the Indian Ocean under the present circumstances.

In the near term, it is China's land based missiles and the varied warheads that can be delivered on Indian targets that should be the primary concern. There have been reports from as early as 1988, that the Chinese have deployed nuclear

¹²"Land-Attack Cruise Missile (LACM)". SinoDefence.com. 2007-05-07. Retrieved 2010-04-06, John Pike. "Land-Attack Cruise Missiles (LACM)". Globalsecurity.org. Retrieved 2010-04-06.

¹³"Global Security Newswire". NTI. Retrieved 2010-04-06.

¹⁴<http://www.taipeitimes.com/News/editorials/archives/2006/12/06/2003339341>

¹⁵ Translate.google.com. 2008-11-11. Retrieved 2010-04-06

¹⁶ Mil.news.sina.com.cn. Retrieved 2010-04-06.

missiles in Tibet. It is true that all missiles have a minimum range, but it is to be ascertained whether Indian targets fall beyond this minimum range.

However, even if there is no truth in the assertion that Intermediate Range Ballistic Missiles (IRBMs) have been deployed in Tibet, there is no doubt that China can very well target India's heartland from existing locations in Sichuan, whereas India would need an ICBM capability which it currently does not possess. For a more detailed account, see Appendix E. However, because of de-escalation of tensions, it is believed that all Chinese missiles have been targeted.

Thus, the question whether China has deployed missiles in the Tibetan Autonomous Region (TAR) or Tibet is not relevant to that extent, in the sense that India can be targeted by China although from elsewhere in China. Three nuclear weapon systems have been identified as capable of targeting of India -- the DF-3/3A, the DF-4, DF-5 and DF-21/21A -- are all sufficiently long ranges to preclude their deployment in the inhospitable, underdeveloped and possibly vulnerable bases, in the TAR. Considering the variety and reach of the Chinese capability, it is axiomatic that China has to be considered a probable security threat for India now and for the long-term.

The Chinese land based missiles are adequate to cover other targets in Russia, USA, Japan, Taiwan and US assets in Asia, and yet have adequate range and capability to engage Indian targets. The current deployment pattern of the DF-3/3A, DF-21/21A, and the DF-4 ensures this adequately. What should however trouble India is the fact that currently India has no capability to counter such threats? The situation is going to further aggravate with the introduction of more advanced land-based missiles such as the DF-31 and DF-41.

China's higher levels of growth over a period have enabled it to begin modernizing its armed forces, particularly the nuclear forces, slowly but steadily. As time goes by, the relative balance of power is likely to shift in favour of China if India does not take any corrective action beginning now. The improvement in relations between both the sides has primarily allowed them to put away the differences, particularly the long-standing border dispute and limit their support for the domestic problems, in each other's territory whether Xinjiang, Tibet or Kashmir. China and India both tend to gain from this approach as in doing so China has one less land frontier to worry about, and can thus concentrate on its more difficult maritime problems in Taiwan and the South China Sea. At the same time India can reduce the number of troops deployed on the border with China, and use them for counterinsurgency operations elsewhere, particularly Kashmir. This arrangement has already been adopted and executed largely.

India's current strategy for dealing with a nuclear China today, is to simply maintain superior conventional forces backed by superior tactical air power. In the event of a Chinese offensive, a strong forward defence can defeat Chinese designs. Such a success can place the onus on China to initiate a nuclear use either to prevent defeat or to break-up Indian defences by a tactical strike or even the launching of counter-value strikes. Another possibility is, if China's modernization of its nuclear forces results in the deployment of tactical nuclear missiles along the line of actual control/line of control/international border (LAC/LC/IB), China may not need to issue any counter-value threats, which India can use to solicit external support. The Chinese tactical nuclear missiles will enable it to issue threats of nuclear use against India if it lacked comparable capabilities.

The modernization that China is undergoing is going hand in hand with the modernization of Chinese conventional forces. China has begun modernizing its military, both in thinking and equipment, during 2001-2002. Analysts estimate that by 2010, that the PLA will be the world's second-most powerful conventional force. Song Do Xing,

a military scholar at the People's University in Beijing, says the world has nothing to fear 'China's main focus is to protect its territory. The strategic objective is to be able to fight a small-scale high-tech war. There is no specific nation China has in mind as it modernizes.' These improvements will significantly reduce the conventional advantage that India currently has. This also implies the need for a ready Indian nuclear arsenal, which can help in balancing this unfavourable tactical situation that is emerging. From all this, it can be safely deduced that only a nuclear deterrent could prevent Chinese blackmail or actual nuclear use. It is clear that, India cannot depend totally on the commitments of nuclear weapons states either the US or Russia, to neutralize Chinese intentions. Thus, for the current conventional deterrence strategy to succeed, India has to acquire a range of nuclear capabilities comparable to those of China.

The counter-value capabilities China possesses today do not cause such a threat due to China's political mellowing. This is enabling India to proceed gradually with its shifting nuclear posture. However, if the situation changes in the future and old problems are revived viz China's support to the North-East insurgencies in India, or if India begins to support the active and uneasy Tibetan community and seek Tibetan independence, the pressures on New Delhi to develop a nuclear response that will permit a flexible response capability would increase.

India's nuclear programme must therefore be guided by these situations, whose worst-case scenarios have to be taken into account. While Pakistan is a manifest threat, China would also develop into a similar one over the next two decades. India's strategic thinking must therefore be based on a very prudent approach, that must lead to the creation of a strong and credible deterrent to both Chinese and Pakistani nuclear adventures.

Having seen a brief review of India's nuclear development programme, its approach to the adoption of a nuclear stance so far, the geopolitical situation in the global arena in general, and the future geopolitical scenario in the world, we can now examine the current global and possible future strategic factors that are important and likely to affect India's nuclear doctrine.

NUCLEAR AMBIGUITY

As seen already, the Indian nuclear programme began even before India's independence in 1947. The approach to nuclear weapons evolved gradually. In the 1950s, India emphasized on the comprehensive economic development and the use of atomic energy for peaceful purposes. The approach had two facets; one was its drive to harness nuclear energy, as an effective source of energy for its development needs, while the second was the rejection of all forms of nuclear weapons. With the growing Chinese threat and the 1962 debacle, India commenced examining the feasibility of extending civilian nuclear technology for defence requirements via means of the Subterranean Nuclear Explosion Project (SNEP). This led to the Peaceful Nuclear Explosion (PNE) in 1974, while at the same time maintaining its opposition to nuclear weapons. This ambiguity continued to rule the 80s and 90s, until the fresh series of explosions in May 1998. Even thereafter, the new capability did not clarify whether India possessed nuclear warheads ready for use or whether it had a programme to manufacture and deploy them in a credible manner within a given time period.

It must be recalled here, that during the period of the Cold War, the Indian strategic policy had two very realistic approaches, each with its respective objectives:-

- The first at the diplomatic level and was aimed at nuclear disarmament and the total abolition of all nuclear weapons at the global level;

- While the second was aimed at maintaining India's capability to produce fissile materials for nuclear weapons and a wide range of delivery technologies that a functional deterrence would need.

Both these stated objectives were actively followed since independence with a fair amount of success and failure and continues to operate to-date seemingly contradictory, but inherently logical from the Indian perspective. The major gains from this approach have been on the political and the diplomatic level, where India has succeeded in avoiding any legal constraints limiting her freedom of choice, while continuing to target disarmament goal. However, there has been very little success in obtaining any support for the abolition of nuclear weapons, particularly from the declared nuclear weapons states.

India is so far not a signatory to the Non Proliferation Treaty (NPT) and the Comprehensive Test Ban Treaty (CTBT), nor is she likely to sign the Fissile Material Cutoff Treaty (FMCT) as long as there is discrimination in its clauses between the nuclear weapons states and the non-nuclear weapons States. At the moment, therefore there is no legal constraint on it, developing a proper nuclear arsenal. However, 'a variety of legislative constraints have arisen within the United States that requires the US government to penalize (unilaterally if necessary), any state other than the permanent five that acquires new nuclear capabilities. The sanctions imposed on India and Pakistan in the aftermath of the May 1998 nuclear tests were made necessary by one or more of the these legislative constraints. Since the United States will remain the only hegemonic power in the international system for at least another two decades, its ability to inhibit foreign choices with respect to nuclear decision-making cannot be underestimated, and must in fact be recognized as an even more significant hindrance of any freedom of choice that India notionally enjoys. At the very least this constraint could materialize in the form of a continuation of stringent US controls that currently restrict access to high technology and advanced weaponry.'¹

India has similarly succeeded in developing and maintaining her capacity to produce nuclear fissile materials, mainly weapons usable Plutonium. In fact, India today is probably at that point, where it faces no technological constraints on its ability to produce any grade of weapons usable (including weapons-grade) Plutonium it desires for the purposes of fabricating nuclear weaponry.²

FACTORS AFFECTING INDIA'S NUCLEAR DOCTRINE

In the overall perspective, the factors that should affect and decide the direction India's nuclear doctrine should take are as follows: -

- The geopolitical situation and its imperative as applicable to India.
- The nature of international nuclear environment and compulsions.
- The regional security imperatives with specific reference to Pakistan and China.
- India's bilateral relations with the major powers in the world order.
- Internal political and economical factors.

Basic Features of the Draft Indian Nuclear Doctrine

These are

- Minimum nuclear deterrent.

- No first use.
- Non-use against non-nuclear powers.
- A commitment towards total disarmament in the long term.

These basic tenets are reflected in the draft report, which elaborates these into specifics. The draft doctrine itself was compiled over a six-month period from January to June of 1999.

A Surgical First-Strike for a Limited Objective

It is worth seriously analyzing whether there is scope for the planning and development of a capability for such an approach. A surgical first-strike would simply the use of a small nuclear weapon (a one kiloton or a sub-kiloton device) launched with precision with the aim of achieving a specific and limited objective. For instance, the ability to stop in its tracks an offensive armour thrust, by three simple low airburst weapon explosions at the head of an armoured column and one similar burst at its base, which would for all practical purposes be the end of that armoured thrust. If it can be executed with no fear of retaliation and consequence escalation, it would be the ultimate dream of any defending corps commander. Such a surgical strike must: -

- Be accurate enough to cause maximum damage in the defined area.
- Be accurate enough to reduce or eliminate non-intended damage to casualties such to civilians and civil infrastructure.
- It must be of adequate yield to achieve the objectives.
- It must be such that there is minimum residual radioactivity and that it spreads over the least possible area.

Such a strike must be backed by the fear of imminent additional strategic level strikes if there is retaliation. This threat must be real and visible to gain control over the possibility of escalation. Thus, the initiator must have the capability to enforce 'Escalation Dominance'. In the event that this escalation dominance succeeds, the initiator will be successful, in the event it does not, there will be counter-strikes, which the initiator should be prepared for to arrive. The nature of the counter-strike may be strategic or tactical. If it is at the strategic level, meaning counter-value, then the situation has moved beyond control. To get it back under control will need a very strong will, and an incredible level of restraint. It is possible that in this whole exchange the initiator suffers more damage than the defender, even though he may have achieved his aim. There can be numerous variations to this scenario, in terms of number of devices in the surgical strike, the timings of the strikes, whether spaced or simultaneous, the nature of the targets whether military or infrastructure and the degree of damage caused. The response would depend on these variable factors in addition to the fixed factors such as capability, will and doctrine.

On the whole it is pertinent to arrive at the conclusion that surgical first-strikes against NWS are fraught with uncertainties, the wisdom usefulness of which is open to doubt.

CONCLUSIONS

India's national security aim is to create a conducive internal and external environment for unhindered economic progress and socio-political development, to enable India to assume its rightful role in the emerging world order. India's emergence as an economic and technological powerhouse would enable India to be perceived as a counter balance to

China. As a result, India could emerge as a neutral player in the ‘balance of power’ game in the region. As a regional power, India will have to increasingly involve itself in ensuring stability, peace and nation building under the aegis of UN or under bilateral arrangements.

The recent approval by the Nuclear Suppliers Group on waiver to India on nuclear trade marks a coming of age for the country, as well as a new moment in its engagement with the world. This could bring India closer to the US, France, EU, Japan and Russia. But Sino-Indian ties could get frosty. India’s strategic thrust, therefore, must realign itself to play an important role in the region in cooperation with the comity of nations, while at the same time develop its military capabilities in synchronisation with its aspirations.

Future war fighting doctrine would need to focus on war prevention. War prevention would be the key element of national security to ensure sustained development. Thus, conflict avoidance strategies would assume greater importance, without impinging upon the ability to fight successful wars. War prevention strategies need to fit into overall security paradigm, which entails social, political, economic and military spheres. The strategy will be to maximize deterrence so as to achieve national objectives through war avoidance. Where deterrence fails, escalation control will define the course ahead.

REFERENCES

1. Mohan Guruswamy and Zorawar Daulat Singh, *India China Relations: The Border Issue and Beyond*, New Delhi, 2009
2. Rajeswari Pillai Rajagopalan, *Clashing Titans: Military Strategy and Insecurity Among Asian Great Powers*, Knowledge World Publishers, New Delhi, 2012.
3. Jagannath P Panda, *China’s Path To Power: Party, Military and the Politics of State Transition*, Pentagon Security International, New Delhi 2010.
4. VP Malik and Jorg Schultz, *The Rise of China*, Pentagon Press, New Delhi, 2008.
5. Mohan Guruswamy, *India–China Relations: The Border Issue and Beyond*, Viva Books, New Delhi, 2009
6. DS Rajan; Ed. *Indian Perspectives on China*, TR Publications Pvt Ltd, Chennai, 2009.
7. K Santhanam and S Kondapalli, (Eds), *Asian Security and China 2000-2010*, IDSA Publications, New Delhi, 2004.
8. Swaran Singh, *China-South Asia: Issues, Equations, Policies*, Lancer Books, New Delhi, 2003
9. RV Kumar, *Chinese Air Force Threat*, Manas Publications, New Delhi, 2001.
10. JS Bajwa, *Modernisation of the PLA*, Lancer Publishers, New Delhi, 2002.
11. Dr. P B Sinha, *History of the Conflict with China 1962*, History Division, Ministry of Defence, Govt of India, New Delhi, 2002
12. Ajay B Agrawal, *India, Tibet and China: The Role Nehru Played*, NA Books, Mumbai, 2003.

