CHAPTER - 2

INDIA'S NUCLEAR POLICY: A HISTORICAL ANALYSIS

After the dramatic end of Second World War[1] the leaders of developing countries have paid increasing attention to science and technology on the assumption that an indigenous scientific and technology would not only bring prosperity for their people but also power and status in international politics. The nuclear era had already begun by the time India attained independence. A very grim situation was prevailing at international level for newly independent countries after World War II with regard to national security and independent conduct of foreign policy in wake of stand taken by U.S and its Western Bloc allies that "if you aren't with us you're against us". That situation forced developing countries to either surrender their national interest and conduct of independent foreign policy by joining one of the two power blocks or pursue independent stand by remaining non-aligned from two blocks.

After independence India's policy making has developed on two distinct stands, an Ashokan one for promoting global peace and the other on Kautilyan stands for protecting India's national interest (Pendse, 2000). Indian nuclear policy is the product of the international environment. India found itself in midst of world divided into two power blocs, with the process of decolonization and disintegration of imperialism and the emergence of national states in the third world. It was against this background that India's nuclear policy has taken shape. India's nuclear policy was formulated to meet the fundamental problem of the country. India's first P.M Jawaharlal Nehru considered nuclear power vital for economically and industrially weak India. It was probably his impatience to reap the fruits of nuclear science and technology that within twelve days of getting freedom, a meeting of the Atomic Energy Research Board was held.

The beginning of India’s nuclear programme is a story of two powerful individuals, Jawaharlal Nehru, Homi Bhabha[2] and their ideas. They regard nuclear power, electric and explosive, as representing modernity, potential prosperity, the transcendence of the colonial past, individual and collective prowess and international leverage. Amid the early years of independence, India sought after what Nehru called “a

peaceful nuclear programme" which implied that the programme was developed not to build nuclear weapons but rather was a substitute to provide clean energy to the people of India. PM Nehru controlled both foreign office and Department of Atomic Energy. As a follower of Gandhian non-violence and his deep resentment against violent conflicts and his commitment to resolve international dispute peacefully, it was natural that PM Nehru would openly oppose the production of nuclear weapon. Most significant aspect of India's foreign policy was its strong advocacy of universal nuclear disarmament. On November 13, 1945, Jawaharlal Nehru declared that the revolutionary discovery of atomic energy would either completely destroy human civilization or take it to unbelievable level of prosperity[3]. The official policy of the Government of India was to use nuclear energy for peaceful purpose which was highlighted in the bilateral agreements between Canada, UK, USA and USSR.

A careful reading of Nehru's speeches and policy declarations clearly reveal that he did not close India's nuclear options. It goes to the credit of PM. Nehru that he established the strong foundations for nuclear research, so that in future when India decides to exercise the nuclear option, it could do so without much difficulty. Considering his inclination towards science and technology Nehru wanted to channelize science for developmental purposes. Nevertheless nuclear energy is a dual technology as it could be used for constructive as well as destructive purposes. Nehru said that, every country should utilise the latest scientific devise for its security and India will also develop its scientific research and will use atomic power for constructive purposes, but he further asserted that if India's security is threatened that she will not hesitate to defend herself by all means.[4]

Although the prominent figures in the Indian nuclear establishment thought in a different way, Prof. Sumit Ganguly alludes to a discussion between Homi Bhabha and the British Physicist Lord PMS Blackett about his interest in acquiring nuclear weapons[5]. While delivering a paper in the in the 12th Pugwash Conference in 1964, Bhabha expressed his views that nuclear weapons along with adequate delivery system can destroy almost every targets, therefore its becomes irrelevant whether the attacked states have greater destructive weapons at its command, he argues that nuclear weapons helps states to acquire absolute deterrence even against other state possessing greater

destructive power under its command (Ganguly, 1998, 2000). Homi Bhabha could impact stalwarts in mainstream scientific researchers, as well as political pioneers to his mindset. Former cabinet secretary SS Khera, is of the view that whoever knew Dr Bhabha and worked with him were aware of his urge to work towards making bomb (Khera, 1968). Bhabha's associates in the Atomic Energy Establishment shared the same passionate sense of commitment with regard to making the atomic bomb at the earliest with the goal that India could turn into an incredible power. As indicated by Raja Ramanna "There was never a discussion among us over whether we shouldn't make the bomb. How, to do it was more important. For us it was a matter of prestige that would justify our ancient past. The question of deterrence came much later. Also, as Indian scientists we were keen to show our western counterparts, who thought little of us those days, that we too could do it (Raja Ramanna, quoted in Chengappa, 2000, p. 62).

Indian nuclear history can be divided into the following four phases:

(i) Phase I- from the development of the Atomic Energy Commission in 1948 to 1964, when Nehru died and China exploded their first device;

(ii) Phase II from 1964 to 1974 when India did the testing of the Peaceful Nuclear Explosive (PNE), namely the period amid which the nuclear establishment gradually acquired the materials, know-how and necessary technology;

(iii) Phase III the period 1974 to 1995 when no tests were conducted and the government changed hands several times; and

(iv) Phase IV from 1995 to 1998, when the path to testing was taken culminating in the nuclear tests themselves in 1998.

2.1 PHASE I FROM 1947 TO 1964: BUILDING NUCLEAR INFRASTRUCTURE

India's indigenous endeavours in atomic science and technology were set up remarkably early. The initial step was taken by Dr. Homi Jahangir Bhabha in March 1944 when he presented a proposition to the Sir Dorab Tata Trust to establish an atomic research foundation, more than three years before independence and a year prior to the first weapon test in 1945 by US. This prompted the formation of the Tata Institute of

Fundamental Research (TIFR) on 19 December 1945 with Bhabha as its first Director. Not even exactly a year after independence, on 15 April 1948, the new Government of India passed the Atomic Energy Act[6], prompting the foundation of the Indian Atomic Energy Commission (IAEC). In the Lok Sabha debates majority of the parliamentarian welcomed the bill however question ascended about the secretive nature of the legislation and the patent role of the AEC. PM Nehru defended the bill and the secrecy by expressing that he proved unable to distinguish between the peaceful and the military use of atomic energy.

The AEA placed all uranium and thorium reserves in the country under state control and encouraged the conduct of atomic research and development activities in 'secret.' In 1945, the Government of India created the Department of Atomic Energy (DAE) to additionally invigorate atomic research and energy development. PM Nehru and Dr. Bhabha respectively became the first minister and secretary which clearly assert that the Indian Government committed to build nuclear programme on priority basis. Furthermore, in 1945 the Atomic Energy Establishment, Trombay (AEET)[7] was set up with a specific end goal to accelerate the nuclear infrastructure build-up. Its primary objectives were to create skilled manpower and basic infrastructure in order to facilitate nuclear R&D and transfer of nuclear technology.

In the early phase India utilised a favourable international environment for atomic research and development to build its nuclear programme. In the 1950s, the general view about atomic R&D was that the 'peaceful use of the atom' could solve many of the economic and social problems of humankind. Given such a favourable international circumstance and utilising commercial interests of the industrialised countries, India garnered considerable assistance from France, the United Kingdom, Canada and the United States to build its nuclear programme. In specific, Canadian assistance contributed significantly in the early days of India’s nuclear efforts.

Canada consented to furnish India with the 40MW Canada-India Reactor (CIR). This was combined with the agreement of the U.S. under the Eisenhower Administration's "Particles for Peace" program to supply overwhelming water for this reactor. This undertaking, (CIRUS), turned out to be a watershed occasion in atomic expansion. The hugeness of the U.S. consent to supply substantial water is this given an

extra conductor to the generation of plutonium and enabled India to sidestep the uranium improvement process that would have been important to create atomic weapons. By enabling this exchange of overwhelming water to happen in 1955, the U.S. should at last bear some duty regarding the atomic tests that consequently happened in 1974.

India however was very quietly beginning to shift from a uranium based production capability to a plutonium based one. This was mainly because of a lack of natural uranium resources, coupled with the plutonium produced in the primary stage could be used as fuel for the second stage and that would further produce an unending fuel supply. The construction of India's first reactor, the 1MW Aspara Research Reactor, built with British assistance in 1955 made the transition much easier. This was only the first step, as after a long negotiations Canada approve to supply India with the 40MW Canada-India Reactor (CIR). This was combined along with the US agreement under the Eisenhower Administration's 'Atoms for Peace' program to supply heavy water for the reactor. This project, (CIRUS), proved to be a defining event in nuclear proliferation. The significance of the American approval to supply heavy water is that this provided an additional channel for the production of plutonium and allowed India to bypass the uranium enrichment process that would have been necessary to develop nuclear weapons Sustained efforts produced results quite quickly. The indigenously built one-megawatt thermal research reactor the 'Aspara' (Water Nymph) went critical on 4 August 1956. For India, this breakthrough was important; because to a large extent it contributed to the successive development of its own nuclear programme.

By the early 1960s, India, by vigorous indigenous efforts and with considerable foreign assistance, made substantial progress in building a formidable nuclear infrastructure. More importantly, it had established a technological base, which could allow India to begin a nuclear weapons programme or at least a nuclear explosives project if the need arose. As it turned out to be the case, India indeed launched a nuclear explosion project in November 1965, in the aftermath of the first Chinese nuclear test.

In 1958, for the first time China publicly declared its desire to develop nuclear weapons, Chinese pronouncement came at a time when India-China relations was gradually declining overshadowing the spirit of Hindi-Chini Bhai Bhai (Indians and Chinese are brothers). It immediately made an impact on some quarters of India's

political circles, as a consequence on 10 March 1959 the Lok Sabha introduced the motion for discussion which suggested extensive nuclear research in the field of defence. During the discussion, Prime Minister Nehru gave less importance to the Chinese nuclear threat asserting that India had much more advance nuclear R&D than China.

However India's suspicions with regard to China greatly increased. From 1959 India-China border dispute ascended leading to large scale troop deployments by both the countries in early 1962. Moreover a year back India become aware of China's nuclear program which gave greater impetus to India's nuclear efforts. India publicly indicated its increasing interest in nuclear weapons, on 9 January 1961 PM Nehru asserted that "we are approaching a stage when it is possible to for us, to make atomic weapons."[8] In September 1962, on Bhabha's recommendation, Nehru passed the revised Atomic Energy Act tightening central government control over all decisions on atomic energy which led to more secretive decision making.

Following India's embarrassing defeat by China in the border war of 1962, the Jana Singh Party made a first formal demand in the parliament for the development of nuclear weapons. Subsequently the conservative Hindu nationalist Bharatiya Jana Sangh demanded the production of nuclear weapons for India's long-term defence efforts against China. Despite such demands from opposition political parties, the Indian Government still remained firm not to undertake on a military nuclear programme.

From 1944–1964, India primarily focussed on developing a wide ranging civilian nuclear infrastructure with an apparent intent of using atomic energy for industrial and economic purposes. Jawaharlal Nehru was an ardent advocate of nuclear disarmament.[9] Nehru had initiated the study on the consequences of the use of nuclear weapons and had adherently suggested the halting of nuclear test. In the mid-1950s Indian diplomats played a major role in drawing up the Partial Test Ban Treaty of 1963, which prohibited countries from testing in the atmosphere, in outer space and under water, but not underground. India was the fourth signatory after the top nuclear powers of the time, the United States, the Soviet Union and Britain.

From India's point, successful global nuclear disarmament could provide a numerous rewards. Disarmament promised a reduction in global tensions and the removal

of the danger of nuclear war. Consequently developing countries like India would be able to allocate resources to economic advancement as opposed to an expensive arms race. During this period there was no apparent indication of any military implications of India's nuclear programme with the exception that India did not act in such a way that it would permanently abandon its nuclear option for future. In any case, Indian elites were very much aware that the nuclear energy programme contained "a built-in advantage of defence use if the need should arise" (Kapur, 1976, p. 194).

2.2 PHASE II FROM 1964 TO 1974: SMILLING BUDDHA (POKHRAN-I)

This was a period of introspection of India's nuclear policy accelerated by the first Chinese nuclear test on 16 October 1964. Dr. Bhabha, very much convinced that the Chinese nuclear test was not very far away as he had estimated within 12 to 18 months, secretly began to seek for Nehru approval to authorize a nuclear test in Ladakh to match with China. However after Nehru demise on 27 May 1964, Lal Bahadur Shastri succeeded him, PM Shastri who followed Gandhian principles was antagonistic about India's persuasion of nuclear option. But that summer the prospect of Chinese nuclear test had gradually increased, Dr. Bhabha with an intention to garner public and political support started expressing his view in favour of nuclear weapons and estimated that India can build a bomb within 18 months. Coincidently, at the same time U.S. National Intelligence Estimate issued a statement indicating India's capability to produce nuclear weapons within one to three years time.

Affirming Dean Rusk's anticipation about the possibility of Chinese nuclear test in near future, China tested its nuclear bomb on 16 October 1964. PM Shastri proclaims that the test undermined world peace and repeated his resistance to India following a similar path of nuclearisation. However after a week on 24 October 1964 Dr. Bhabha made a prominent speech on All Indian radio. Dr. Bhabha asserted that "atomic weapons give a State possessing them in adequate numbers a deterrent power against attack from a much stronger State" (Perkovich, 1999, p. 67).

Against the background of the still sore wound of 1962 defeat, the Chinese test embarked on an unprecedented nuclear debate in India. Notwithstanding Shastri's 'no policy change' stance, various political parties including a majority of the All India Congress Committee members, the Indian media, many influential public opinion-makers and a majority of the Indian polity reacted sharply demanding the manufacturing of nuclear weapons for security purpose. In the last week of November 1964, Lok Sabha held its first debate on foreign affairs after Chinese nuclear test. Three alternative motions on nuclear policy were introduced for debate, one called for immediate production of an atomic bomb, second one called for embarking on 'nuclear-based defence installations in the country' and a third considered revision of Indian foreign policy and strategy considering the Chinese bomb.

Those who advocated nuclear weapon contended that there is a need for India to regain her lost prestige that a deterrent would be effective and cheap, and as an intense security threat had emerged India should put herself into the centre of power system. It would be important to demonstrate that India was ahead of China. Counter arguments was based on the negative impact on economy, and inability of such weapon to solve any problem. The question was between domestic consideration and identity as a great power, between Gandhian tradition and Cold war realism (Subrahmanyam, 1998).

Despite considerable pressure, Shastri was reluctant to change government's policy line. On 23 November, the Prime Minister repeated his earlier stand that the Indian Government would adhere to its traditional policy of developing and applying nuclear energy only for 'peaceful purposes' and indicated his government would seek for nuclear disarmament to tackle the problem. However, the following day (24 December) he gave in to the combined pressure of the Parliament members and slightly modified his government's policy, switching over from a 'no bomb ever' to a 'no bomb at present' position. Shastri indicated that India was capable to produce the bomb, but, maintained that a decision should be taken only after a careful consideration of all aspects. However, It was a crucial deviation from Shastri's underlying inflexible no-bomb position. Its significance lies in the implication that the present nuclear policy was Shastri's own,

which was based more on intuition and political instinct rather than on expert advice and analysis.

On 27 November, Jana Sangh introduced a motion in the Lok Sabha and called for manufacture of nuclear weapons. Shastri won a voice vote against the motion, by assuring the parliament members that his policy would not jeopardise national security. In his speech for the very first time he mentioned that India's nuclear programme would entail 'peaceful nuclear explosives.'[10]This change was a small but critical change. Infact PM Shastri adopted a 'nuclear option' strategy embracing a middle ground that was the third option.[11] This strategy was regarded to be the practical option at that given time as there was an obvious moral, economic and political reason for not taking up on an explicit nuclear weapons programme. More importantly, this policy change paved the way to undertake the Subterranean Nuclear Explosion Project (SNEP), which PM Shastri authorised in November 1965. The probability of immediate manufacturing of nuclear weapons from the project was very low. However, the importance of this initiative lied on the fact that it had the implied option to go nuclear from a PNE foundation. Indeed, it was the beginning of a new era in India's nuclear programme which eventually culminated with the 1974 nuclear explosion. This explosion provided India with the option to go nuclear in the future if desired so.

Prime Minister Shastri explored the possibility of an external security guarantee from the major powers. However, he was half-hearted and indecisive over the nature of seeking an external security guarantee for fear of domestic opposition and suspicion of any such commitment's credibility. Indians in general had serious doubt about the utility of an external security guarantee.[12] In particular, Indians suspected the credibility of guarantee in a crisis scenario. Moreover, many viewed that an external security guarantee was nothing but sacrificing the sovereignty and non-aligned policy of the country. Following PM Shastri formal consent to develop nuclear explosive, on 5 April 1965, Dr Bhabha initiated the Study of Nuclear Explosions for Peaceful Purposes (SNEPP) and chose Raja Ramanna who was the Director of Physics at AEET to lead the effort.

Within eighteen years of their independence, India and Pakistan fought their second war in 1965 over the disputed territory of Kashmir. In the midst of the intense nuclear debate, this war impacted substantially on India's nuclear perception. For New

Delhi, the most disturbing aspect of this conflict was Beijing's diplomatic support to Islamabad and its threat to open a second front along India's Himalayan borders. On 8 September 1965, China had sent an open diplomatic note threatening 'grave consequences' if India proceeded with military action against Pakistan (Barnds, 1970). Many Indians, including bureaucrats and politicians were persuaded to conclude that an independent Indian nuclear capability was the only means to prevent future Chinese nuclear blackmail and intimidation. On 22 September 1965, a day before the cease-fire, a hundred parliamentarians petitioned to PM. Shastri demanding an immediate approval to develop nuclear weapons. The petition referred to the bitter experience of weapons denial by Western governments during the war and emphasised that the security of the country must no longer depend on the mercy of so-called friendly countries. The petitioners concluded that "India's survival both as a nation and as a democracy, in the face of the collusion between China and Pakistan, casts a clear and imperative duty on the Government to take an immediate decision to developed our nuclear weapons"(Mirchandani, 1968, p. 39). As a result of the 1965 war India reinforce its long haul plans to acquire Nuclear weapons. The cooperation between U.S. equipped Pakistan and nuclear armed China posed a security threat that India couldn't ignore. Unfortunately after signing the Tashkent Declaration PM Shastri died of a heart attack and two weeks later Dr. Bhabha died due to plane crash in Mount Blare. The sudden death of PM Shastri and Dr. Bhabha who initiated the 'third option' strategy and 'peaceful nuclear programme' were relegated.

After Shastri and Bhabha the official policy changed as well, for P.M. Indira Gandhi the question on PNE's was secondary as she had to consolidate Congress' in the face of domestic problems. The new AEC chairman Vikaram Sarabhai, was similarly chosen for political and domestic purposes rather than reflecting on technological preferences of the political leadership. Saharabhai himself questioned the morality, political and military utility of nuclear weapons and decided to discontinue the NEP project. Despite Saharabhai opposition and PM Indira Gandhi's reluctance, a group of scientist continued their work on nuclear explosive. A study to design nuclear explosive with plutonium was lunched at Bhabha Atomic Research Centre (BARC) in late 1967. The top scientist who were involved were Raja Ramanna, P.K. Iyangar, Rajagopal

Chidambaram, who were not affected by national security concerns but infact they were motivated by desire to prove their own and Indian ability to produce nuclear bomb. They also felt that they were under no obligation to have a formal approval from the political leadership as Ramanna states that Sarabhai "could not keep them from doing their work "(Perkovich, 2000, p.123).

The first serious strategic development that brought a change in Indira Gandhi's nuclear stance was the thermonuclear weapon test by China on 9 May 1966. This enhanced China's capability to targets deep into India. Given this development and China's determination to build a modern nuclear force, the Indira Gandhi Government began to consider seriously exercising the nuclear option by undertaking on a nuclear weapons programme. In reaction to this development, the PM Indira Gandhi announced in the Lok Sabha that in addition to 'peaceful' uses of atomic power, India would increase nuclear technological know-how and 'other competence.' It was interpreted, however, as a subtle, but crucial, change in her nuclear policy. Several executive members of the Congress Party Parliamentary Group demanded that India had no choice but to develop the nuclear bomb in self-defence or at least to undertake a vigorous pursuit of a nuclear technological development to an extent where a switch-over to arms production was possible in a short time. In reply, PM Indira Gandhi assured them that the Government would step up its efforts to develop scientific and technological know-how in the field of nuclear energy. The Prime Minister also maintained that there was no question of a country like India depending upon others to defend itself. However, PM Indira Gandhi still chose not to begin a definite nuclear weapons programme considering its economic, political and diplomatic fallout. She instead geared up research and development of India's nuclear explosive technology. India resisted growing non-proliferation pressure from the major powers as was reflected in India's decision not to sign the Nuclear Non-Proliferation Treaty (NPT) in 1968.

Since negotiation on global proliferation regime emerged in the mid-1960s, the treaty was largely debated along certain normative principles in India. The policy in post-Nehru period undergoes a subtle shift best describe as one from an opposition to nuclear weapons, to a "no bomb now" orientation. New uncertainties are reflected in India's role and attitude to the NPT negotiation in which it had initially played a significant role. The

final draft of the treaty diluted what India and other non-nuclear weapon states wanted, namely a balance between the differential commitment of nuclear weapon state signatories and the non-nuclear weapons states signatories.

In the first Committee of UN General Assembly, 31 October 1966 Indian representative V.C. Trivedi adopted the stance of universal non-proliferation and disarmament and that no permanent club of nuclear powers should be given exception. He stated that the non nuclear states have no option but to pursue the same option as necessary if the existent nuclear powers resisted disarmament. It was clear that India would not shun atomic arms unless the existing nuclear states likewise did. This rationale prompted India declining to sign the Nuclear Non-Proliferation Treaty and voting against it on 12 June 1968. The other major reason behind India's non signature was China's decision not to sign the NPT and India's new hesitance to commit itself to future abstinence (Bidwai & Vanaik, 1999). Behind the curtains of criticism of the NPT from the moral high ground, however, India intensified nuclear preparation at the ground level.

On the political front, by 1969 Mrs. Gandhi had consolidated her hold on power in the party and in the parliament. Dr. Sarabhai, who had a unified view of the defence needs of the country, had started a space and missile development program separate from the Atomic Energy establishment before he died suddenly of a heart attack in 1971. By this time, the team of Ramanna and company had crossed almost all the hurdles on the way to a successful building of the PNE device (except for one remaining vital component, the neutron initiator). The only remaining thing was the authorization from the Prime Minister Indira Gandhi to build the device. By fall of 1971, Mrs. Gandhi had made public statements revealing that momentum was gathering for building and exploding the device.

In late 1971, a crisis in East Pakistan resulted in India-Pakistan war. Within twenty four years of their independence, the war ended with the creation of a new nation Bangladesh. The result was that India won the limited war with Pakistan. However, this war left significant strategic and nuclear implication for India. The U.S. (Nixon-Kissinger) infamous "tilt"[13] with the subsequent sending of a nuclear capable aircraft carrier –the USS Enterprise and nine supporting warships to the Bay of Bengal was alarming for the Indians and left long-lasting scars in the Indian thinking about their

security questions. Even more frightening to India was the prospect that a US-Pakistan-China strategic triangle would develop in near future. Indeed it generated substantial strategic pressure on India. Such a potential brought India closer to Soviet Union and signed a Treaty of Peace, Friendship and Cooperation on 9, August 1971 which reduced the fears about possible pressure on the northern borders from China. Thus the third Indo-Pak war prompted India to pursue a more robust defence and nuclear policy.

India conducted a PNE at the Pokhran test site on 18 May 1974, codenamed 'Smiling Buddha' It is almost impossible to say with certainty, what were the main motivating factors for the decision to proceed with the Pokhran test. It appears that it is a complex mix of national security, scientific-technological ambition and momentum, interpersonal relations, desire to show prowess etc. The rationale and sequence of decisions or events leading up to the 1974 tests remains very difficult. However, in 1970, the Indian Government began to consider seriously the conduct of a nuclear explosion against the background of Chinese nuclear activities. Sentiment for moving ahead gained momentum in the wake of the 1971 Indo-Pakistani War. In September 1972, PM Indira Gandhi authorized the chairman of AEC Homi Sethna to build a nuclear explosive device which would be eventually exploded in a 'peaceful' test. A small team of scientists from BARC and DRDO took another year and a half to finish the project. In January-February 1973, PM Mrs Gandhi had a closed door meeting with Mr. Sethn, Mr Ramanna and a few close advisors to discuss the issue though no military advisor were present in the meeting. According to Dr. Ramanna "Mrs Gandhi did not ask any questions or say anything revealing, just listened and then said, let's have it" (Kaul, 1974, p. 19).

The Pokhran test of 18 May 1974 was described by Indian officials as a "peaceful nuclear explosion" (PNE). Prime Minister Gandhi went further emphasizing "that the new nuclear know-how and technology would contribute to India's development, even if the economically advanced nations would suggest otherwise" (Perkovich, 2000, p.178). It was not very clear when PM Mrs. Gandhi took the 'final decision'[14] to conduct the test in absence of any government source materials in this regard. Different persons who were involved in the project have given different dates of the explosion decision. For example, Raja Ramanna, the chief architect of the device, during a press conference immediately

after the test said that the nuclear explosion was conceived exactly two years before, along with the authorization of Purnima research reactor on 18 May 1972. Defence Minister Jagjivan Ram stated that the decision to test was taken "three years ago" which meant sometime in 1971 (Ram, J. *The Indian Express*, 20 May 1974). IAEC Chairman, Homi Sethna, asserted that he "gave the green signal to Dr. Ramanna and his colleagues to go ahead with this project" in May 1972.[15]

Following the explosion, New Delhi was quick to indicate that the blast had no military implications. However, on several accounts this Indian claim was confusing if not misleading. There was hardly any doubt that it was not a definite Indian step towards building nuclear weapons but it was clearly a significant step towards strengthening its nuclear option, which eventually paved the way for India's building of a nuclear arsenal. India's claim that the 1974 explosion was 'only peacefully motivated' was contrived, as the government was aware that PNE could be utilised for military purpose. Indeed, the blast manifested a consistency and continuity in India's nuclear policy. As noted earlier, India since the mid-1960s had been developing a nuclear option surrounding atomic explosive technology. It was an outgrowth of this policy and a 'demonstrative blast' of India's growing nuclear assertiveness. Doubts about its peaceful character also arose from the fact that the Indians never gave an adequate explanation about the results and accomplishments of the test. There had been no reporting of coherent scientific or industrial use of the results of the experiment. Nor was there any evidence that India seriously used the results of this PNE for its socio-economic or industrial development in subsequent years.[16]

The Government of India never gave any detailed clarification for the decision. However PM Indira Gandhi did mention in an interview that " The PNE was simply done when we were ready. We did it to show ourselves that we could do it we did it when the scientists were ready". Many Indian commentators acknowledge as well as lamented on the strategic nature and importance of the test. The scientists winched about the failure to perform follow-up tests which was expected to a natural course of action. The military complained about being left out of the loop, particularly with the view of the effect the test would have on Pakistan's and China's strategy towards India later on. Professional

diplomats lamented that the international sanctions that arose against India were not anticipated.

India faced a mixed blend of International reaction to its PNE. States belonging to the non-aligned movement hailed the competence of the Indian scientists and technologies that had enabled to conduct the test. France openly sent out complementary messages to the Indian Atomic Energy Commission. However other states reaction demonstrated that there had been serious doubts with regard to India's claim about the 'peaceful character' of the test. Without wasting much time Pakistan indicate that the explosion validated its long-held suspicion about India's nuclear programme and claimed that India aspired to built nuclear weapons after China's nuclear test

The United States acted immediately and imposed restrictions on India with the intension to confine India's access to nuclear material and technology, thereby attempting to slowdown India's nuclear ambitions and to bring India within the fold of nuclear security and proliferation agreements. Canada which had provided the indirect technical and material assistance to make the Indian bomb possible responded indignantly with a sense of treachery and immediately stopped all aid to the Indian nuclear program. The Canadian Secretary of State for External Affairs affirmed that Canada could not "be expected to assist and subsidize, directly or indirectly, a nuclear programme which, in a key respect, undermines the position which Canada has for a long time been firmly convinced is best for world peace and security".[17] Beyond the immediate reactions of individual countries, India's nuclear test prompted an intensive tightening of the international non-proliferation agreements, which turned out to be more evident in the late 70's and early 80's as India attempted to gain assistance to its nuclear programs and know about to increased nuclear yield.

The 1974 explosion was not considered by India to be a nuclear weapon test. However, this was an exercise of weapons option based on a proven technology and its implication was to strengthen the viability of the weapons option through independent capability to initiate a military nuclear programme. It can also be considered as a technological and political signal of intent and capability. After the Pokhran test, India had a demonstrated capability to build nuclear explosives and hence weapons but with no

policy to move ahead. This self-restraint was expected to bring "respect" while at the same time to show that India had technological capacity.

2.3 PHASE III FROM 1975 TO 1995: THE LONG PAUSE (NUCLEAR AMBIGUITY

After Pokhran test India's nuclear policy was confronted with numerous domestic, regional and global challenges. Indian political system went through a series of upheavals and unstable intervals during this period. PM Gandhi threatened by political developments felt insecure and declared a state of emergency in June 1975. She suspended democracy for the only time in the history of Indian independence and jailed many opposition leaders and created an atmosphere of fear and distrust. This made her government very unpopular, and finally she was forced to lift the emergency and hold elections which she promptly lost. The fall of Indira Gandhi made it clear that the political leadership was more interested in internal, political and economic affair then in the ever more expensive and risky continuation of a nuclear programme. Indira Gandhi did not initiate any further test and her successor simply ruled them out.

The new government[18] was made up from a loose coalition of many parties and with no clear mandate. The new Prime Minister, Morarji Desai had a very strong aversion to nuclear weapons and immediately after assuming power announced that he would reassess India's previous nuclear policy and assured that India would not conduct any further nuclear explosions including NEP's. Though the nuclear policy did not change completely, PM Desai maintained the rigid Indian line of refusing to sign the NPT "as long as those who possess atomic weapon and go on doing the explosions do not give them up".[19] According to Subrahmanyam, PM Desai's moral stand emphasised both practical and normative costs over any military or security argument.

However PM Deasi's anti- nuclear stance was subsequently moderated afterward. This was first reflected in Desai's Lok Sabha speech on 26th July 1978. He stated that he only barred 'explosions,' but all along was in favour of 'blasts'. According to Deasi, underground engineering projects, like digging of canals and dams, exploration of oil, extraction of low-grade metal ores, required blasts, not explosions. But the simple fact

was that technologically there was no basic difference between explosion and blast, this reflected a subtle but a crucial divergence from his original nuclear stance.

Two critical factors explain PM Desai's subsequent deviation from his initial nuclear policy. First with regard to China's modernisation of its nuclear arsenal and second, Pakistan's growing nuclear potential. Amid PM Desai's time in office, Pakistan was in a serious clandestine endeavour to acquire a nuclear weapons capability. Pressure was mounting on the Janata Government to respond to the looming Pakistani nuclear threat with a similar Indian programme. This incident caused substantial strategic concerns in India about Pakistan's 'Islamic Bomb'[20] bounding India to revive its nuclear explosive programme.

Second, PM Desai's efforts of winning back American and Canadian nuclear cooperation remained largely unrealised during his tenure as Prime Minister. President Jimmy Carter's tough anti-proliferation policy and the adoption of the Nuclear Non-Proliferation Act (NNPA) by the US Congress in 1978 made a nuclear reconciliation between India and the US difficult. Despite considerable efforts, Desai also failed to reconcile the nuclear differences with Canada. His futile efforts were increasingly regarded as appeasement and a sell-out of India's national interests (The Indian Express,8 August 1977). Hence, Desai's initial nuclear policy gradually became vulnerable.

Before the Janata Government could advance its nuclear policy, due to the internal bickering the government collapsed in July 1979. After the fall of Desai Government, interim Prime Minister Charan Singh indicated that he intended to keep nuclear options open.[21] Indeed, Charan Singh was the first Prime Minister to officially express concern about Pakistan's nuclear weapons programme. In his 1979 Independence Day (15 August) address, the Prime Minister maintained that if Pakistan had gone nuclear, India would 'review' its nuclear policy. By 1979 Pakistan's nuclear potential had become an important factor in India's nuclear policy planning.

However after the invasion of Afghanistan by Soviet Union in 1979, the South Asian strategic landscape changed dramatically which largely impacted India's nuclear perception. As the result of US–Soviet Cold War equation Pakistan was placed in a more advantageous position than India, as US needed Pakistan as a strategic ally to resist the USSR's westward expansion and also to channel aid to anti-Soviet forces in Afghanistan.

Against this unfolding backdrop, Indira Gandhi returned to power in January 1980. Upon reassuming the Prime Ministership, Mrs. Gandhi immediately reverses her predecessor's nuclear explosion policy. On 17 February 1980, she affirmed that India had no intension of making nuclear weapons, but should be free to carry out experiments if it was deemed necessary. The policy changed to pre-Pokhran era and the changing regional situation drove India to consider alternative means of dealing regional tension.

Raja Ramanna returned to BARC to boost the nuclear energy programme. However the scientist and technician at BARC wanted another test, Ramanna and V.S Arunachalam presented their ambition to PM in early 1983. The scientist did not address to international nor domestic problems and made their case based on technological argument. Mrs. Gandhi approved the request for nuclear test though a day later she changed her mind.[22]It was not carried out for 'unexplained reasons', fear of negative international economic and political sanctions could have been the main reason why PM Gandhi finally abandoned the plan However, the episode highlighted India's indecisiveness in its nuclear policy in the midst of an intensifying nuclear security dilemma in South Asia.

The potential element of a nuclear weapon system is based on a delivery system based on ballistic missile. Indian policy planners felt the need that without proper delivery systems India's nuclear option would not be credible. In July 1983 India launched the Integrated Guided Missile Development Programme (IGMDP) and placed it under the Defence Research and Development Organization (DRDO) for its implementation. Dr. Abdul Kalam headed the programme and under his leadership the IGMDP began with the development of five missile systems, the short range Prithvi (Earth), the intermediate range Agni (Fire), the surface to air missiles (Akash (Sky) and Trishul (Trident), and the guided anti-tank Nag (Snake). As a result of this new program the first test of the Prithvi was conducted on 25 February 1988 followed by Agni test in the next year.

This continued to be the path that India travelled down through the Mrs. Gandhi's reign which ended abruptly in 1984, when she was assassinated and succeeded by her son Rajiv Gandhi. Rajiv Gandhi's was generally oriented towards modern technology and thus, took keen interest in the technical aspect of issues and actively promoted

technological advance. His approach toward nuclear weapons was consequently the continuation of the policies of his mother during her second term in office.

The 1980s witnessed a series of crises between India and Pakistan that stopped short of actual war. These included the reports that India would attack Pakistan's nuclear weapon production facilities and the conduct of exercise Brasstacks by India which pushed the two states nuclear competition to a new height.[23] Although the crisis ceased but Pakistan indicated that it had acquired nuclear weapons capability which alarmed India and with the Rajiv's approval the Indian scientists reportedly began work on thermonuclear weapons in late 1988 despite the fact that they were not made operational.

In the wake of Pakistani exercise Zarb-i-Momin conducted in late 1989, there was a sudden increase in the insurgency movement in Kashmir. Pakistan is reported to have threatened to weaponised their nuclear capability to counter any Indian attack. Prime Minister Rajiv confidently announced "We intend meeting President Zia's threat. We will give an adequate response."[24] Thus, in response to these crises of the 1980s, India's military doctrine moved from a purely conventional deterrent (in 1983-84) to one that incorporated nuclear weapons. Nuclear deterrence was based on a doctrine of no-first-use and second strike retaliation. This phase continued until the nuclear tests of 1998, which ushered in the phase of 'minimum credible deterrence'.

Rajiv Gandhi's policy to support the rebellious Tamils in Srilanka with money and aid backfired and he had to eventually support the ruling Government in Srilanka. As a by-product of this, there was resentment against him amongst the Tamil rebels and while campaigning Rajiv Gandhi was blown up by a suicide bomber. During 1989 and 1991, India went through a turbulent domestic time with the government changing hands several times with a succession of prime ministers. In 1989 election, the National Front led by Janata Dal backed by BJP formed the Government. The new Prime Minister V. P. Singh tried to evaluate Pakistan's nuclear threat as well as India's doctrine for various options about response and met with top Indian advisor and learned that nuclear establishment was ready to conduct a nuclear test if so ordered. In April-May 1990, U.S. intelligence detected Pakistani preparations to assemble at least one nuclear weapon, the existence of such a device in Pakistan altered the security equation drastically and created the possibility of nuclear blackmail over any issues of disagreement in particular

Kashmir. Pakistan nuclear capability in general worried the Indians. A small secret group was established to develop plans for ensuring the function of government and included retaliation in the event of preventive nuclear attack. The group decided that the nuclear doctrines should be guided by four principles: no-first use, ultimate civilian control, no engagement in the arm race and no single- sector dominance on nuclear dominance (Perkovich, 2000).

In 1991, the Congress party came back to power with Narasimha Rao as Prime Minister. The long suffering economy took the central stage and the new Finance Minister Dr. Manmohan Singh initiated major reforms by liberalization of Indian economy in 1991. PM Rao regarded economic development and integration into the global economy was more important than nuclear weaponry in trying to strengthen the country. Rao did not authorised any concrete measures to strengthen nuclear weapon program as he considered it to be less practical. Therefore the nuclear program remained modest, covert and ambiguous, disregarding more revelations of China's assistance to Pakistan's the nuclear and missile program.

The 1990 Kashmir crisis prelude a new era in South Asian nuclear competition. It indeed established a rudimentary regional nuclear deterrence system. Devin Hagerty observed that "A strong case can be made that India and Pakistan were deterred from war in 1990 by the existence of mutual nuclear weapon capabilities and the chance that, no matter what Indian and Pakistani decision-makers said or did, any military clash could escalate to the nuclear level" (Hagerty, 1995, pp. 107-108). The crisis once again reaffirmed the utility of nuclear weapons from the perspective of both India and Pakistan.

By the mid-1990s, India was standing at the cross-road of a declaratory and non-declaratory nuclear deterrent posture, while still pursuing a policy of nuclear ambiguity. However it had certainly reached a point from where it could assemble nuclear weapons within a short period of time. The Indian public security discourse at this stage was that India maintained an adequate nuclear preparation as a precaution to confront an uncertain strategic environment.

In the 1995 international conference held by the NPT member states, India could not participate as a non-party to the treaty. Indians sought to rally support for a move to press the five "haves" to commit themselves to concrete steps towards nuclear disarmament. To the dismay of many, this was repudiated by the five states and was successful to generate a consensus of the 179 parties to extend the treaty indefinitely in May 1995, this left India more isolated than before. Both the strategic enclave and BJP attacked the government. Atal Bihari Vajpayee declared that BJP would build nuclear weapons if it comes to power (Ganguly, 1999). Many commentators in India labelled this NPT extension as "nuclear apartheid". Indefinite extension of NPT however encouraged Indian hawks to advance nuclear weapon development before prospective test ban and fissile material production ban treaties were passed. This meant that if India's strategic security interests and the desires of its nuclear scientists required testing of nuclear weapons, then India would have to move expeditiously before confronting immense external pressure.

Accordingly, Rao Government planned for a nuclear test in December 1995 like France and China, who first conducted series of nuclear tests before they joined the treaty. But before this plan could reach its logical conclusion, American intelligence sources detected Indian preparations and exerted enormous pressure on India to renounce the test. Eventually Americans prevailed over indecisive Indian PM Narasimha Rao, who nevertheless felt that it would be better to wait until Indian economy would face the inevitable sanctions and the missile programme was more advanced. The investment required for economic infrastructure mostly came from foreign sources. The loans, aid and investment would have been compromised with a robust policy and behaviour. Allegedly, Bharatiya Janata Party (BJP) also considered nuclear testing when it came to power for two weeks in March 1996. These ‘near test’ incidents highlighted India’s strategic dilemma domestic force, international pressure and evolving nuclear regime were forcing India to choose whether to retain nuclear ambiguity or credible deterrent without testing or to go for a series of test to streamline a minimum deterrence in a rapidly changing regional as well as the global security environment.

2.4 PHASE IV FROM 1995 TO 1998: OPERATION SHAKTI (POKHRAN II)

India had been an active proponent of a comprehensive nuclear test ban treaty (CTBT) since the mid-1950's it continued to demand a treaty that would oblige nuclear weapon state to disarm. India spoke of nuclear apartheid at UN Conference on Disarmament in Geneva, Arundhati Ghose ambassador to Geneva Talk argued that national security consideration would be key factor in Indian decision making. Indians perceived that the CTBT as it had evolved was an offspring of the NPT, primarily aimed at preventing countries like India from building nuclear weapons because all other non-nuclear states were already barred from conducting nuclear explosions under the terms of the NPT. [25] India also complained that the nuclear powers failed to link the CTBT to a 'time bound framework' for complete elimination of nuclear weapons (Chakma, 2002, p 242). In addition, India was very critical of the CTBT allowing sub-critical tests and computer simulation methods to upgrade nuclear arsenals of the nuclear powers. This of course was not acceptable to the five "haves" and in the end India refused to sign the treaty when it was readied for signature, and to bypass this blockage it was taken from Geneva to New York at the U.N. and passed in the General Assembly by a vote of 158 to 3, with India, Bhutan and Libya voting against it and Pakistan abstaining.[26]

India's rejection to CTBT brought enough time for Indian leadership to reconsider their strategies and managing political and economic issues were the primary concern. During Gowda's Government Foreign Minister I K. Gujral pursued a dynamic foreign policy and was successful in improving Indian relations with China, Pakistan, the minor states bordering India and last but not least the United States. The Gujral Doctrine reflected India's commitment to resolve issues with smaller states and creating a regional norm and practice of non-interference in others' affairs. To some extend Gujral's success was because of the advantage taken from the possibility created due to the end of cold war which had isolated India from China, Pakistan and America as a 'quasi client' of Soviet Union.

Inder K.Gujral subsequently succeeded H.D Deve Gowda as the United Front Prime Minister in April 1997. PM. Gujral and Nawaz Sharif got along well and managed to take some small steps to improving Indo-Pakistan relations, including a direct dialogue

on Kashmir. However domestic pressure grew in summer 1997 when Pakistan tested Hatf-III missile and US denoted a sub-critical missile. PM. Gujral responded with a reminded that Indian nuclear option was said to be open and Agni programme still continuing. Gujral later recalled that he too weighed the question of testing but was deterred by the thought of the 'punishment' that would be imposed. However in the end it was the BJP Government who made the decision to proceed with the test when it returned to power in March 1998. The BJP had promised in its election manifesto to exercise the nuclear option.

After the election victory BJP successfully formed a coalition government of thirteen parties later it was extended to twenty parties. Without wasting much time BJP made its intension clear that it was in favour of deploying nuclear weapons. This is evident from the fact that a day before being sworn as Prime Minister on 18 March 1998 PM designated Mr. Vajpayee proclaimed that the new government will not compromise on national security and that it will exercise all options including nuclear options to protect India's security and sovereignty. An official planning report repeated the campaign position that the new government intended to re-evaluate the nuclear policy and exercise the option to induct nuclear weapons.

In a closed door meeting on 20, March 1998, Mr. Vajpayee consulted both DRDO Chief Dr. A.P.J Kalam and AEC Chairman R. Chidambaram. Vajpayee was briefed on the nuclear program, about the devices that had been prepared and the status of the missile program was updated. The meeting conclusion was noteworthy as Vajpayee instructed the scientist to be prepared to test but no commitment to conduct the test as such was made. Consequently, the test preparation started immediately after the meeting despite the fact that the tests had not been approved.

Publically Vajpayee did not rush into testing. In order to gain the vote of confidence in the Lok Sabha he was cautious not to alarm his coalition partners and assured then to first set up a National Security Council and conduct a strategic defence review before taking the decision to conduct the nuclear test. The NJP- led coalition successfully passed a vote of confidence 275 to 260 on 28 March 1998, a milestone was achieved which had prevented the BJP Government from conducting the test in 1996.

Following the achievement the yet again PM Vajpayee had a secret meeting on 9 April with the heads of DRDO and ACE and inquired about the time required to conduct the test. Dr. Kalam stipulated that thirty days would be enough to conduct the test. PM Vajpayee asked the scientist to fix the date and coordinate it with his principal secretary Brajesh Mishra. 11 May 1998 was decided as the date to conduct the test and PM Vajpayee authorised the test. Yet again a handful of BJP leaders and top scientist only came to know of the decision. The Cabinet was not informed nor was anything hinted before the test. India obviously wanted to avoid pressure prior the test and accepts sanctions afterwards.

The capstone event for the advancement of nuclear program occurred between 11th and 13th May 1998, when India conducted its nuclear test which was believed to be three nuclear devices -a thermonuclear device, a fission device, and a low-yield device and it was followed two days later by the testing of two sub-kiloton devices that were designed to provide data for additional computer designs that would enable India to increase the capacity of its nuclear arsenal. In a Suo Moto statement to the Parliament on 27 May, PM. Vajpayee claimed that the tests were successful. He also announced a unilateral test moratorium.[27] The first statement of the strategic rational of the test can be ascertained from the letter by PM. Vajpayee to the President of U.S Bill Clinton and not to the people of India on 11 May, the first day of the test. Vajpayee wrote about the complexities involved in the deteriorating security environment, especially the nuclear environment faced by India and the compulsions of circumstances confronting India to make overt its nuclear capabilities (Text of the letter by Indian PM Atal Behari Vajpayee to US President Bill Clinton (See appendix I). It locates the test rationale in the so called threat from China and Pakistan, heightened by alleged Sino-Pakistan strategic level nuclear and missile collaboration. However on 25th May 1998 Prime Minister argued that the tests was a response to problematic regional and nuclear environment and that the test had given India "Shakti" physical and political power, ability and self-confidence. Yet the high grounds of nuclear moralism was held, India committed herself to exercising a moratorium on nuclear test and hinted at adhering to test ban treaty. India would now be in a better position to peruse nuclear disarmament.

The momentum behind the testing had been built steadily since 1995. The newly elected government boldly pushed India across the threshold of declared nuclear weapon status, carrying the country into what can be considered the fourth phase of its nuclear history and perhaps ending its record of self-restraint. In conducting the May tests, the Indian government stood by the premise that it was the right of every nation to conduct these tests and that they should not be limited by those nations that already possessed and tested nuclear weapons.

China's initial reaction was muted. Though, Beijing warned that India's nuclear tests would harm peace and stability in South Asia. The Xinhua News Agency which is a state run agency reported that China is 'seriously concerned' about Indian test quoting Zhu Bangzao spokesman of Foreign Ministry of China. Pakistan reciprocate by conducting five tests on May 28 and additional conducted one more test two days later equalling 1974 Pokhran test. The Indian Government was immediately accused by opposition in the Lok Sabha for threatening the national security by provoking a nuclear arms race. An overt Pakistani nuclear capability was seen to wipe out the military edge India had (Talbott, 2004).

The Indian tests of May 1998 (followed by the Pakistani tests) raised three primary challenges. India attempted to legitimize its right to possess nuclear weapons and depict itself as a responsible nuclear state through its declarations and actions as India proclaimed to create a 'minimum credible deterrence' and further ensured 'no first use guarantee'. Additionally India offered to join NPT but as a nuclear weapon state and further consented to give negative security assurance to proposed nuclear weapon free zone in the region. Third there was a growing apprehension regarding the region becoming a 'flash point' for a nuclear exchange.

The international response to the India's nuclear test was characterized by a deep division among the P-5 and G-8 governments about the ways to deal with the situation. United States, Canada and Japan imposed economic sanctions against India. In fact a 1994 anti-proliferation law made such action of US virtually automatic. Canada and Australia imposed a ban on ministerial level talks with India as a sign of their displeasure. Others (especially the United States, France, Canada and the United

Kingdom) sought diplomatic engagement with India based on two parameters – non-proliferation and Indian security.[28]Soon after the Kargil crisis Brajesh Mishra the Indian national Security Advisor unveiled a draft report of the National Security Advisory Board on India's Nuclear Doctrine on 17 August 1999. The document that came to be known as Draft Nuclear Doctrine (DND), highlighted the existence of some offensive doctrine based on first use policy and also focused on the legitimacy of the use of nuclear weapon by nuclear states against non nuclear weapon states which is considered as a threat to the peace stability and sovereignty of the state. The draft doctrine (see appendix II) "outlines the broad principles for the development, deployment and employment of India's nuclear forces."[29]

Various motives help explain why India suddenly decided to go nuclear in 1998. Evidently the existence of overt as well as covert nuclear threats from China and Pakistan, the international pressure to sign the CTBT in the mid-1990s was the other factors. Additionally Hindu nationalist leadership aspiration to change India's 'soft' image, was another. It was clear from the positive response of the Indian public that the nuclear test had extensive domestic value as a nuclear weapon state identity, overnight the test had placed India among nuclear armed states.

2.5 POST POKHRAN II

Immediately after the May 1998 test PM Vajpayee began to work towards enhancing Indo-US relation and chose Jaswant Singh to be his personal representative to probe the terrain and find some common ground. It was an initiative to make Americans understand the Indian rationale behind Pokhran II and harmonise the relation between the two countries which would be vital for India's economic development, which would "not advance without fruitful cooperation with the Americans" (Jaswant Singh, 2006, p.274).

The most significant issue to US was to reframe India from further test and possibly joining the CTBT. The Americans wanted to maintain the status quo, undesired any other nation to follow the footsteps of India and Pakistan. American demanded to publically undertake the pledge to sign CTBT by giving a deadline. Talbott did not receive any promise nor answer from Indian side .On December 1998 Talbott wrote to

Singh and suggested "an agreed time table that linked Indian steps on the benchmark with American alleviations of sanctions"(Jaswant Singh, 2006, pp. 311-314). The trust and goodwill President Clinton gained by successfully pressuring Prime Minister Sharif during Kargil crisis and then a successful visit to India did not materialise in the dialogue. Eventually in September 2000 Jaswant Singh informed Talbott that India was not going to sign CTBT. The opportunity for signing CTBT was very narrow and time wise very limited considering the delicate balance of Indian domestic policy. In the year of test it would have been premature to commit for any concession, in the following year BJP- led Government faced political crisis, general election, Kargil crisis and military coup in Pakistan, and 2000 was the presidential campaign year in US. Other reason was technical for not signing CTBT. Most importantly the Indian nuclear establishment would like to keep its option open for further test especially for testing a thermonuclear device.

Responding to a terrorist attack on Indian Parliament on 13 December 2001, the Indian Government launched 'Operation Parakram' five days later. Though the operation was a disappointment as the political ends and military means did not meet, but the exact cause of failure of the operation was the Indian reliance on "Sundarji Doctrine" that called for massive mobilization and the use of the crop-size force that lacked speed, strategic surprise and offensive power. The Indian intention to signal her determination to stop Pakistani's support to Kashmiri militant regardless of nuclear escalation was undermined by three weeks' time it took India to deploy her force. This gave enough time for Pakistan to counter mobilise her force. To fill the gap the Indian Army formulated a new war doctrine named "Cold Start" in April 2004, the strike crops were reorganised into eight-division sized "integrated-battle group" this would enable India to seek minor territorial gains without threatening Pakistan's existence. From Indian nuclear doctrine perspective the Cold Start signifies the deterrence role nuclear weapon have in Indian thinking. Cold start in an Indian response to limited insurgency operations Pakistan has managed to conduct under her nuclear umbrella.

In 2003 the NDA government announced that it is committed in developing and maintaining a credible minimum deterrence in addition to no first use policy and that India would massively retaliate in response to first strike against Indian force anywhere

and further stated that India would not use nuclear weapon against non nuclear weapon state but at the same time it declared that it would use its nuclear options against a chemical and biological attack. India declared that it would adherence to strict export control. The government renewed Indian participation in FMCT negotiation and pledged a moratorium on testing and repeated its commitment to universal disarmament.[30]

Congress led left-centrist United Progressive Alliance (UPA) replaced the BJP-led National Democratic Alliance government in 2004, but continues to defend nuclearization as a central part of India's economic, defence and foreign policy. This can be asserted from the PM Manmohan Singh in his 'Address to the nation' speech on June 24, 2004 which reaffirmed previous Government's nuclear policy based on no first use along with credible minimum deterrence and to work towards averting proliferation of weapon of mass destruction. This clearly indicated that that the UPA government would follow its predecessors' policy as Indian national interest went beyond partisan politics.

The most significant acknowledgement of Indian responsible nuclear behaviour was a bilateral nuclear cooperation agreement between India and US in 2008 within a decade of India's nuclear test in 1998. India a not signatory of NPT was considered under US law for civil nuclear cooperation by modifying the requirements of Section 123 of the US Atomic Energy Act of 1954 which restricted nuclear exports to non NPT states. Hyde Act was passed by US Congress in January 2006 which approved the adoption of a bilateral 123 Nuclear Agreement between India and US. The International community at large had also stated acknowledging the fact that India was indeed a responsible nuclear power. The civil nuclear agreement with US received support from Russia, France and Britain. Infact in 2008 the Nuclear Suppliers Group (NSG)[31]on reaching consensus granted the exceptional trading privilege waiver to India. These privileges was a first of its kind as India became the first nuclear armed non NPT state permitted to engage in nuclear commerce with other countries.

On October 1, 2008 US senate approved the Indo-US civil nuclear deal with 86 votes for and 13 against,[32] on a condition that India should separate its civilian and nuclear weapon facilities and should also place its civilian nuclear facilities under the

safeguard of International Atomic Energy Agency (IAEA). On 10, October 2008 External Affairs Minister Pranab Mukherjee and Secretary of State Condoleezza Rice signed the bilateral US-India Civilian Nuclear Agreement in Washington DC. The Agreement effectively recognizes India as a nuclear member state and enables it to participate in civil nuclear cooperation with the US and other nuclear member nations.

The agreement which also removed decades of sanctions on India in reaction to its past nuclear tests faced criticism from some political parties and scientist in India. Within India it was argued that the deal would undermine the sovereignty of India's foreign policy. Internationally, critics argued that the agreement not only hurts the global nuclear proliferation but it also provided an excuse to some states who aspired to possess nuclear weapons by exempting India from NPT governed provisions.

Within a decade after India's 1998 tests, the extraordinary nuclear agreement between India and the US signalled that India had drawn resourcefully on its history to complete the journey from nuclear rogue to nuclear partner. The choice to go nuclear put India’s emerging ambitions and capabilities in the spotlight, forcing her to explain her goals and strategic vision. It is very important to understand that India's nuclear programme was based on calculated risks, it was or rather is an integral part of India's national project which is crucial to its economy, security and national identity.

After the 2008 NSG waiver from export requirements India has negotiated nuclear cooperation with 14 other nations as of 2016. France was the first nation to sign civil nuclear cooperation agreement on 5 December 2008 which entered into force on 14 January 2010. The Russian President Dmitry Medvedev went to the extent to amend the 1992 decree with regard to nuclear control in order to permit nuclear export to India who lacked a comprehensive IAEA safeguards.[33] India and Namibia signed an agreement on "Cooperation in Peaceful Uses of Nuclear Energy” on 2 September 2009 facilitating supply of uranium and setting up a nuclear reactor.[34] Similarly, India and Mongolia signed a MOU on "Development of Cooperation in the Field of Peaceful Use of Radioactive Minerals and Nuclear Energy” in mid-September 2009.[35] India and Argentina on 14 October 2009, in a joint statement agreed to “encourage and support

scientific, technical and commercial cooperation for mutual benefit in the peaceful uses of nuclear energy" and signed a nuclear cooperation agreement on 23 September 2010.[36] Furthermore, India and the United Kingdom signed a "Civil Nuclear Cooperation Declaration" on 11 February 2010, allowing the transfer of nuclear-related technology and equipment to India.[37] Additionally, India and Canada signed an agreement for "Co-operation in Peaceful Uses of Nuclear Energy" on 27 June 2010, which provides for cooperation in nuclear reactor design and construction.[38] India and Canada finalized their 2010 nuclear export agreement on the supply of uranium to India on 6 November 2012.[39] India and Kazakhstan signed an agreement for "Cooperation in Peaceful Uses of Atomic Energy" on 16 April 2011 for the supply of fuel (uranium), construction and operation of atomic plants.[40] South Korea and India signed a nuclear agreement on 25 July 2011 allowing South Korea to bid for sale of its nuclear reactor in India. India signed civil nuclear agreement with-the world's third largest producer of uranium- Australia on 4 September 2014 allowing the export of uranium from Australia for the peaceful civil use in India. On 12 November 2015 India signed nuclear civil deal with UK, in a joint statement PM Modi and PM Cameron affirmed the mutual trust between the two countries. Very recently on 11 November 2016 India and Japan signed a nuclear cooperation agreement as India is proposing to build 20 new reactors over the next decade and this is seen as a potential lifeline to Japanese nuclear plant builders.

In an effort to get membership into NSG and other export control regime India has tightened its export control for both civil and nuclear weapon technology. India has been successful in getting membership to MTCR, Wassenaar Arrangement and Australian Group except for NSG. In a bid for NSG membership India points out on its unblemished non proliferation record in comparison to other nuclear weapon state and its consistent support for complete nuclear disarmament. India has successfully represent itself as a responsible nuclear power who after 1998 test voluntarily uphold to unilateral moratorium on nuclear testing and expressed desired to negotiations on Fissile Material Cut-off Treaty (FMCT) on the basis of universal non-discriminatory principles. India has also worked progressively towards tightening its export control for dual use nuclear technology.

2.6 CONCLUSION

India's nuclear programme has evolved gradually rather than drastically. The process of making nuclear choice arose from India's own understanding of itself and the world order. In the initial phases, Indian nuclear programme was conceived as an instrument of economic development. Atomic science and development assumed a significant role in the technological development and the modernization of the country. Then India pursued the policy of keeping 'nuclear option open' by not being a party to the NPT and CTBT. India's decision to conduct nuclear tests and formally declare itself a nuclear weapon state marks an important historical transition. The 1998 test was not only an event driven by domestic political compulsions though it may have influenced but rather it was a logical and perhaps an even inexorable culmination of a decade long evolution of strategic which was influenced by increasingly complex and hostile security environment, geopolitical developments and its quest for status and identity.

The two and a half decades of restraint exercised by India after exhibiting its nuclear capacity in 1974 until its second nuclear explosion in 1998 is itself an exceptional example. Building up on a record of nuclear restrained behaviour and a peaceful image of itself proved crucial in facilitating a positive image of India's nuclear past. The exceptional Indo- US civil nuclear deal signalled that India has drawn resourcefully on its history to complete the journey from nuclear rogue to nuclear partner.

NOTES/REFERENCES

[1]During Second World War atomic attack on Japan by the USA brought the atomic power to centre stage of world politics.

[2]Homi Jehangir Bhabha was undoubtedly the father of Indian nuclear research and the architect of India's nuclear strategy and diplomacy. In the 1930's, Bhabha studied with the eminent nuclear scientist Lord Ernest Rutherford. He also associated himself with other great experts in the field like Niels Bohr, James Franck, Erico Fermi and WB Lewis. On his return to India, Bhabha convinced the Tatas to finance the establishment of a centre for research to study nuclear physics. Thus India's nuclear program predates the dawn of independence. The Tata Institute of Fundamental Research (TIFR) was established in Bombay on 19 December 1945, four months after Hiroshima and months before India became independent Bhabha was already in command of India's nuclear future. He dominated the Indian nuclear scene till his unfortunate demise in an air crash twenty years later.

[3] Kapur, Ashok. (1991). Nehru's Nuclear Policy. In M. Israel & University of Toronto. *Nehru and the Twentieth Century* . Toronto, Ont., Canada: University of Toronto, Centre for South Asian Studies. pp. 217-232.

[4]Ibid.

[5] Ganguly, Sumit. (2000). Explaining the Indian Nuclear Tests of 1998. In Raju C. C. Thomas., & Amit Gupta (Eds), *India's Nuclear Security* (40). New Delhi: Vistaar Publications2000).

[6] Prime Minister Nehru introduces the Atomic Energy Act before India's *Constituent Assembly of India (Legislative Debates)*, 2d sess., vol. 5, April 6, 1948, pp. 3315, 3328, 3333-34, cited in Perkovich, George. (1999). *India's Nuclear Bomb: The Impact on Global Proliferation.* (18). Berkeley: University of California Press. Assembly to create an Atomic Energy Commission (AEC) and the legal framework for its operation.

[7] AEET was renamed as Bhabha Atomic Research Centre or BARC in 1967.

[8] *India's Nuclear Weapons Program On to Weapons Development: 1960-1967* [Online: web] nuclearweaponarchive.org/India/IndiaWDevelop.html. Retrieved on 18. 06. 2013.

[9]Kerttunen, Mika. (2009). *A Responsible Nuclear Weapons Power : Nuclear Weapons and Indian Foreign Policy*. Ph.D. Thesis. Helsinki: National Defence University Department of Strategic and Defence Studies. p.152.

[10]'Nuclear Race Will Ruin Country's Economy—Shastri's Firm Stand: Many M.Ps. Plead for Change in Policy, *The Hindu*, 28 November 1964.

[11] A third group advocated a middle course neither to undertake nor exclude a nuclear weapons programme. Instead of embarking on an explicit nuclear weapons programme, it favoured a vigorous development of nuclear technology so that it would be possible to 'go nuclear' within a short period of time if required. This position subsequently came to be known as the policy of 'nuclear option.'

[12]Chopra, K. Maharaj. Nuclear Guarantee is Meaningless Today. *The Indian Express*, 3 May 1967.

[13] On this, see Hollen, C.V. (1980). The Tilt Policy Revisited: Nixon– Kissinger Geopolitics and South Asia. *Asian Survey*, 20(4), 339–61.

[14] According to Ashok Kapur, the final decision for the explosion was taken on and around on 15 February 1974. See Kapur A, (1976). *India's Nuclear Option: Atomic Diplomacy and Decision Making*. California: Praeger Publisher Inc. 198.

[15] Trombay Plutonium Used for Blast, *The Hindu*, 20 May 1974.

[16] On this point, see Peter R. Lavoy, Learning to Live with the Bomb? India and Nuclear Weapons, 1947–1974, unpublished PhD Dissertation, University of California, Berkeley, 1997, pp. 398–403.

[17] Swedish International Peace Research Institute (SIPRI), Nuclear-weapon Proliferation, SIPRI Yearbook 1975: World Armament and Disarmament (London: MIT Press, 1975), p. 21.

[18] The brief Janata rule from 1977-1980 which was the first non- congress administration in Indian history provides important insight about the changes and continuity in India's nuclear policy.

[19] Desai in Lok Sabha, June 13, 1977, quoted in Perkovich, 2000, p. .202.

[20] Raana, Swadesh. (1979, June 15). The Islamic Bomb,' *India Today*, p. 8–9.

[21]India to Keep Nuclear Options, *The New York Times*, 28 July 1979.

[22] Karrnad, Bharat. (1982, April 23). Another Pokhran test in offing? *The Hindustan Times*, 23, April 1982.

[23] The Brasstacks military exercises conducted by the Indian Army in the Rajasthan desert along the Indo-Pakistani border between December 1986 and March 1987 pushed the Indo-Pakistani nuclear competition to a new height. For a detailed discussion on the Brasstacks crisis, see Bajpai, Kanti., Chari,P.R., Pervaiz Iqbal Cheema, P. Q., Cohen, Stephen., & Ganguly, Sumit. (1995). *Brasstacks and Beyond: Perception and Management of Crisis in South Asia* New Delhi: Manohar.

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