

UNITED STATES NUCLEAR STRATEGY IN SOUTH ASIA

DR. LEENA MERLIN



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Dedication

To Mom and Dad for always loving me and supporting me. You planted the seed of knowledge in my mind and nurtured it. You nurtured my learning, you supported my dreams. You gave me the gift of dreams and the ability to realize them. Without you I would not be the person I am today.

I would like to thank my son who has been a constant source of inspiration for me throughout my studies. For my son who always pushed me to reach for the stars.

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About the Book

The book “The United States Nuclear Strategy in South Asia” analyses the major challenges faced by the nonproliferation policy at the global and regional level. It critically reviews the nature and dimensions of nuclear proliferation in South Asia. This book is a study on incoherent U.S. nonproliferation policies and in appropriate influence strategies that have encouraged other states to advance their nuclear weapon capabilities. The book highlighted the current trends in U.S. nonproliferation objectives in South Asia. It further analyses how the paradigm shifts in U.S. nonproliferation policy towards India has occurred. The book describes how American scholars and policy experts understood and reinterpreted the nuclear estrangement with India that enabled the policy change. The book further describes in detail about how the U.S. national interests were constructed that necessitated nuclear cooperation with India.

The book also says about the internal and external factors influencing nuclear proliferation in South Asia. It mentions in detail about the U.S. nonproliferation goals and objectives that are contradictory. And also how Indo- U.S. nuclear deal impact on India’s nuclear policy.

Contents

Introduction	1
Chapter I: U.S Nuclear Policy: An Overview	3
Chapter II: Nuclear Proliferation And Security in South Asia....	24
Chapter III: U.S Policy Towards South Asia Until Pokhran II ...	54
Chapter IV: U.S. Response to Pokhran II.....	81
Chapter V: Indo-US Nuclear Deal.....	106
Chapter VI: U.S Nuclear Policy Towards South Asia Under Obama	136
Chapter VII: Conclusion	164
Bibliography	177
Annexure – I.....	193

Introduction

The issue of nuclear proliferation emerged as the most serious challenge to international community today. The growing influence of Non- State Actors in to the security establishment has added new dimensions to the problem. Since dawn of the nuclear age, United States and other major powers tried to formulate an advanced strategy with regard to the development of nuclear weapons. The cold war era witnessed intense nuclear arms race between the two Super powers. Most recent projections show that there are approximately 16,300 nuclear weapons located at some 98 sites in 14 countries. The largest concentrations of nuclear weapons reside in Russia and the United States, which possess 93 percent of the total global inventory. The recent estimates shows that the United States stores nuclear weapons at 18 sites, including 12 sites in 11 states in the United States and another six sites in five European countries. There is considerable uncertainty about the number of Russian nuclear weapons storage sites, but the authors estimate that Russia today stores nuclear weapons permanently at 40 domestic locations. This information shows the growing vulnerabilities in the global nuclear security architecture. The nuclear nonproliferation treaty was formulated to stop further proliferation of nuclear weapons. But unfortunately the world witnessed horizontal and vertical proliferation. The main concern of many nuclear non- proliferation advocates is not nuclear weapon proliferation but the policies of a handful of states claiming that only they have the legitimate right own and operate these weapons. The Indian leaders have always advocated against the nuclear apartheid and stands for a global nuclear disarmament. The double standards adopted by US and other nuclear weapon states towards the non- proliferation regime resulted in global proliferation. This is more evident in South Asia. The end of cold war has certainly

lowered the possibility of nuclear holocaust, but nuclear war remains a fear in the post cold war era anyway. In addition to give declared nuclear powers, India and Pakistan, including several other nations in the world can now develop and deploy nuclear devices. After more than two decades of secret research and development, bluff and nuclear ambiguity, India and Pakistan have passed a critical threshold by openly detonating their nuclear capability The stockpiles of nuclear and fissile materials in India and Pakistan continue to mount. Both countries are committed to strengthening their missile programmes. The defense strategies of both India and Pakistan – together with the problems posed by the unresolved Kashmir dispute, deep animosity and distrust between them make South Asia a conflict-prone region. Although both countries had long been suspected of having “recessed” nuclear arsenals, their recent nuclear tests now infused their long standing rivalry with new dangers. It has become commonplace to think of the South Asia as the most likely region where a war could escalate at a trigger to a nuclear exchange.

Chapter I

U.S NUCLEAR POLICY: An Overview

The United States was the first country in the world, which developed nuclear weapons and used nuclear weapons against Japan during World War II under the order of President Franklin Roosevelt. Between 1945 and 1990, more than 70,000 total warheads were developed, in over 65 different varieties, ranging in yield from around .01 kilotons (such as the man-portable Davy Crockett shell) to the 25-megaton B41 bomb. Between 1940 and 1996, the U.S. spent at least \$8.78 trillion in present-day terms on nuclear weapons development. Over half was spent on building delivery mechanisms for the weapon. The groundbreaking developments of the late 80s and early 90s have shattered the foundation of the post-war international system characterized by a bipolar distribution of power between the U.S. and the Soviet Union. The two superpowers had hitherto been engaged in an intensive political, economic, ideological and technological struggle which had brought the world to the brink of potentially devastating nuclear war. After the sudden demise of its competitor, the U.S. found itself in a unique position in the international system, unparalleled in modern history. Many authors have come forth with their definitions of the newly achieved status of the U.S. Charles Krauthammer wrote about the — unipolar moment, attributing to the U.S. the role of the sole superpower as in the mid-term horizon. There was no other international actor with a potential to rival its military, diplomatic, political and economic predominance (Krauthammer, 1990). Samuel P. Huntington (1999) had more or less accepted the same assumptions but claimed that the current international system was unimultipolar since there were many other regional powers exerting influence on

the course of international politics, although limited in robustness and geographical scope. After the end of the cold war, the U.S. nuclear program was heavily curtailed, halting its program of nuclear testing, ceasing production of new nuclear weapons, and reducing its stockpile by half by the mid-1990s under President Bill Clinton(Arms Control Association: 1994). Many of its former nuclear facilities were shut down, and their sites became targets of extensive environmental remediation. During the presidency of George W. Bush, and especially after the 11 September terrorist attacks of 2001, rumours have circulated in major news sources that the U.S. has been considering design of new nuclear weapons ("bunker-busting nukes"), and the resumption of nuclear testing for reasons of stockpile stewardship.

The Cold War has been over for more than a decade now, and the world has moved on. A lot has been written about what that means for U.S. nuclear policy. Two interesting trends have emerged so far. First, there is widespread agreement among disparate parts of the defense community on some important issues. In particular, nearly everyone agrees that U.S. nuclear forces can be reduced drastically compared to Cold War levels. Second, even that degree of consensus masks remaining deep philosophical differences on the most basic concepts of nuclear strategy, the nature of the risks, and practical steps that the United States should take with respect to its nuclear forces. US nuclear policy and its responses to global proliferation is one of the decisive factors influencing nuclear proliferation across the world. This section presents the major developments in US nuclear policy after its historic Manhattan project. US nuclear policy entered its decisive stage during the Presidency of Ronald Reagan because of the intense arms race between US and Soviet Union. Reagan was under the impression that there existed a nuclear threat from Soviets and this made him more aggressive in pursuing much more defense science projects and trying to develop long range ballistic missile arsenals to fight against the Soviets. This had made an increase in the tensions between both nations and their top most leaders began to engage in

conversations. Reagan and Gorbachev came into an agreement on Intermediate-Range Nuclear Forces (INF) agreement, and established the foundation for the Strategic Arms Reduction Treaty (START), which was concluded in 1991 and these agreements made Reagan administration to revive the weapon systems because these agreements were not capable of placing peace between both nations. Once Reagan took office he resumed talks with Soviets on the matter of eliminating intermediate range missiles and launch systems. But Soviets rejected the plan. This made United States to bring improved systems for nuclear warhead delivery. During the mid 1982 Reagan initiated the talks for nuclear arms reduction which was dubbed as START. The US proposal was one sided and it wasn't designed to reduce the number of cruise missiles and bomber planes in US side but it was mainly to control Soviets. Soviets rejected the plan. And United States began to deploy ground and launched cruise missiles in Europe. This made an end to their fruitless negotiations with the US. (Schwartz Stephen:1998)

In the era of Reagan many scholars had a view that there was a high tension between both US and USSR on the matter of possibility of inadvertent nuclear exchange. The raise in the number of US nuclear exercises after 1983 was a high tension factor. These new levels of nuclear exercise from the part of US led the Soviets to improve their nuclear capabilities. Reagan claimed that the highest priority of U S-Soviet relations should be about avoiding a nuclear war and also about reducing their nuclear arsenals. In a speech delivered to the United Nations, just six weeks before the 1984 presidential election, Reagan positioned himself as a peacemaker by calling for a new round of comprehensive arms negotiations with the Soviets. Reagan initiated a new chapter in the strategic debate on March 23, 1983, when he announced his plan to develop space-based anti-ballistic missile systems that would render nuclear weapons "impotent and obsolete." (Powaski Ronald:2000). But at the same time the Reagan administration tried to convince the world that it is their job to put Soviets under

pressure there by making the Soviets to fund more on these obsolete technologies on space and other fields so that their concentration on developing nuclear arsenals will be lowered eventually. Reagan's national security adviser, Robert C. McFarlane, claimed that the administration "primarily committed to launching it with the expectation that we would never have to build it because the Soviets would come our way in the arms control setting." That was not the public case made by the administration at the time. Reagan and Secretary of Defense Caspar Weinberger repeatedly held out the promise of an anti-ballistic missile defense system that could provide a "security shield" to protect the population and eliminate the prevailing strategic situation of mutually assured destruction.

The critics of Star Wars see this policy in a different way. According to them it will lead to further arms race which are both offensive and defensive. And there is always a chance of preemptive attacks. SDI also threatened the 1972 Anti-Ballistic Missile (ABM) Treaty, which was designed to constrain such a programme and which would have to be abrogated or violated long before a deployment decision could be made. To circumvent these constraints, the Reagan administration in October 1985 advanced a controversial reinterpretation of the ABM Treaty that would allow for the development and testing of space-based and other mobile ABM systems and components. This so-called broad interpretation actually contradicted the treaty, which prohibited the testing and development of space-based defenses and/or development of a nationwide missile defense system.(George P Shultz:1993). In January 1985, as the United States deployed new missiles in Europe, the Soviet Union agreed to Reagan's proposal for resuming arms control negotiations on strategic, intermediate, and defensive weapons. In November 1985, Reagan held a summit meeting with the new Soviet premier, Mikhail Gorbachev, which was Reagan's first with any top Soviet leader. The Geneva meeting brought a new note of civility to superpower relations but achieved no immediate results. Both sides continued publicly to advocate

radical, presumably non-negotiable, solutions to the nuclear dilemma. At the same time, each side continued to develop and deploy new and more advanced weaponry. During Reagan's time US was able to build massive strategic nuclear build up against any nuclear threats from Soviet Union. This made the Moscow to be more tensed and there raised a new level of anti-nuclear activism that increased political dialogues on the matter. Yet, Reagan's unconventional leadership style and determination also allowed him to reach out to the Soviet leadership and relate to Gorbachev's new and bold thinking. Together the two leaders set their nations on a path toward arms control arrangements that reflected their personal abhorrence for nuclear war and addressed domestic and international concern about where Cold War nuclear rivalry might eventually lead without such restraint.(George Shultz:1993)

1.1 Bush Administrations Nuclear Doctrine

Since the Bush administration took office, and especially since excerpts of the Nuclear Posture Review were released, there have appeared in America some heated arguments about the Bush administration's changes to the Clinton administration's nuclear strategy, what consequences these changes would produce, and what influences they would exert on international and regional security. The US president Bush's foreign policy had made some radical changes that created a boost in global arms trade which made the US-Soviet arms race looked weak. In his only significant public pronouncement on the subject, Bush put forward a schizophrenic view of the nuclear conundrum. He even implied that the cold war doctrine of Mutually Assured Destruction (MAD—the doctrine that spurred the U.S and the Soviet Union to build thousands upon thousands of nuclear weapons as a way of ensuring that neither side would dare attack the other for fear of being annihilated in return) was a “dead relic” of a bygone era.(Henry Sokolsky:2001). President Bush initiated the deployment of a massive missile defense programme on the scale of Ronald Reagan's “Star Wars” plan. But now it has been

completed with interceptor missiles based on land, sea, air and in outer space. The main contradiction in the Bush view taking reassuring steps by downsizing the size of the U.S arsenal and taking forces off alert on the one hand, while provoking other nuclear powers with a massive Star Wars programme on the other disappeared if one looked at the common thread uniting these proposals.(Keith B.Payne:2005)

Spurred on by the ideological ratings of conservative think tanks like the Heritage Foundation and Frank Gaffney's Center for Security Policy, a powerful bloc within the Republican Party has increasingly come to treat negotiated arms control arrangements like the Anti-Ballistic Missile Treaty of 1972, the Strategic Arms Reduction Treaties (START I and II), and the proposed Comprehensive Test Ban treaty as obstacles to U.S supremacy rather than guarantors of a fragile but critical level of stability in the nuclear age. The right-wing always called these treaties and talks as immature because they were having an attitude of "peace through strength, not peace through paper." Republicans have always meant shredding two decades of international arms control agreements and most of which were negotiated by Republican presidents which was a contrary to their political stand. Bush advisers like Stephen Hadley have suggested that the U.S can significantly reduce the numbers of nuclear weapons in its current arsenal of 8,000 to 10,000 strategic warheads. Simultaneously, the U.S would need to modernize the force by developing low yield nuclear weapons that could be used for missions like destroying hardened underground command centers or hidden weapons facilities. The barely concealed premise of this emerging nuclear doctrine is a desire to make U.S nuclear weapons more usable. This dubious proposition is grounded on the notion that a low-yield weapon could more readily be used as a threat, or actually dropped on a target, without sparking nuclear retaliation by another nuclear power. Conservative analysts have even suggested that low-yield nukes are a "humanitarian" weapon, claiming that they can be used to take out underground biological warfare laboratories, for

example, with less loss of life than would result from other approaches to destroying such facilities. The scaring aspect of this new doctrine of making nuclear weapons more usable is that the Bush administration tried to sell it to the American public as a forward-looking, responsible approach to nuclear arms control. It entailed reductions in the numbers of U.S nuclear weapons, it was presented as a step forward from the nuclear gridlock of the Clinton/Gore administration, a fallow period during which not a single significant nuclear arms reduction agreement was negotiated. The fact that it might provoke nuclear buildups in Russia and China provoked the nascent nuclear arms race between India and Pakistan, terrifying European allies. Ronald Reagan came to office in 1981 with guns blazing, pushing for a new generation of nuclear weapons and a Star Wars system. By the end of his second term, however, he had put Star Wars on the shelf and signed on to two major nuclear arms reduction treaties, the Intermediate Nuclear Forces (INF) treaty, and the Strategic Arms Reduction Treaty (START). Reagan's historic reversal came as a direct result of pressure brought to bear by the nuclear freeze campaign, the European Nuclear Disarmament movement (END), and pressures from European allies and Mikhail Gorbachev, who would not take no for an answer. (Arnett Eric:1996)

1.2 Post Cold War U.S Nuclear Policy

The relationship between democracy and nuclear weapons is extremely ambivalent. On the one hand, in the theory of democratic peace, democracies are regarded as afraid of risk and cost-conscious: their citizens strive to avoid the threat which brings with it the war for life, limb and property. Their orientation around welfare, moreover, causes them to limit the burden of armament costs and defense expenditure to what is necessary to safeguard the existence of the nation-state. The fall of the super power Soviet Union opened new, incalculable chances for the leading democracy, the United States, to reconsider its relationship with nuclear weapons. Recognition of these new opportunities was slow

to grow during the first tenure of the Bush government. Nuclear planning was executed as before, oriented towards a super power, whose military especially nuclear equipment was to be deemed vulnerable in the face of American nuclear weapons. This strategy was continued even after the first breakthrough in arms control, the INF Treaty, came to fruition; nor was it abandoned when both sides negotiated and concluded the START treaties and clearly reduced tactical nuclear weapons on the basis of unilateral, yet parallel political declarations. The government revived nuclear non-proliferation which until the Gulf War had remained neglected. At the end of its term in office, the government declared a nuclear test moratorium, after which it put up a strong fight against the proposed conclusion of a Comprehensive Test Ban Treaty. Early plans for the broad modernization of the nuclear weapons arsenal were also abandoned as was the deployment of a new short-range weapon in Europe. The structure of the American nuclear forces remained, however, intact like the strategy. The first Bush government considered employing nuclear weapons as deterrence, preemption, warfare and retaliation against states possessing weapons of mass destruction. This debate began to find its way into strategic planning. The Clinton government's hopeful, multilateral start gave way to growing signs of unilateralism. However, the government never completely gave up arms control and multilateralism. It reinforced the efforts of the "Cooperative Threat Reduction Programme" that aimed to help Russia and other successor states to deal safely with their dangerous inheritance of Soviet weapons of mass destruction. The Clinton government led an energetic campaign to obtain the unlimited extension of the Non- Proliferation Treaty and successfully concluded negotiations on the Test Ban Treaty. Yet, the Senate refused to consent to ratify this treaty, which was attributed not least to the half-hearted advertising attempts of the administration. Under Clinton, the U.S endeavored to increase the transparency in the nuclear sector, and achieved temporary agreement with Russia to further reduce strategic arsenals. Also, the nuclear bureaucracy extended the traditional philosophy, strategy and weapons structure of the

nuclear sector in the "Nuclear Posture Review". Counter proliferation", i.e. military options versus weapons of mass destruction and missiles of "rogue states", was officially part of the Pentagon's strategy; nuclear planners also contemplated the option of first strike against these "new enemies". The violent removal of the Iraqi regime was discussed inside and outside the administration. It thus emerges that the second President Bush regime went along with his unilateral path of security policy. September 11 likewise changed nothing in Bush's nuclear strategy. The "hawks" in the government pursued their old objectives only with greater determination; this is where the difference between "before" and "after" lies. The security strategy of the Bush government was based on absolute military superiority. As the new Nuclear Posture Review reveals, this refers first to a smaller arsenal of active and operational nuclear weapons, and secondly to a reserve of several thousand warheads, enabling rapid development into a "Cold War" arsenal. In so doing, the administration aimed to maintain complete freedom of action. (Scott Sagan:1997) Against such a background, the Bush government was against legally binding disarmament treaties. Its concession, to conclude the SORT Treaty, reflected this position in a subtle way. The treaty aimed at a reduction in the active, operational, strategic arsenals of 2,500 warheads by 2012. The reserves are not affected by the reductions, the nature of the implementation is open, short-term cancellation of the treaty is permitted; the treaty ends on the date on which it is fulfilled, after which the parties are free to rebuild their arsenals. Bush also announced the ABM Treaty and set about building the first elements of a missile defense system. The administration claimed to have the right to make pre-emptive and preventive military strikes against states with weapons of mass destruction and prepared its troops for such missions. This could involve the use of nuclear weapons, should their employment be considered necessary to destroy the enemy's underground command facilities or weapons of mass destruction. The administration examined whether new nuclear weapons, the effects of which would be

optimized for the job, were needed for this purpose. Bush's security policy has almost no place for multilateral arms control and non-proliferation. A review of 14 years shows a number of telling patterns. There was a steady reduction in the number of deployed nuclear weapons. The structure of the armed forces in the nuclear sector has, on the other hand, remained the same. The list of objectives in Russia no longer determines the permanently applicable objective planning; this is flexible and adaptable to the security situation at the time. The operational arsenal would nevertheless cover the objectives of an attack directed against Russia's strategic forces. The supposed democratic preference for minimal deterrent arsenals determined the direction but not the substance of the study. The arsenal, for the next decade, is clearly bigger, by far more operational and expandable, than numerous non-government experts had recommended and Russian partners had suggested. Clearly, the political and bureaucratic preferences which have determined American nuclear policy in 14 years do not match the model of nuclear policy which is derived from the axioms of "democratic peace". This applies to the negative trend of arms control, which started promisingly but which stagnated in the mid-1990, despite the best framework conditions. (Eric V Larson: 1996) Today, we face the new position of a nuclear- armed, pre-emptive, unilateralist, democratic philosophy of superiority, in no way the minimalist, multilateral concept of cooperative security which we expected. Yet, democracy plays the role of supporting the argument of the policy, in quite unexpected way. While the supposed enemy has changed on a few occasions and emphasize on who the main enemy is has also varied, the basic pattern remains – an enemy exists and is totalitarian and therefore dangerous and not trustworthy – a constant in the structure of American nuclear weapons policy. (Joseph.S.Nye:1990). In the present context, nuclear weapons represent an option in the preemption strategy and preparations to develop new nuclear weapon types are under way. The deterrent side is gaining acceptance in the relationship between democracy and nuclear weapons. The arms control strategy was successful only at the start, to stagnate and disappear

altogether. Also, the nuclear establishment perceives non contradiction between democratic values and the murderous character of the deterrent apparatus. (James A.Baker:1995)

1.3 Nuclear Policy under Obama

Barack Obama is the first post Cold War U.S President who truly embraces the issue of nuclear prohibition, and to pursue a policy to reduce U.S reliance on nuclear weapons. When Obama assumed the President's office he promised considerable change in U.S nuclear weapons policy, the centerpiece of this was his very public desire to reignite the quest for "global nuclear zero". The new U S president wanted progress made towards this goal by embarking on a three-pronged strategy during his first year in office. First, this would involve a concerted effort with Russia to make further cuts in both powers' strategic nuclear arsenals a prerequisite for any further multilateral nuclear reductions involving the other seven nuclear powers. (Barry R Posen/Andrew L Ross:2012) Second, Obama intends to reduce the role of nuclear weapons in U.S security policy by gradually increasing the role of advanced non-nuclear weaponry to perform functions previously covered only by nuclear weapons. Third, he wants to stop the spread and possible use of nuclear weapons by actors hostile to the United States through a renewed approach to nuclear non-proliferation and nuclear security. The Obama administration's approach to nuclear policy has been framed by the changing nature of United States power, and threats approach to its security in the post Cold War, and post 9/11, and possibly in the post unipolar world. The past two decades had seen a gradual shift in U.S policy from the centrality of great power politics and nuclear rivalry with Russia and China, towards a greater focus on rogue state and terrorist nuclear threats, and this is strongly reflected in Obama's approach to U.S nuclear weapons thinking. In addition to the U.S and Russia, Britain, France, China, India, Pakistan, North Korea and Israel are nuclear weapons states and Israel remains an "undeclared nuclear power". It would appear that his determination to reduce and

prevent the spread of nuclear weapons technology to these actors is a direct result of the belief that other counter-proliferation choices are perhaps no longer open to him, and that reliance upon nuclear deterrence is no longer sufficient. In this sense, Obama's room for manoeuvre in nuclear policy has been limited both by the changing nature of threats to U.S security in the 21st century, and by perceptions of U.S power in a post-Bush, and particularly post-Iraq, international context.

Even after the efforts made by the world to reduce the nuclear arsenal since the cold war in the year 2009 it was estimated that around 20000 nuclear warheads are being kept by the world's nine super powers which includes Russia and United States. But among this estimated nuclear arsenal a huge amount of weapons are waiting to get destroyed. And these weapons are enough to destroy the whole world. During the presidential election's rally many times Obama had showed his willingness to co-operate for a world which has zero weapons. After becoming president he even publically announced about his policy for a nuclear free world in Prague in the year 2009. He took his first step on reducing nuclear weapons when he signed the New Strategic Arms Reductions Treaty with Russia to replace START I. START I got expired on December 2009. The new treaty has the ability to limit the number of nuclear warheads deployed by U S and Russia in strategic areas.

After the efforts made by Obama after he was elected as the president many people hope that U S will consider the policy of no first use of nuclear weapons in any situation. The reality of his effort is mainly that he is striving to balance the need of missile defense which can be used against all sorts of rogue nuclear threats. Although the Obama's policy is a follow up on the policy of former U S president George W Bush, Obama stands strongly on the matter of zero nuclear weapons agenda. When the U S announced the setting up missile defence in entire Europe it was seen as the U S commitment on nuclear warhead reduction. (Robert S Litwak:2010)

Obama's nuclear policy has changed the utility of nuclear weapons to mere security thinking. This has given the think tanks an opportunity to theoretically assume that there will be a reduction in U S nuclear stockpile. At the same time U S focusing more on conventional weapons will create a difficulty in reducing the arms race around the world. When U S possess more of conventional weapons and the advantages it have with conventional weapons both in qualitative and quantitative terms will make other nations more attached to nuclear weapons. The major issue faced by the Obama's new policy is that it will be very difficult to keep a balance between domestic and international nuclear disarmaments. In the modern age of international climate, U S is facing more nuclear threats from terrorist organizations rather than any particular country. In the post 9/11 world U S policy makers are now reviewing the policy of Mutually assured destruction because there are more non state actors whom are trying to acquire nuclear weapons rather than some nation states. So this has led the U S planners to review several post cold war nuclear policies regarding the first use of nuclear weapons and also about MAD. Even the number of nuclear weapons has gone down when compared to cold war period but the risk has increased due to the roles of non state actors.(Barry Schneider:2008) Obama has recognized this and his initiative about signing START with Russia is a key player. But to continue with his plans he will have to address two major issues. The first issue is how he is going to convince Moscow to agree to reduce its nuclear stockpile. If he is able to convince Russia about reducing their nuclear stockpile then eventually he can convince the domestic population of U S about unilaterally cutting down the nuclear stockpile. The second biggest problem that Obama faces is that how he is going to redirect the U S security policy with non nuclear conventional weapons as the centre of U S security policy. This policy will make nuclear war heads cut down more acceptable in the U.S, but there is a bigger problem of diplomatic and strategic issues as a stumbling block standing against the disarmament agenda internationally. The reason for such a block is that the great U.S conventional superiority will eventually make nuclear

weapons more important to her competitors and other actors who challenge the U.S.(C.F Nolan:2008)

1.4 Nuclear Weapons in U.S National Security Policy

Nuclear weapons have always been a key issue in the U.S national security policy for more than 50 years. From the end of World War II, and, particularly, from the first explosion of a Soviet nuclear weapon in 1949, until the end of the Cold War in 1991, the U.S relied on nuclear weapons to deter Soviet aggression and forestall the outbreak of a global war between itself and the Soviet Union. (Casper Weinberger:1984) Normally the U.S security policy always sought to make it a priority that nuclear and conventional capabilities of U.S armed forces are sufficient to hold back any potential aggressor by making the aware that the cost of aggression would exceed any potential gains that it might achieve. Before and during the time of cold war Soviet Union was the only nation that was able to compete with U.S and her allies in the matter of nuclear weapons. Other nations, such as China and Soviet allies in Eastern Europe, were included in the U.S nuclear war plans, but the Soviet threat dominated U.S defense planning. Nuclear forces were sized to deter the Soviet threat; these were then thought to be sufficient to deter or respond to the “lesser included cases” of threats from other nations. Although there were debates about the numbers and types of weapons that the U.S should deploy in its nuclear arsenal, there was little doubt, or debate, among analysts, experts, and government officials about the need for it to deter the Soviet threat.(Sydney D Drell:2005)

This widespread opinion about the nature of the threat to the United States and its allies, and the need for nuclear weapons to deter and respond to this threat, began to dissolve during the period of 1990s, when the Soviet Union got disintegrated. When there was nobody else to compete with U.S Some argued that in the absence of the U.S threat of global nuclear war, it should declare that her nuclear weapons should serve only as “weapons of last resort”. On the other hand there were another group of people who argued that the

United States needed to maintain a credible nuclear deterrent to “hedge” against the possibility of a resurgence of the Russian threat. United States began to maintain nuclear forces with almost as of the same size and shape as it did during the 1990s. Nevertheless, the George W. Bush Administration has continued to emphasize the need to size and shape U.S. nuclear forces to deter emerging threats from a growing number of potential adversaries. Specifically, the Bush Administration has indicated that the United States would employ a strategy of “tailored deterrence” where the weapons and attack strategies guiding U.S. nuclear forces would be “tailored” to address the specific capabilities and goals of emerging adversaries.(Jason Sherman:2005)

1.5 U.S and Nuclear Deterrence.

Deterrence, is the theoretical construct of strategic deterrence, describes an ongoing interaction between two parties. In a deterrent relationship, there will be one or both parties seek to persuade the other party to refrain from harmful actions either by threatening or by promising the other party that the costs of action will outweigh the benefits. This strategy can be done by threatening to impose high costs on the acting nation, threatening to deny the benefits the other nation may seek through its actions, and promising to withhold the costs if the nation forgoes the expected action. There were a lot of Questions about the credibility of U.S deterrent policy persisted throughout the Cold War, with the U S adjusting its doctrine, targeting strategy, and force structure periodically in an effort to bolster its credibility and enhance deterrence. U S did not try to maintain a “one size fits all deterrent,” but sought to “tailor” its forces and attack strategies to affect the perceptions of the S U, and other potential adversaries, by making them believe that the U S had the will and the weapons, and also the plans needed to make sure that it would respond if attacked and that the level of destruction on enemy would be unacceptable to the opposite party. The George W Bush Administration’s focus on well defined and precise deterrence follows the same logic with the focus on

planning attack strategies and weapons which creates a credible deterrent threat. (Jaison Sherman:2005)The Bush Administration's theory of "tailored deterrence" is quite different from the classic "strategic deterrence" in two ways. First, the Bush Administration is arguing that the U S must prepare to face a wider range of threats from a greater number of potential adversaries, so it is seeking to assess weapons capabilities, operational plans, and targeting strategies to counter the capabilities of "advanced military powers, regional WMD states, and non-state terrorists." Second aspect is that tailored deterrence focuses less on maintaining a deterrent relationship with any specific nation than it does on acquiring the capabilities to attack and destroy valued targets in another nation.(Jaison Sherman:2005)

Although the period of the Cold War ended, the challenge on U.S nuclear policy was to make the threat of nuclear retaliation, and thereby the U.S deterrent posture will become credible. The U S repeatedly sought to sharpen and adjust its forces and targeting strategy towards this end so that the S U would believe and heed its threat to retaliate with nuclear weapons. The 1950's doctrine known as "massive retaliation" which was designed for "simultaneous, massive, integrated" U.S nuclear strike against targets in the S U, Eastern Europe, and China if the S U or its allies tries to start any nuclear or conventional attack against the U S or its allies. In the late 1950s, many scholars and policy makers began to question on the matter that whether the S U would believe that the United States would launch a massive nuclear attack against it in response to any level of aggression against Western Europe, particularly when it became evident that the Soviet Union could strike back with nuclear weapons against us cities. (Amster Warren:1995).

Even after the decline of threat from S U, The U S reportedly continued to get ready for a range of attack options, from limited attacks involving a minor number of bombs to major attacks involving thousands of nuclear and non nuclear warheads, and it also had several plans to carry out attacks against military targets,

nuclear forces, and civilian leadership sites in Russia. During the period of the Clinton Administration, even they did not rule out the possible use of nuclear weapons against nations that were not armed with nuclear weapons themselves. Specifically, it maintained the long-standing U.S policy of reserving the right to use nuclear weapons first in a crisis or conflict “if a state is not in good standing under the Nuclear-Nonproliferation Treaty (NPT) or an equivalent international convention.” Furthermore, the United States did not rule out the possibility of retaliating with nuclear weapons if a nation attacked it or its forces with weapons of mass destruction (WMD). (Greg Miller:2002) The United States did not, however, directly threaten to use nuclear weapons in retaliation of non-nuclear attacks. Its policy, consistent with the long-standing U.S approach, was one of “studied ambiguity,” neither ruling in nor ruling out the possible use of nuclear weapons in any given circumstance. The United States did, however, reduce the size of its nuclear arsenal, to around 6,000 warheads deployed on strategic delivery vehicles, according to the provisions outlined in the 1991 Strategic Arms Reduction Treaty (START). Even with these reductions, however, the United States continued to maintain a triad of strategic nuclear forces, with warheads deployed on land-based ICBMs, submarine launched SLBMs, and heavy bombers. According to the Department of Defense, this mix of forces not only offered the United States a range of capabilities and flexibility in nuclear planning that complicated an adversary’s attack planning, but also hedged against unexpected problems in any single delivery system. Moreover, the United States still maintained detailed, tailored attack plans that were intended to enhance the credibility of its deterrent posture.(Hans M Kristensen:2005)

NOTES

1. The New York Times of March 8, 1992 first revealed this new U.S global policy. The strategy was to legitimize the use of force and intimidation; to dominate the Western World; to

exact acknowledgment of the U.S.'s global policing role; and to neutralize the former Soviet Union as a potential nuclear contender. This last objective involved buying of large numbers of technical nuclear experts; radically reducing the Soviet arsenal; and ascertaining that it no longer targeted the United States.

2. "Reed panel" had prepared a top secret report describing a comprehensive nuclear targeting plan for the post-Cold War era, which was leaked to the Washington Post, January 5, 1992. This new policy is the clearest formulation for saving the Cold War, but with new emphasis of nuclear war-fighting directed against Third World insurgencies.
3. The Bush Administration has continued to emphasize the need to size and shape
4. U.S nuclear forces to deter emerging threats from a growing number of potential adversaries. Specifically, the Bush Administration has indicated that the United States would employ a strategy of "tailored deterrence," where the weapons and attack strategies guiding U.S nuclear forces would be "tailored" to address the specific capabilities and goals of emerging adversaries.
5. The 1950's doctrine known as "massive retaliation" envisioned a "simultaneous, massive, integrated" U.S nuclear strike against targets in the Soviet Union, Eastern Europe, and China if the Soviet Union or its allies initiated any nuclear or conventional attack against the United States or its allies. In the late 1950s, many began to question whether the Soviet Union would believe that the United States would launch a massive nuclear attack against it in response to any level of aggression against Western Europe.
6. Deterrence, or more precisely, the theoretical construct of strategic deterrence, describes an ongoing interaction between two parties. In a deterrent relationship, one or both parties seek to persuade the other to refrain from harmful or dangerous actions by threatening or promising the other nation that the costs of acting will far outweigh the benefits.

7. The Bush Administration's concept of "tailored deterrence" is different from classic "strategic deterrence" in two ways. First, the Bush Administration has argued that the United States must prepare to deter a wider range of threats from a greater number of potential adversaries, so it is seeking to tailor weapons capabilities, operational plans, and targeting strategies to counter the capabilities of "advanced military powers, regional WMD states, and non-state terrorists." Second, tailored deterrence focuses less on maintaining a deterrent relationship with any specific nation than it does on acquiring the capabilities to attack and destroy valued targets of another nation.

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Chapter II

NUCLEAR PROLIFERATION AND SECURITY IN SOUTH ASIA

2.1. Geo-strategic significance of South Asia

South Asia occupies a pivotal position in the contemporary world due to its unique geo-strategic location and the possession of nuclear weapons by India and Pakistan. These countries locations have evoked much interest among the major powers as well as among other small countries around the world. The growing influence of Non- State Actors and the looming threat of nuclear terrorism give the region such unique place in the current global security debate. South Asian sub continent mainly comprises of seven nation states. They are Pakistan, India, Nepal, Bhutan, Bangladesh, Maldives, and Sri Lanka. Pakistan is considered as geo- strategically more important than all other South Asian states. Pakistan acts as a bridge that connects both South Asia and South West Asia. Among the South West Asian nations, Iran and Afghanistan are having rich energy resources at the same time both India and China are not self sufficient in energy resources. India and China are in great need to get access into these states and Pakistan has the advantage of connecting them to South West Asian states. India has an advantage to make trade with Iran through other routes other than through Pakistan but they are really expensive. For India trade with Iran through Pakistan is much cheaper and same is the case with Afghanistan too. The geo-strategic location of Pakistan has created many troubles for that country during and after the cold war. United States has always used Pakistan as a tool in their proxy war against Soviet Union. during 1979 S U attack on Afghanistan, the United States did

utilized Pakistan's location because the latter country has a large border with Afghanistan, and now in the global war on terror (WOT) Pakistan pays a lot because of its geographic connections with Afghanistan, U.S chose Pakistan's land to fight against WOT. U.S had several interests in this region. Among them the major interest is to contain the growing China strategically, nuclear projects of Iran, containing the terrorism in Afghanistan, and also to make benefit out of market in India. Security and Business are the main interest of the U.S in the region. The geo political location of Pakistan is near Central Asian Republics. These countries are rich in oil and gas natural resources. These nations are landlocked states and they need a port for exporting their energy resources and a route for trade and commerce. Pakistan has the ability to provide these countries route for trade and commerce. So for Afghanistan and CARs, Pakistan's geostrategic position is very significant for trading purposes. (Steve Weissman:1981)

2.2 Nuclear proliferation in South Asia – origin

The legacy of partition between both India and Pakistan has a key role behind the nuclear standoff that now exists between both nations. Partition made both these nations get separated. And these separations of both nations split apart a region that had been united for millennia. Amid communal massacres on a scale never before seen, leaving in its wake the unresolved issue of contested Kashmir, Kashmir which is a Muslim majority region held by Hindu majority India and this was the way in which people in Pakistan have been viewing the issue. But the reality is different at the time of formation of states in India. Raja Hari Singh of Kashmir chose to be sided with India and he even sought the help of Indian army for protecting Kashmir from falling into the hands of Pakistani aggressors. And several times there were attempts from the part of Pakistani troops and there were even times when the Pakistani spy agency ISI began to train the Afghani militants and made them fight against Indian troops. But it was later found out that the Afghanis were controlled by Pakistanis. Indian army had

to take control of Loc due to criticality of the situation at that time onwards Pakistan began to raise the situation in every international spaces as a part of Hindu Muslim enmity. But the reality is different. The disputes among both nations had been continuing for more than 60 years. The rivalry between both nations had even led to full scale war in the years of 1947, 1965, and 1971 and also there was a limited war in 1999 which even made the world aware the criticality of the Indo-Pak dispute. All these reasons have given both nations enough motivation to develop massive capability weapons to gain Comparative advantage over one another. They claim their arms race is to restore balance with the other country. (Cary Sublette:2000)

2.3 Evolution of South Asian Nuclear Weapon Programme

Pakistan's nuclear programme began on 24 January 1972. On this date President Zulfikar Ali Bhutto made Pakistan to acquire nuclear weapons. This was at a secret meeting held in Multan. This was done after the country's devastating defeat in the 1971 Bangladesh war. But Pakistan had already begun a national nuclear programme. The Pakistan Atomic Energy Commission (PAEC) was constituted in the year 1956 so that it can participate in the Atoms for Peace programme initiated by the Eisenhower administration in United States. The nuclear programme of Pakistan got a new push after the appointment of the Minister of Mineral and Natural Resources, Zulfikar Ali Bhutto. In 1960 Dr. Ishrat H. Usmani was appointed as the Chairman of the PAEC. Usmani was made responsible for initiating motions for many of the critical programmers and institutions that would later give Pakistan nuclear weapons. Usmani started Pinstech (full name variously given as the Pakistan Institute of Nuclear Sciences and Technology, and the Pakistan Institute of Science and Technology), and the Karachi Nuclear Power Plant. One of Usmani's most momentous achievements is said to be the training programme under which brilliant young Pakistanis were selected and sent for training abroad. Between 1960 and 1967 some 600

were selected of whom 106 eventually returned with doctorate degrees. He watched with growing concern as China moved closer to nuclear capability, and in response India's domestic rhetoric on the subject grew more bellicose.

India's interest

During the year of 1964, when China tested its first nuclear bomb many factions in India including the country's most politically prominent scientist were openly started to argue for initiating programs to develop nuclear weapons. There were many evidences which proved that India's new interest in the nuclear option was of great concern to Pakistan. After the Bangladesh independence Pakistan began to worry about its own existence after the great Indian victory. But on the contrary Indian side which thought that the strength of Pakistan-China axis will eventually turn back against India turned out to be wrong. The so called Pakistan- China axis eventually turned out to be a mere "paper tiger". At this stage, Pakistan's objective in holding a meeting with its well renowned scientists was not to consult them but was to pursue them with the blind ambitions for acquiring nuclear weapons.

A major motivation for this programme was about the concern shown over towards the India's well known progress toward having its own nuclear option, and the public declarations by top Indian leaders in India that they must acquire nuclear arms. Years later, after India's 1974 nuclear test, when Pakistan's nuclear programme became public knowledge, persistent attempts were made to paint the weapons programme as a response to the test. It was a response to India's developing nuclear challenge, but not to the Pokhran test per se. Although Pakistan did not know it at the time, when Bhutto made his decision to proceed with a weapons programme in 1972, an Indian team had already been engaged for a few years in developing a prototype nuclear explosive device. By then the basic design for India's first nuclear device was already complete. (K.Alan:2000)

During the period of mid-1971 Bhutto contacted the North Korea to achieve critically needed weapons. The agreement was suddenly reached and on September 18, 1971 the first weapons shipment came from the DPRK to Karachi. India's first nuclear test, known variously as "Smiling Buddha", the PNE (for "Peaceful Nuclear Explosive"), and Pokhran-I, occurred on 18 May 1974. It acted as a catalyst to increase the speed of Pakistani weapons programme, which had made little Progress at that point. Bhutto rose the funding for the programme after the Indian test. One consequence of the test was ironically to hamper Pakistan's programme as the test sharply escalated international attention to proliferation and led to increased restrictions on nuclear exports to all nations, not just India. Over the next three years, these restrictions would change the entire course of the Pakistani nuclear programme. U.S also boosted aid to Pakistan, including restarting military aid, which helped to improve Pakistan's conventional military position and released domestic funds for other purposes.(Clary,Khan:1999)

2.4 Nuclear Terrorism in South Asia

Risks that are related to nuclear terrorism have been on a rise for recent years in south Asia mainly because of three factors: the growth and spread of nuclear weapons across the world, the expansion of civilian nuclear programs like medical programs and the increase in extremist political groups waging campaigns of terror. Inadequate security over nuclear materials and weapons in one country could be exploited to trigger atomic blackmail and terrorism elsewhere. Inadequate security at nuclear facilities also could provide extremists waging a campaign of terror within a nation an opportunity to create a situation of national terror by sabotaging a civilian nuclear power plant or a research reactor or a laboratory. Nuclear power stations, research reactors and laboratories are always vulnerable to the acts of sabotage and also there is the risk involving terrorist attacks that could cause the release of dangerous amounts of radioactive materials to the atmosphere. Expanding civil commerce in weapons usable nuclear

materials has raised the specter of theft of plutonium or uranium in significant quantities in plots aimed at political blackmail or terror. The risk of theft of nuclear arms by terrorists is also a main concern. (Paul L. Leventhal: 1987)

In Southern Asia, the potential for the act of nuclear terrorism is a matter of special concern for many reasons. One main reason is the rapidly expanding nuclear programs in India and Pakistan involving massive investments in the construction and operation of civilian nuclear power plants, research reactor, laboratories and reprocessing and enrichment facilities. Another reason is that the growing stockpiles of nuclear fissionable materials, possibly of actual weapons, in each country protecting them requires special technologies, safety systems and security checks and surveillance. A third reason for nuclear terrorism is that both neighbors continue to be cracked by high levels of terrorist activities that pose major political challenges to their national leaders. A fourth reason which is turning out to be the major reason is the growing sophistication of terrorist methods of operation and attack and the increasing availability of portable weapon systems like shoulder-fired rockets that can be used to accurately strike nuclear installations. (Brian Jenkins:1987)

Factors that increase the international dangers of nuclear terrorism include the clear evidence of state support, even sponsorship of terrorist groups. In South Asian subcontinent, we witness the ominous spectacle of India accusing Pakistan of training and arming Sikh dissidents, and Pakistan charging the Kabul regime with sponsoring terrorism inside Pakistan. The other general factors which supports the threat are growing number of possible terrorist targets in the civil nuclear programs, the possibility of procuring nuclear equipment and fissile materials from illegal nuclear black markets and the growing incidence, sophistication and lethality of conventional forms of terrorism, often for shock value. Pakistan's nuclear programme is built on what is documented as a State organized campaign of nuclear espionage and smuggling, carries some inherent dangers. It is agreeable that

some Pakistani officers might seek to emulate the exploits of fellow countrymen involved in nuclear smuggling and be tempted to sell nuclear technology to political extremists in their own country or to agents of any other country that they would perceive as friendly. (Paul.L Leventhal:1987)

South Asia, which once had experienced very low levels of threats due to organized terrorism until the early 1980s, has now undergone a dramatic transformation and it is becoming an active scene of the bloodiest terrorist violence in the world. In terms of casualties also it ranks easily in the list of world's most terrorism-battered region and they are been followed by the Middle East and Western Europe. (Warren Donally:1988)

2.5 Terrorism in India

India is bearing the burden of the terrorist violence in South Asia for many years. The events of terrorist attacks in India have risen sharply in recent years. Several other parts of India like the North eastern region, the northern hills of West Bengal, the states of Tamil Nadu, Kashmir, Haryana and Himachal Pradesh, and the territories of Chandigarh and New Delhi, also have been ravaged by what can be described as terrorist-related violence. Ethnic unrest and rebel violence have been major Indian security concerns since the Chinese-aided Naga and Mizo separatist insurgencies flared in the 1960s. But the recent growth and expansion of various forms of terrorism across the nation strikes at the very heart of India's democratic system. (Leo E.Rose, PR Chari:1987) While hit-and-run attacks have declined in the northeast except in Tripura, terrorist violence has in recent years spread to the hills of Darjeeling, the plains of Tamil Nadu and the farms of Punjab. Groups which are blamed for terrorist attacks in India include the exiled Tamil militants from Sri Lanka, Gurkha nationalists, Kashmiri Muslim fundamentalists and Tripura tribal rebels. There are Several Sikh terror groups whom have helped turn the rich farms of Punjab into India's "killing fields." They include the Khalistan Commando Force, the Babbar Khalsa, the All-India Sikh

Students Federation, the Khalistan Liberation Army, the Dal Khalsa and the Dashmesh Regiment. At least two of these groups, the Babbar Khalsa and the Dashmesh Regiment, are believed to be funded from overseas, particularly from Canada and West Germany. (New York Times:1988)

2.6 Terrorism in Pakistan

Unlike India, Pakistan has been wrecked by ethnic and sectarian conflict. The Unrest in Pakistan has been sparked by what is perceived by ethnic and linguistic minorities such as the Sindhis, Baluchis and Pathans. The Shiite sect has also been very agitated. The secession of the Bengali speaking East Pakistan in 1971 was a result of the failure of the democratic system of Pakistan to integrate the country's five main ethnic communities into a central system. The frequent military intervention in the national politics and also the absence of democratic institutions had created more unrest in that country. Pakistan has a turbulent domestic politics that has always been helpful to fuel the violence in her society. There has been a steady increase in the ethnic disturbances and terrorist attacks in that country. (Shaukat Hassan:1998) The use of Pakistan as a base to operate by several Afghan terror outfits and the arrival of millions of Afghan refugees has helped the internal situation to be more complex and uncontrollable. The supply and steady flow of large quantities of arms in Pakistani society is the main cause of all these troubles. The law and order system has always been in peril because of this. Pakistan is a major arms-purchase centre and also has a functional weapons black market which is constantly accessed by international terrorists, particularly from the countries in the Middle East. In 1987, 17 per cent of the 832 incidents of international terrorism recorded in the world occurred in Pakistan. Pakistan's strategic relations with the United States government due to the threats possessed by Russia have made it a good location for staging terrorist attacks on U.S and other targets in that country. (Paul Leventhal:1998)

In South Asian sub continent, terrorism often appears to draw its strength from several factors. They are:

1. Ability of these terror groups to work across different national frontiers, which helps these organizations to co operate and carry out attacks effectively
2. Technological sophistication. Most of the groups which operate in these areas are technically sophisticated. One of the major terror outfits which operated in India was the LTTE and it even had small submarines which helped them to transport drugs as well as weapons through international waters.
3. State sponsorship for terror. In many occasions it has been discovered by international agencies that many terror outfits are working by the support of some nations especially Pakistan. Pakistan has many times funded several terror outfits that actually carried out deadly attacks on India.
4. Drug-dealing. Although extortion, "protection" fees and bank robberies are important means to finance terror, drug trafficking is beginning to play a key role. In Afghanistan Taliban was heavily funded because of the presence of opium fields in that country. The amount of money that the drug business brings to the hands of terrorists often helps them to purchase high end weapons.
5. Halo of martyrdom. Many terror organizations make it a holy cause that martyrdom or suicide bombing is a holy cause. Such propaganda always fits right into under developed societies and these terror organizations can easily get potential suicide bombers from the society.(Amir Taheri:1987)

Trends in terrorism indicates that the South Asian nations will have to focus on giving large amount of resources to combating efforts against terrorism. The changing character and the new levels of terrorist operations often call for an increased amount of investments in physical protection systems at nuclear installations. Close monitoring of shipments of nuclear materials, rigorous surveillance of nuclear facilities and installation of updated anti-

sabotage systems would help to deter atomic terrorism. Risks of nuclear terrorism appear relatively high in South Asia for three reasons.

1. **The extreme, civilian-targeted nature of terrorism.** Several groups have found their enemies in a very broad sense. They often select their enemies who are members belonging to a rival community, sect or organization. The amount of intensity of violence is reflected in the indiscriminate targeting of such people in terrorist bombings, shootings or ambushes. This facet of South Asian terrorism should be of the greatest concern to officials involved in building protection systems for nuclear plants and weapons- usable materials. There are many nuclear sites in India and Pakistan that could be so defined by indigenous extremists or by trans-border terrorists. (New York times:vol.40)
2. **Availability of portable weapon systems.** Another major reason for concern about nuclear terrorism in South Asia is that the growing availability of powerful and portable weapon systems that can be used to attack many nuclear installations in the sub continent. These weapons include surface-to-air rockets (like the shoulder- fired Stinger missiles) and anti-tank rockets.(The Christian Science Monitor:1998)
3. **The internationalization of domestic terrorism.** Another reason for Concern about growing terrorism in South Asia is that the underground groups are establishing links with other organizations overseas for training, procuring arms and receiving funds. They help each other in setting new terror training camps and raising funds for their activities.

The general tendency rising towards the centralization and personalization of political authority in South Asian countries has increased the inability of state structures to accommodate ethnic concerns which in turn fueling unrest and violence. Political leaders should be able to continue to search for solutions to the problems of terrorism in South Asia. The expansion of the nuclear programs in India and Pakistan calls for new steps to protect

nuclear facilities and nuclear weapons- usable fissile materials. The features to protect nuclear faculties can be building double containment walls designed to trap radioactive releases within a reactor, an emergency cooling system, an automatic shutdown system and a fail-safe design. But the main concern is that the plants which are currently in operation do not have all these safety features. The expansion of the nuclear programs in the two rival countries place heavy burdens of safety and security responsibilities on authorities.(Paul Leventhal:1998)

2.7 Nuclear development in India

India has already launched a futuristic and ambitious civilian nuclear expansion programme. The Aim of this program is to raise the nuclear power capacity to 10,000 MWe by 2000. Now, in India there are six nuclear power reactors with a total capacity of 1,230 MWe which are already in operation at Tarapur, Rawatbhata and Kalpakkam. And there are Eight new Indian-designed CANDU reactors, each of 235 MWe, which are under construction at four sites: Narora, Kaiga, Kakrapar and Rawatbhata. India's nuclear plans also aims at the completion of six additional 500-MWe plants by the year end of 2000, but these plants are likely to change because of a decision by Prime Minister Rajiv Gandhi to import two large reactors from the Soviet Union. An agreement on the purchase of two VVER-1000 reactors is likely to be signed this winter during a visit to New Delhi by Soviet leader Mikhail Gorbachev. The Rs. 48-billion deal is going to be a great deal among the India's largest import contract. The decision to import nuclear reactors has already been severely criticized by many Indian policy makers, and there are several indications that the proposed nuclear deal might actually become a quid pro quo for the Soviet Union lease of a nuclear powered fleet of submarines to India last January. India's whole stocks of separated civilian plutonium are projected to rise sharply in the next 10 years since the country began to expand its already significant reprocessing capacity. According to the head of India's atomic programme, M.R.

Srinivasan, the country's stockpile of separated plutonium outside the scope of international safeguards is expected to be thousands of kilograms in the next 10 years. But there are No official figures which have been released on the amount of plutonium which has already been separated by India, but one study on this area estimates that India could have stockpiled 100 to 200 kilograms of plutonium by mid-1987.(K.R Narayanan:1988) Indian nuclear propulsion project, which involves scientists from the Defense Research and Development Organization, the Bhabha Atomic Research Center and other institutions, has began a uranium enrichment project by having a very few details available. Nuclear submarines in the United States, the Soviet Union and Britain are which are fueled by weapons-grade uranium (93 to 97 per cent U235). But the new French Rubis design which generates a high propulsion power in a small reactor core by using uranium enriched by a factor of less than 10 percent, far below the 20- per cent threshold for weapons applications. Indian scientists involved in the SSN project should consider developing propulsion fuel of similar enrichment level to avoid the security risks associated with weapons- grade U-235. By the year 2000, India might also have separated more civilian plutonium than the plutonium which China now has in its nuclear arsenal. (Nord Land:1998)

2.8 Nuclear development in Pakistan

The death of former Pakistan President Mohammed Zia- ul- Haq has created a cloud above the future of the Pakistani nuclear programme. General Zia played a major role in rapidly expanding Pakistan's nuclear base in the 11 years he was in power. The method in which Islamabad has been managing to acquire sensitive nuclear equipment and materials by circumventing nuclear-export controls has proved the ineffectiveness of the current international nonproliferation regime. It has been clearly documented that the Kahuta plant in Pakistan has been built with the stolen plans of the Almelo enrichment nuclear facility in the Netherlands. (Simon Menderson:1987) Pakistan also built another facility at Dera Ghazi

Khan in order to manufacture uranium hexafluoride, which is the feedstock for the enrichment process of uranium, with smuggled sophisticated equipment and the important fact is that almost the whole equipment for the installation was illegally received piecemeal from West Germany between 1977 -1980. After conducting sixty five raids on various industrial firms in three major European countries in 1987 revealed a huge plot by West Germany's Leybold-Heraeus to illegally export nuclear equipment and allied nuclear components for building a sophisticated enrichment plant in Pakistan. This proves that Pakistan will be building a second enrichment facility at Golra Sharif. (Specter:1986)

Pakistan is believed to be working in reprocessing facilities which is situated in Chashma and Rawalpindi's PINSTECH and "New Labs" nuclear complex. However, it is unknown to have any unsafeguarded spent fuel to reprocess as both KANUPP and the PARR research reactor are always under IAEA inspections. The Chashma nuclear plant of Pakistan, which is the largest one in Pakistan and which is also designed to have a 100 ton nuclear reprocessing capacity. This plant is also capable of producing 100 to 200 kilograms of weapons grade plutonium a year when completed. Pakistan always claims that the Kahuta facility is intended to manufacture only LEU for its civilian nuclear programme. Various nuclear experts question this claim because Pakistan's sole operating power reactor does not need LEU. The Ronald Reagan Administration nevertheless, has continued military and economic funding to Pakistan, because of its role as a key U.S ally, by waiving the nonproliferation provisions of the Foreign Assistance Act. President Reagan has several times certified to the U.S Congress that Pakistan has no nuclear explosive devices in its possession. (Richard P. Cronin:1988)The U S President on January 15, 1988, also announced about the requirement of the Solarz Amendment for an aid cutoff to any country found trying to smuggle nuclear items that may add to its nuclear-weapons capability. It is very clear from the ongoing

discussions that the importance for anti-terrorism measures at various nuclear facilities and also the safeguarding of nuclear weapons materials will increase as the nuclear programs in both India and Pakistan is in the growth path. When we analyse the situation we can find that in the long run the growing ability of India, and to a lesser extent of Pakistan, to export nuclear reactors, nuclear equipment or nuclear materials can further intensify the risks of wide scale nuclear terrorism. New nuclear markets could mean that the large global stocks of weapon grade nuclear materials already being processed, stored and shipped (often across national frontiers) will increase more than the current rate. Nuclear technology denial by the major nuclear suppliers are being viewed by some analysts to have ignited indigenous research and development in major under developed countries, which leads to the gradual emergence of Argentina, Brazil, China, India, Israel, South Korea, Taiwan, Pakistan and South Africa as potential members of a new club of emerging nuclear exporters. Among these seventy three, several of these potential nuclear suppliers have already been entered in the international nuclear market during the period 1990s. (Brahma Challaney:1999)

Regionally analyzing, both the countries, India and Pakistan should evolve a proper framework of periodic bilateral discussions on counterterrorism and other nuclear safety and protection systems. The oral agreement between Mr. Gandhi and Gen. Zia about not to attack each other nation's nuclear facilities, and the visit of the late Pakistani President to India's Kalpakkam nuclear plant, held promise of increasing bilateral cooperation between the two neighbors. The national -security interests of both countries would be enhanced by cooperation between them to diminish the dangers of conventional and nuclear terrorism through effective confidence-building measures. In a much broader context of the situations, such cooperation between India and Pakistan should be applied towards allaying on mutual suspicions by striving for greater bi lateral transparency in their various nuclear programs. By "transparency" on discussions we mean both countries

exchanging information and also frequent reciprocal site visits. The difficulty of achieving such a transparency under present circumstances cannot be minimized in particular, without the cooperation and participation of China. India will be reluctant even to consider it. In this regard, every effort should be made to minimize or avoid altogether the further production and use of bomb-grade nuclear materials, not only in this region but also in other parts of the world.(Nordland:1998)

2.9 Nuclear risk reduction in South Asia

Nuclear restraint and the nuclear risk reduction measures have been practiced by the major nuclear powers ever since the dropping of atomic bombs in Japan in 1945. These proper efforts of major powers have led to various agreements on measures to bring down the risk of an outbreak of major nuclear Wars. “These efforts include signing of various agreements like, Anti Ballistic Missile Treaty (1972); Treaty on the Elimination of Intermediate Range and Shorter Range Missiles, (1987); START-I and START-II.” The various processes have served to contain and minimize the number of nuclear weapons in the arsenal of the nuclear-weapon states. The major nuclear powers like United States and Russia have also began some preliminary steps to de-target and de-alert their weapons.

The agreements also facilitated placement of systems of Notification of Ballistic Missile launches between Great Britain, Canada, Russia, and Norway. These agreements have also served as a guideline for both India and Pakistan on the same matter. Along with the immediate catastrophic effects of nuclear explosions which will bring in large scale devastation, there are several short and long term environmental problems that should be brought to the attention of the general public and the policy makers.

Some of these environmental problems effects include acid rain, Ozone depletion and atmospheric turbidity. These would be especially important in the case of South Asia since the two nuclear

powers are close neighbors and they also account for one sixth of total world population. The first effect after a nuclear bomb burst would be the emission of large amounts of dust into the atmosphere. In addition to this, there will be changes in the complete temperature structure of the atmosphere. (The Washington Post vol.29). Human race will face acute reduction in precipitation, despite the abundance of water vapour and condensation of nuclei following the nuclear explosions and fires. "The total intensity of the inversion plus the persistence of pollution would also cause major changes in atmospheric circulation patterns. It is estimated that even a relatively small nuclear exchange of 100 Megatons could create a situation making the life on earth almost unbearable" (Richard P. Cronin:1988)

"The Draft of Nuclear Doctrine of India not only provides doctrinal support to an ambitious and patently provocative nuclear programme, but it also advocates enhanced conventional military capability under the garb of raising Indian threshold of nuclear tolerance. This would mean continued development and updating of its delivery systems, which includes missiles, ground, air and submarine launched. Missiles, especially the ones capable of delivering weapons of mass destruction to any place within minutes have become a symbol of prestige and national pride. Missile technology, being dual use, has also benefited satellite launch vehicle technology for space exploration as well as launching of satellites for navigation, communications, surveillance, reconnaissance and scientific missions." (Brahma Chellaney:1997) When missile technology was developed, the world began to realize the risks and dangers that it brought about by missiles and their heavy proliferation. There emerged the importance of Risk reduction measures therefore, required to weaken motivation in favour of missile possession and proliferation, there is need to:

- Institutionalize missile launch transparency.
- Develop a mechanism for encouraging and rewarding the states that relinquish possession of missile weapon delivery

systems.

- Guaranty security of such states against nuclear threats.

The missile launch programs transparency will make for voluntary presentation of related information in the form of alerts of ballistic missiles launches and also space launch vehicles that have been affected or are underway. Such a framework actually does exist between India and Pakistan. But the arrangement is highly simplistic and there is also a need to put in place a comprehensive system that would make sure that missile and missile technology non-proliferation, transparency of missile use, and international monitoring. “It is ironic that the rocket technology that has created danger for the modern world, in the form of long range missiles armed with nuclear weapons has also made possible the means of reducing this threat, in the form of satellites” says Bundestag report. (Bundestag report:1988)

2.10 South Asia and Security Dilemma

“Increase in the nuclear arms proliferation in South Asian sub continent is in part a consequence of the Security Dilemma that exists in the region. These forms of Security dilemmas arises when a state’s mechanisms for increasing its security negatively impact the security and threat perceptions of other states” (Charles L. Glaser;1997) The South Asian nuclear security complex involves several security dilemmas, including Pakistan/India, India/China, and Russia/United States. A further security dilemma dyad is that of the United States and China, since it has an impact on attitudes in India and Pakistan, and helps shape their nuclear decisions. According to India’s perspective, the threat from China is given most prime importance, and therefore New Delhi’s has its nuclear and missile development program is geared, in part, toward countering Beijing with a secure deterrent. However, Beijing’s primary threat perception is from the United States and consequently, one must consider the possibility that Beijing may conduct nuclear tests in the coming years if Washington goes ahead with plans to construct newer, more reliable warheads . China’s has

intense desire to catch up with the U S that would oblige India to prevent an adversely affecting strategic balance. India's need for a more reliable and practical nuclear deterrent against China also involves expanding New Delhi's nuclear weapons and also the delivery systems capabilities. The so called advanced capabilities include the development of a thermonuclear weapon and second strike capabilities with the use of long-range ballistic missiles, such as the Agni-III or submarine launched ballistic missile capabilities, within the proposed nuclear submarine project and the Sagarika missile.(Naeem Ahmed Salik:2006)

2.11 Security Disputes, Nuclear Doctrines, and Proliferation Trends

The Proliferation issues in South Asian region must be understood in the context of a vertical and horizontal proliferation. The Vertical proliferations are taking place as nuclear states modernize their nuclear arsenals with more and more reliable delivery systems and warheads. Major Countries including the United States, China, India, and Pakistan, are in the ongoing process of modernizing their arsenals through various actions such as proposals for "a reliable replacement warhead" (just like in the case of the United States). And also in the context of South Asia, nuclear modernization will mainly be a function of prevailing threat perceptions arising out of various levels of security dilemmas. Modernization of nuclear arsenals includes the development and testing of longer range of missiles such as the tests of the Agni-III by India, and the Shaheen-II by Pakistan in the first half of 2007. The Horizontal proliferation on the contrary is the spread of nuclear weapons technology from nuclear states to other entities which can be state actors or non state actors Horizontal proliferation mostly involves a important role for WMD supply networks that does not have a connection to official entities in a nuclear state.

Sub continental Rivalry

South Asian region is one of the most populated regions of the world, this region has India and Pakistan alone accounting for about 1.35 billion people. Both these countries have been hardcore rivals since partition of the subcontinent in 1947 which led to the creation of independent state of Pakistan and independence for India. Both countries have fought two wars over Kashmir (1947, 1965), one over East Pakistan/Bangladesh (1971), one limited war (Kargil, 1999) and the ongoing insurgency in Kashmir (since 1989). The 2001-2002 crisis further intensified the dangers of terrorist violence provoking a conventional conflict that could lead to a nuclear disaster. Since the 2001-2002 crisis, Islamabad and New Delhi several times have conducted several rounds of peace talks aimed at bringing an everlasting peaceful settlement to the Kashmir issue. This peace process has involved several types of confidence building measures. Apart from the conventional notions of sovereignty and nationhood, Kashmir has lot of strategic importance. Rivers originating in the Kashmir region often provide crucial water supplies for food producing areas in the heartland. And also, the Siachen glacier which is present in the region is also a region of military significance. The glacier, to the north of Kashmir, the commands of India has a strategic overlook of the small border between Pakistan and China and can potentially be used as a point of attack on India from northwest Kashmir. The glacier became a battle ground between the two armies in April 1984 and despite several talks, there have been no actions that are taken by both nations toward demilitarization. The extremely complex rivalry between both India and Pakistan involves several levels of territorial disputes based on the notions of national identity as well as terrorist issues. Another important element of the sub continental security problem is the role of China. The role of China in South Asian security issues as well as in future conflict scenarios is crucial when considering two realities

- a) The historical animosity between India and China.

- b) The long standing 'all-weather' political and military alliance between Pakistan and China.

Indian analysts often point out that transfer of nuclear and missile technology from Beijing to Islamabad as evidence of an encircled threat to India. (Raja Mohan:2007) Thus, in the South Asian region, which has several security disputes, is based on territorial rivalry and terrorist violence. It is combined with a need to expand the nation's global and regional position which encourages future uncertainties that will shape the actors' nuclear policy decision-making. As mentioned above, apart from the Indo-Pakistan age old rivalry, strategic uncertainty, and suspicion in New Delhi has also generated by Pakistan's most close military links with China. With China in the picture as a major rival of India and a strategic ally of Pakistan, even if Delhi and Islamabad move towards a everlasting peaceful resolution of the Kashmir dispute, the Beijing is likely to be the biggest element in Indian threat calculations. The present threat perceptions between both India and China are not the same just like the threat perception between India and Pakistan, which are more immediate and based on a 'hot' territorial dispute and state-sponsored terrorism. Nevertheless, the major analysts in New Delhi have long pointed to Chinese military modernization as a coercive threat projecting towards India. This modernization includes various sorts of missile development, like the current deployment of the DF-21 and DF-3 missiles in the provinces of Qinghai and Yunnan in China. The Sino-Indian security dilemma has also a dimension of China's desire to establish close relationships with other countries in the Indian Ocean region (most notably Myanmar), a major policy that has been seen as a potential threat by India and termed as "strategic containment." For India and China, the various levels of security dilemma also arise from threat perceptions based on consequences of future nationalistic tendencies. Both nations fear that a huge rise in the nationalism could lead to more hostile attitudes. (John W. Garver:2002)

2.12 Non-state Actors and Security in South Asia

The Nuclear weapons development and enhancement facilities in South Asian region are duly related to long-standing rivalries between the concerned parties. However, the instability does not just stem from the risk of a nuclear warfare that can happen between states in the region. Non-state actors whom are also play a very significant role in the nuclear security framework, apart from their role in facilitating the nuclear proliferation. There are several groups like that among them. The first, terrorist groups that are closely connected to the Pakistani religious and political establishments can always provoke tensions between India and Pakistan through mass casualty attacks and mutually assured destructions. This was clearly demonstrated following the December 2001 attack on the Indian Parliament by Jaish-e Mohammed militants, which led to a ten month highly threatful stand-off between the two armies. A second danger is by a Kargil style incident in which any militant organization, in cooperation with official Pakistani agencies can occupy territory in Kashmir. As the July 2007 siege of the Lal Masjid (Red Mosque) in the complex which is in Islamabad showed, militant groups who are steadily and rapidly expanding their geographical area of influence, by adversely affecting the stability of Pakistan. However the nuclear weapon complex is under Pakistani military control, but there might be pockets within the military which are sympathetic to fundamentalist groups. At the very least, political and religious instability in the Pakistan creates uncertainty in the minds of policymakers within and outside the region. (Seymour Hersh:2002) Finally, the fears have been heightened from 9/11. Over the possibility of nuclear weapons technology transfers from Pakistani military to several terrorist networks, especially after it was revealed that some senior Pakistani nuclear scientists met with the Al Qaeda leadership prior to 9/11. In a general understanding the complex nuclear weapons scenario in South Asian region is mainly shaped by two major factors. First, the most intense nature of the dispute between the states of India and Pakistan that strikes

at the very core of their nationhood. It involves several levels of territorial disputes and most importantly terrorist violence, and the situation is further complicated by the desire of some terrorist groups to acquire non conventional technology. Second, South Asian region is a part of a bigger and broader nuclear weapons context which includes China and the U S. the Military developments or movement by either Washington or Beijing, which are perceived as a clear and direct threat, also make an impact on the military policies (both conventional and non-conventional) in South Asian region. (C.Raja Mohan:2007)

2.13 Nuclear Policies in South Asia

By keeping the various levels of security disputes and different attitudes in mind, the next step is to consider the various nuclear doctrines and policies of protagonists in the south Asian region. Both nations, India and Pakistan strive for a minimum level of deterrent. The primary objective of India's nuclear strategy is for a credible minimum deterrence (CMD), meaning more secure and reliable second- strike capability even after absorbing an adversary's first strike. The estimated main potential targets of this projected deterrence capability are Pakistan and China. Pakistan's nuclear doctrine also seeks a credible deterrent, against India, and according to one senior nuclear weapons planner, its weapons are "aimed solely at India." In particular this seeks to deter New Delhi even from launching a conventional military attack even after such an offensive for limited war objectives, including destruction of terrorist training camps, as well as attacks on nuclear facilities. Thus, both India and Pakistan always strive for a assured and secure second-strike capability as an integral element of their credible minimum deterrent doctrines. Since neither side has constructed systems that are deemed completely satisfactory and reliable, nuclear modernization continues.(S.M Hali;2006) For India, this means a survivable delivery mechanism that can conceivably strike major cities in China. At present the longest range deployed missile is believed to be the Agni-II with a range

of 2,000-2,500 km, and can reach parts of western China. To have an increased range capability, the Indian Defense Research and Development Organization (DRDO) is developing the Agni 111 intermediate range ballistic missile, which was successfully tested for the first time in April 2007 and has a range of about 3,500 km. Nevertheless, reports have stated that the Indian military is not altogether satisfied with the nuclear capable missiles that are in its arsenal Prithvi I (short range ballistic missiles) and the Agni I & 2. Thus, India's nuclear delivery systems are deemed far from adequate and for the time being. In the opinion of the Indian Air Force, there will be considerable reliance on fighter bombers such as the Mig 27, Jaguar, and Mirage-2000 for a nuclear delivery role. (Rahul Bedi:2007)

NOTES

1. India's approach to the Indian Ocean is primarily as a solo player. So far, it has been wary of direct involvement in multinational enterprises such as international anti-piracy organizations. It has sought other ways to coordinate with the other nations concerned – cooperation rather than joint operations. Anti-piracy ought to be the major arena for international organizations to shape regional policymaking, but it has thus far been a relatively ineffective one as far as India is concerned. India has participated in the Indian Ocean Rim Association for Regional Cooperation (IORARC), an organization founded in 1997 and dedicated to strengthening economic cooperation among the coastal states
2. The United States is probably not looked on by Pakistan as a reliable partner in shoring up its Indian Ocean security, especially in light of the high profile of the Indian Ocean in the growing U.S. security dialogue with India. But Pakistan is an active participant in the multilateral anti-piracy task force
3. The legacy of partition is a key driving force behind the nuclear standoff that now exists between India and Pakistan. Partition split apart a region that had been united for millennia amid

communal massacres on a scale never before seen, leaving in its wake the unresolved issue of contested Kashmir - a Muslim-majority region held by Hindu-majority India under dubious political and legal circumstances. The skirmishing that has continued now for over fifty years, punctuated by outbreaks of full-scale war (in 1947, 1965, and 1971), and limited war (1999), have given both nations ample motivation to develop potent weapons to gain advantage over or restore balance with the other.

4. India's first nuclear test, known variously as "Smiling Buddha", the PNE (for "Peaceful Nuclear Explosive"), and most recently Pokhran-I, occurred on 18 May 1974. It provided an additional stimulus to the Pakistani weapons programme, which had made little headway up to that point. Bhutto increased the funding for the programme after the Indian test. One consequence of the test was ironically to hamper Pakistan's programme as the test sharply escalated international attention to proliferation and led to increased restrictions on nuclear exports to all nations, not just India.

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Chapter III

U.S POLICY TOWARDS SOUTH ASIA UNTIL POKHRAN II

3.1 Evolution of U.S Nuclear Policy towards South Asia

Realism is always the driving force behind the evolution of U.S policy towards South Asian region. The U.S perennial interest is to preclude any major hostile power from dominating Europe or Asia. In order to maintain such an interest the U S built a global alliance system to contain the Soviet Union during the Cold War period, and it wanted India, one of the most dominant states in South Asian region, to join it. However, India adopted a nonalignment Policy. (Satu P Limaya:1993) Washington was made to choose Pakistan due to the circumstances as an ally for containing the Soviet Union in South Asian region. Many times the U.S - Pakistani relations fluctuated, according to the rise and fall of Pakistan's strategic value to the U S. One such instance, the Carter administration which at first adopted a policy of détente and cooperation with the Soviet Union, it downgraded the strategic importance of Pakistan, and in October 1979, suspended economic and military assistance that it gave to Islamabad for its clandestine development of nuclear weapons. Meanwhile, the U S has improved relations with India and they continued to supply India with various grades of nuclear fuels for India's nuclear reactors despite India detonating a nuclear device in 1974. The Soviet Union's invasion of Afghanistan in the month of December 1979 restored Pakistan's strategic value in the region to the United States. Carter offered to renew the already suspended economic and military aid to Pakistan. But Pakistan immediately rejected the economic and military aid as "peanuts". When the Reagan administration raised the economic and military

aid to \$3.2 billion for next six years Pakistan suddenly agreed to help the U S to engage in a proxy war against the S U in Afghanistan. When Moscow began to withdraw its troops from Afghanistan in 1988, Pakistan lost its importance to the U S. The war against Al Qaeda and the Taliban regime of Afghanistan in the year 2001 dramatically improved Pakistan's strategic value to the U S. The George Bush administration which was carrying out attack on Al-Qaida refrained from making fundamental changes in its Military and economic policy towards South Asian region. Consequently, there was more continuity than change in the policy. In June 1989, when the Pakistani Prime Minister Benazir Bhutto visited the U S and held talks with President George Bush. President George Bush reiterated U S pledges for the security and economic development of Pakistan, and U S agreed to sell twenty eight F-16 fighter planes to Pakistan. He also requested the U.S Congress to provide the Islamabad with \$380 million economic aid and \$240 million military aid in the financial year of 1990. (Washington post:1989) The Main official rationale that was given for the aid was that the Afghan Communist regime installed by Moscow still existed, and the Afghan resistance forces had not overthrown it yet. Thus the U S was forced to work closely with Pakistan to contain S U influence in Afghanistan. When the U S began to impose sanctions against Pakistan in 1990 in an effort to dissuade the Pakistan from developing nuclear weapons, the U S Department of Defense and military agencies still tried to maintain a genuine and normal military links with their agents in Pakistan. This was partly because Pakistan was still considered very important for U.S military operations in the region of Gulf, partly because they wanted to maintain their long standing influence on the Pakistani military which had a greater role in every developments in these regions, and also because they did not relish the prospect of Pakistan being forced to side with the radical Muslim states for help in its confrontation against India. As a result, the U S began to get itself engaged in a series of selective sales of military spare parts and equipments to Pakistan. (Ibid:1992) One among the main goals of the Bush

administration's in South Asian regional policy was to prevent the illicit proliferation of WMDs. Due to several ranges of strategic considerations, President George Bush at first chose to ignore the Pakistan's clandestine development of a huge cache of nuclear weapons. As in the case of President Ronald Reagan, Bush's main goal was to contain U S influence in the Afghanistan and he also needed the cooperation of Pakistan for this matter. In the year of May 1989 CIA Director William H. Webster had warned the U S administration that there were several indications that India was interested in acquiring the capability of exploding nuclear weapons, that Pakistan was obviously engaged in developing nuclear weapons, and, therefore, that there would soon emerge a nuclear arms race in South Asian region. Even After imposing several ranges of sanctions against Pakistan, the U S asked for permission to conduct several international inspections on Pakistan's nuclear facilities so as to verify Pakistan's assertion that it had no nuclear devices. Partly this was happening because of the due consideration of national sovereignty and honor, and along with that partly because of the sanctions, Pakistan turned down the request of U S. Both countries also differed on the definition of a nuclear device. To the U S, nuclear device referred not only to a simple device already assembled and ready for launching, but also to its various types of components. And To Pakistan, it mainly referred to the former. (A.G Noorani:1993)The Washington D.C also called upon the Islamabad to obey the Non Proliferation Treaty. The Pakistan could not accept the Washington's request because it was against its long held position on the Non Proliferation Treaty. The American sanctions created big impact on Pakistan on various levels. The cut down of American economic assistance eventually resulted in further deterioration of Pakistan's economy. The suspension of military aid to Pakistan meant that Pakistan could not obtain any of the F-16 fighters it had ordered and also they cannot try to get spare parts to the American made fighters, tanks, and other weapons it had already bought from various other countries. (Washington Post:1992)On the burning issue of missile proliferation in the South Asian region, the U S

began to focus its efforts on the Pakistan, mainly because India had already displayed their indigenous capability to produce missiles, and there was no way for Washington to prevent India from carrying out its missile technology programme. The case with Pakistan was different from India. Pakistan had no comparable capability to produce its own missiles. Its missile programme was heavily relied on various outside assistance, and the main source was China.(The New York Times:1992)

3.2 India's nuclear capability

In the year of May 1989, the George Bush's administration began the applied limited sanctions against Glavobosmos and Space Research Organization, prohibiting the U S government from engaging in any trade with both organizations. In the year of late May 1989, the George Bush administration also banned the sale of the Combined Acceleration Vibration Climatic Test System to India as the system that will help to upgrade India's nuclear and missile capability. (Washington Post:1989) During the Cold War era, the U S efforts to improve any relations with India were heavily hindered by the strategic goal of containing the S U, since India would not improve relations with Washington at the expense of its tight relations with Moscow. In The end of the Cold War era, both countries were freed from both the United States and India from the Moscow factor and this enabled them to improve their bilateral security relations. In the year of 1991, the U S and the Indian navies gradually began to have increased bilateral links, this included small scale but unprecedented combined joint exercises; this was being code named as Malabar, in the Indian Ocean. Along with this Similar relations were also established between the army and naval departments of the two countries.(The New York Times:1992)

Pakistan always supported the cause of the Muslim separatist movements in Kashmir and they even provided these separatists with several weapons and materials. And India had to accuse Pakistan for supporting the terrorists and interfering in the India's

domestic affairs. Pakistan always maintained a stand or can also be called as a strategy that the people in Kashmir always had the right to determine their political future whether to remain in Pakistan or India. So Pakistan therefore insisted on holding a effective plebiscite in Kashmir which India couldn't agree because of the agreement made with Raja Hari Singh of Kashmir and Indian government India did not agree. In the month of February 1990, the tensions between both India and Pakistan began to rise because of the Kashmir dispute. India questioned Pakistan of instigating the cross border incursion with proper evidences. Indian Prime Minister V.P. Singh claimed that Pakistan had amassed troops on the border and responded by deploying 400,000 troops in Kashmir. (The United Daily:1990) Both countries were near a war situation. The U S appealed to both nations for restraint because U S knew that if both states began a war then things will be out of control. To prevent both from entering into war, President George Bush sent his Deputy National Security Advisor Robert M. Gates as a special envoy to South Asian Region. Gates led a large group of U.S. officials, including Assistant Secretary of State for South Asian Affairs Martin Kelly, and senior National

Security Council official in charge of South Asia and the Middle East Affairs agent Richard N. Hass. From May 19 to 21, Gates and his fellow men mediated between both the countries and finally they succeeded in preventing both from entering into a war. The U S feared that since both states had nuclear weapons at their disposal, the outbreak of conventional war between them might lead to a nuclear war that will destroy the region. From the year of 1994 onwards, the Bill Clinton administration began to take various steps to improve Relations with India. On the date May 14, 1994, the Indian Prime Minister Narasimha Rao visited the U S, the first visit by an Indian Prime Minister since Rajiv Gandhi's visit in 1987. Rao gave a speech to the U S Congress it was the first time that a head of a foreign government to do so since Bill Clinton assumed power. Both nations viewed his visit as a great opportunity to change the tense relations between them. With a

greater view to create a most friendly atmosphere among both nations, Clinton and Rao began to concentrate their talks mainly on economic and trade cooperation and exchanges, and barely touched upon such sensitive issues as human rights and nuclear proliferation. In late May, Pakistani President Farooq Leghari he too made a private visit to Washington. U S officials at that time virtually ignored his visit, because of the underlying fact that U S attached greater importance to relations with India than with Pakistan. The agreement between them was a breakthrough in their bilateral relations. It meant that both nations decided to end the past and move beyond an economic and trade cooperation.(Sumit Ganguly:2001)

3.3 India's foreign policy

There were many reasons for the bill Clinton administration to improve the relations with India. First reason is that, the collapse of the S U had destroyed the then foundation of India's defense and foreign policy. India was not in a position to use S U as a counterweight to U S. At the end of the Cold War it also meant that the U S did not had to be in a suspicious mode about India even if it continued to maintain a close relation with Russia. Second reason was that, after the S U troops withdrew from the regions of Afghanistan, The Pakistan's strategic value to the U S began to greatly decline. As one of the predominant state in the south Asian subcontinent, India has become more important to the U S for maintaining the regional peace and stability. Third reason is that, Rao's reforms had changed India's economy from a central planning system to a market one. The U S began to consider India as a huge potential market for U S capital, technology, and goods. Fourth reason is that, India was the largest democracy in the world. And In terms of shared values and other democratic morals the U S had a closer relation to India than to the military controlled Pakistan. Finally, the geopolitical considerations and perhaps which also had an effect on bill Clinton's policy toward India. The bill Clinton administration also had tried to prevent the

proliferation of WMD in South Asian region. In the month of December 1995, U S received information that India was preparing for a nuclear test in the dessert of Rajasthan. The U S officials privately warned India that not to hold any sort of nuclear test and they even threatened to cut of economic assistance to India. The information was perhaps false, as India did not conducted any nuclear test. Nevertheless, the Washington began increasingly concerned with the Janata Party that advocated turning India into a nuclear country. In 1998, the Janata party became the largest party in the Indian parliament, and formed a coalition government of more than ten small parties. On May 11, 1998, India surprised the United States by openly testing nuclear weapons, using China threat as an excuse. Washington strongly condemned the test and tried in vain to prevent Pakistan from following suit. The Clinton administration immediately imposed many economic and military sanctions against India and Pakistan. U S also pushed through the U.N Security Council resolution and condemned the tests the U S then called upon for both countries to stop holding any more nuclear tests and immediately sign the NPT. Pakistan agreed to sign the NPT agreement and give up all its nuclear weapons, provided India also did the same. (Sumantra Bose:1999) India at this point accused the NPT of legalizing the “nuclear apartheid” in the world and would agree to sign it and to give up its nuclear weapons on condition that the five nuclear powers destroy their own nuclear weapons first. Washington rejected the condition naturally. Since the sanctions could not be changed the nuclear policy of both India and Pakistan remained on them. The Bill Clinton’s administration was also severely concerned with the allegation that Pakistan always supported the Muslim terrorists in Kashmir. And it wanted the two countries to solve the Kashmir dispute peacefully and immediately. In order to convince the Clinton administration that Pakistan had nothing to do with terrorists, the then Pakistani President Nawaz Sharif had sent a special envoy Chaudhary Nisan Ali Khan to Washington in the month of March in 1993. He maintained the stand that the Muslim fundamentalists, who appeared in his country and were accused of

engaging in terrorist activities in Kashmir, were foreigners who had fought alongside the Afghan “freedom fighters” in the 1980s and were supported by the U S. (Sumantra Bose:1999)

3.4 Continued hostilities

As the hostilities around these nations continued and tensions escalated, Bill Clinton sent the commander of the Central Command General Anthony Zinni to Islamabad. The Zinni reiterated Clinton’s earlier proposal that the Pakistan should withdraw its troops and also the Muslim militants from the mountaintops of Kashmir border. Pakistan maintained their position that they were mere Muslim freedom fighters over whom the Islamabad had no control, and not even the Pakistani soldiers. The Bill Clinton urged both the countries to exercise a self-restraint while keeping pressure on Pakistan about the matter. India redoubled its whole military efforts to expel the intruders from Kashmir region and even threatened to attack Pakistan’s province of Punjab. Since the Pakistan was no match for Indian army in terms of conventional forces, Islamabad threatened to use the nuclear weapons to defend itself. To avert the danger of a nuclear war in the region, Bill Clinton personally intervened in the Crisis of both nations. In a meeting with the Pakistani President Nawaz Sherif on July 6 at the White House, he was succeeded in obtaining a public pledge from Nawaz Sherif that the Pakistan would take enough concrete measures to re-establish the LOC in Kashmir, and moreover the Pakistan would Use their influence to advise the so called “Muslim freedom fighters” to stop fighting in the region and withdraw from the Indian side of the LOC. (Sumantra Bose:1999)

3.5 An “India First” Policy

On May 1, the then U S president George Bush announced the plan for deploying a national missile defense system. On May 2, the India’s then foreign ministry immediately made a public statement, which was in support of the plan. The statement which came before

America's allies, including Britain, had supported Bush's plan. The George Bush administration immediately moved to upgrade the military ties between both countries. In the month of June 2001, both countries held a joint military exercise. In the month of July, the chairman of the U S Joint Chiefs of Staff Henry Shelton visited India, the highest U.S. military officer to visit the country since 1998. Shelton told the Indian leaders that U S had already decided to reactivate the "Defense Policy Forum" that has been put on the back of the burner for three years. (Far Eastern Economic Review:2001) In the month of November, U S Defense Secretary Donald Rumsfeld and CINCPAC Commander Dennie C. Blair separately visited the New Delhi. As Blair said, bilateral cooperation on the military and security issues had reached with India into a new level. In the mid of May 2002, hundreds of Indian and U S paratroopers conducted a major joint exercises outside the northern city of Agra. It was one of the largest military exercise ever held between the two countries. U S naval ships made several port calls in India. The U S sold India sophisticated radar systems in order to pinpoint the origin of hostile artillery fire. After the September 11 attacks of 2001, the then Pakistani president Parwez Musharraf had personally guaranteed that the questionable transactions with North Korea would cease. However, the U S officials thought that he was either unwilling or unable to halt the transactions. In the month of November 2002, Powell publicly warned of hardcore "consequences" if the U S discovered that Pakistan is continued to make suspect nuclear transfers to North Korea. But the George Bush administration was so reluctant to act against Pakistan for fear that the uneasy alliance with Musharraf would get more worsen. (Far Eastern Economic Review:1999)

3.6 Renewed friendship

The sanctions were imposed against the institute, not the Pakistani government, so as not to embarrass president Musharraf. Moreover, after three days, the U S wrote off \$1 billion in Pakistani debt. The debt relief was represented nearly one third of total of what

Pakistan owed the U S. The rest of the money was given on more favorable terms with the approval of the U S Congress. Debt relief was a sort of sign of renewed friendship between both countries.(Alexander Eveans:2002) The violence led to the tensions between both India and Pakistan in late 2001. On the month of December 13, the five militants who were armed with automatic weapons and grenades stormed Into the Indian Parliament in New Delhi, killing more than nine people before they themselves were killed. It was one of the most serious attacks that took place in New Delhi. India blamed that two extremist militant organizations based in Pakistan, the Jaish-e- Muhammad (Army of the Prophet) and Lashkar-e-Taiba (Army of the Pure) for the Attack. President Musharaf condemned the Parliament attack. And India asserted that Pakistan based militants were solely responsible for the deadly attack and India turned down the Pakistani and U S request for releasing evidence for the allegation. On December 22, two of Indian border guards were killed, because of Pakistani fire. India suddenly moved several divisions of its eastern command to the Pakistan border. India clearly saw the attack on its parliament as a major golden opportunity to end Pakistan's support for the Kashmiri militants which was continuing for decades. New Delhi even issued a huge list of 20 alleged Pakistani terrorists who India wanted to prosecute. The then British Premier Tony Blair traveled to South Asian region to calm the tension between both states. Following a bilateral meeting in Islamabad on January 7, 2002 with Blair, Musharaf denounced terrorism and pledged to reveal them within days a plan to combat militancy in his country. India and the U S stated that the onus was on Pakistan to make concessions. (Far Eastern Economic Review:2002)

3.7 U.S. strategy

Phone calls by President George Bush and Powell to their Indian and Pakistani counterparts even failed to calm the tensions that rose. The U S was forced to put more and more pressure on Pakistan for more concessions to India. On the month of May 26,

U S Deputy Secretary of State Richard Armitage who arrived in the Pakistan began to threaten Musharaf with going to the U.N Security Council with the charge that Pakistan was not implementing UNSC Resolution 1373, which committed U.N members to fight terrorism. Security Council even began debate that would amount to a global condemnation of Pakistan as a sponsor of terrorism. Armitage's heavy handed mediation which eventually resulted in a quid pro quo: this made the Pakistan agreeing to stop militants from crossing into Kashmir which was controlled by India and then shut down their training camps in Pakistan occupied Kashmir, while even India dropped its demand of extraditing 20 Pakistanis to India and promised to withdraw their troops from several borders with Pakistan. History clearly points out that strategic interest has been the most important element for U S policy towards South Asian Region. That policy change has been a part of a U S global strategy which was to prevent a hostile power that dominates Europe or Asia. From the U S perspective, the S U was the major power in the Cold War era, and China began to emerge as the most likely candidate for that power in the post Cold War Era. By The end of the Cold War which freed both the United States and India from the S U factor. U S and India had already accelerated the pace of improving their bilateral relations and widened the scope of cooperation and exchanges among both nations. With the Pakistan's strategic value to U S having declined in the new international order, the U S would no longer tolerate the Pakistan's clandestine development of nuclear weapons and imposed several sanctions on Islamabad. The Bill Clinton administration had adopted a policy of tilting towards Indian side, by considering India as a more important partner than Pakistan. However, the long-standing policy of preventing the proliferation of WMD in South Asian region suffered a quick death when India and Pakistan began to conduct openly and separate nuclear tests in the month of May 1998. (Far Eastern Economic Review:2002)

3.8 Sanctions lifted

The U S retaliated by imposing many sanctions on both nations, which failed to change both of their nuclear policy. U S had no choice but to live with the failure that they had with their foreign policy and, within a short period of time, U S even lifted a part of the sanctions. President George Bush and his administration at first adopted an “India First” policy, for treating India as a foil to China, but after the September 11 attacks dramatically restored the Pakistan’s strategic importance to the U S. In order to win the support of India and Pakistan for Anti-terrorist actions carried by U S in the south Asian region and the U S led war against Al Qaeda and the Taliban in particular on various fronts the U S even lifted all of the sanctions against them.

3.9 U.S Pakistani Nuclear Relations

The main potential for the intersection of terrorism and nuclear weapons in the hands of Pakistan is the greatest threat to U S national security. U S even needed to carefully reconsider its policies towards Pakistan as it always seeks to deter the possibility of terrorists gaining access to the nuclear weapons. The major results of investigations into the Pakistan’s nuclear scientist A.Q. Khan’s nuclear black market deals demonstrated in stark terms that the devastating consequences of nuclear proliferation by several individuals with access to state controlled nuclear programs. But the threat of nuclear terrorism within Pakistan is from the danger of radical Islamists whom running the country, and even gaining control of the country’s nuclear assets. Even The religious parties who lack wider popular support and the President Parwez Musharaf and his senior army commanders have often largely opposed the Islamists agenda.

Claims of advanced programme

Pakistan had conducted its first nuclear tests in the month of May, 1998 with response to a round of testing by India after it broke a

24-year self imposed moratorium on nuclear testing. The bill Clinton Administration began to impose fresh sanctions on both Pakistan (and India) following the 1998 tests, but after that gradually U S lifted their restrictions. Following the 9/11 attacks twin tower attacks; the George Bush Administration lifted all remaining nuclear sanctions against both the countries Pakistan and India. After the 1998 nuclear tests by Pakistan, A.Q Khan boasted that he made the Pakistan's programme more advanced and reliable when comparing to the nuclear programs of India. Then He validated this by citing the Pakistan's mastery of the uranium enrichment process. George Tenet speculates in his report regarding this event that UTN's contacts with the Taliban and al-Qaeda could have been supported by elements in the Pakistani military's always and its intelligence establishment. (Paul Leventhal:2001) Tenet continues by saying Pakistani interrogations of the seven board members were insufficient. He further noted that despite the CIA warnings to Pakistani officials about UTN's activities even before 9/11, it was only when President Bush dispatched him to Pakistan that in November 2001 following revelations of a meeting between Bin laden, Aiman al Zawahiri, and UTN leaders that Musharaf took serious action. The U S officials even had repeatedly raised their voice about A.Q Khan's activities regarding illicit nuclear technology transfer with President Parwez Musharaf, but it was not until the U S provided concrete proof of its knowledge about Khan's various illicit and illegal activities and they even threatened to go public with the information in late 2003 that President Parwez Musharaf took a direct action that halted Khan's illegal activities. Even after the details were emerged on the huge damage done by the A.Q Khan on proliferation network, there was no formal prosecution conducted by Pakistani associates of Khan, and Khan himself is merely was under house arrest. President Parwez Musharaf claims he cannot even formally prosecute Khan or even allow him to be questioned by U S. or any other international authorities just because of the hero status that Khan received for contributing to

the development of Pakistan's nuclear weapons programme. (Paul Leventhal:2001)

Anti U.S. sentiment

Based on the high level of negative consequences arose due to the U S cut off assistance to Pakistan in 1990, it was unlikely that a narrow minded policy of cutting down or even conditioning the assistance to Pakistan through U S legislation now would help to meet the above goals. The 1990 economic and military aid suspension had cost the U S highly valuable leverage with Islamabad, which damaged Army to army relationships, and this stoked strong anti American sentiment in that country. The Efforts that were made to publicly condition the assistance provided to Pakistan could actually weaken President Parwez Musharaf's hand in convincing that his military commanders that the U S is the most reliable partner under the changed circumstances. President Parwez Musharaf already began to contend with public opposition to make his supports for effective U S counterterrorism goals in the south Asian region, and conditioning economic aid through the legislation that would awaken the good memories of 1990 and in turn it will weaken Pakistan public support for pursuing relations with the U S. Tailoring a CTR programme which would be of assistance for Pakistan would be a most challenging since Pakistan is not at all a signatory to the Non proliferation Treaty. The U S is prohibited on both grounds, by legal and by treaty obligations form giving any assistance for the nuclear program of states that are outside the non proliferation regime. Another major obstacle was the basic premise of the Nunn Lugar legislation which requires the recipients of the CTR assistance that would make "substantial investment of its resources for dismantling or destroying such weapons". It was important to prevent Pakistan's nuclear weapons and technology from falling into the hands of regional and global terrorists. It was a top priority for the U S. The major revelations about the most devastating impact of the A.Q Khan's proliferation network and the activities in the nuclear black market will have to

be prevented. U S formed even a civil nuclear cooperation agreement with Pakistan similar to that being U S was pursuing with India. The U S policy toward Pakistani nuclear program should have to be specifically on nuclear safety and security cooperation and also encouraging fresh levels of India Pakistan dialogue that will definitely improve the Pakistan's regional and global security perceptions. U S needs to maintain a continued and robust partnership with Pakistan which is based on mutual trust and mutual understanding. The U S policymakers should stop compartmentalizing the myriad interests that is within the Pakistan but instead it should integrate several components of U S policy towards the Pakistan. In other words, they were pursued to have nuclear safety and nuclear security and signing of nonproliferation in Pakistan which should not be viewed as a "competition" with other U S goals like denying the Taliban and al-Qaeda a safe haven inside the Pakistani territory, shutting down the controversial madrassas that acts as a feeder ground for terrorist groups.(Kumar Dhruva:1999)

3.10 U.S. Nuclear policy towards India

The Western economic and several types of technological sanctions did not contained India's nuclear weapons development capabilities. The U S and the non proliferation policy has retarded the India's nuclear energy programme that was relative to similar program elsewhere found in the world. There were not at all any assistance from the part of West for India's nuclear energy projects and weapons development programs since India had tested its first atomic device in May 1974. These so called sanctions which were forced upon India were further increased and tightened after the test of 1998. The denial of high levels of external technology assistance had prevented India from fulfilling its nuclear energy ambitions. Indian nuclear energy performance was comparatively minimal. The estimated Projections that were made back in the periods of 1970s that the nuclear energy would constitute 10 per cent of India's total electric power by the year 2000, had fallen

really short of the expectations. In the year 2000, the nuclear power alone constituted about 2.5 per cent of total electricity that was generated in India. India at that time had only 10 operating reactors in 2000, two each at Tarapur near Bombay, Kota in Rajasthan, Kalpakkam near Madras, Narora in Uttar Pradesh, and Kakrapar in Gujarat. On the other hand, the South Korea and Taiwan had far greater nuclear advantage because of their high levels of generating capacity than India. In the year 1998 a news report which indicated that China was in the market for 150 nuclear reactors which led to an extensive lobbying in the U S. Congress which stood by General Electric, and the other nuclear power plant suppliers in U S to ease up Congressional sanctions against China because of China's controversial human rights record. These figures which indicates that the India's indigenous capacity for nuclear energy production which has been denied external assistance since its first atomic test of 1974 which needs all sort of foreign assistance that it can get if the nuclear energy is made to have a significant amount of contribution to the severe deficiency in the Indian power sector.(Spector:1998)

3.11 U.S. denies law violation

With accordance to the Nuclear Non Proliferation Agreement, the heavy supply of enriched uranium was withheld by the Jimmy Carter administration. At that point India began to accuse that the U S had violated an international agreement. When the U S denied the violation of the peaceful uses of nuclear uses because U S heavy water technology was allegedly used in the Canadian supplied CIRUS research reactor that India had obtained the plutonium for the 1974 atomic test. In order to circumvent the Nuclear Non Proliferation Agreement and Congressional pressures, and to fulfill the actual contractual obligations that were arising from the 1963 agreement, the Jimmy Carter administration allowed India to acquire the enriched uranium from France, and even after from Germany. Eisenhower's "Atoms for Peace" plan that was a controversial move by U S began to appear to have an

expression to something totally unavoidable. Eventually, this sort of dilemma about containing the already aroused nuclear proliferation and advancing the new levels of nuclear energy development was codified and encrusted in the Nuclear Non Proliferation Agreement. The Nuclear Non Proliferation Agreement was completed and opened for signature in the year of 1968 and went into effect in the year of 1970. It was a full grown treaty that was drawn up as loosely as possible in order to attract the maximum amount of state signatures and also several numbers of ratifications at that time. Indeed, while Articles 1 and 2 of the Nuclear Non Proliferation Agreement, to join the Nuclear Weapons States and also the Non Nuclear Weapons States that would take several measures in order to prevent the spread of these nuclear weapons among the newly emerged states, in the articles, Articles 4 and 5 even calls for the transfer of civilian nuclear technology from the Haves to those eligible Have nots, this even included the technology transfer for “peaceful nuclear explosions.” When analyzing the given fact that it appears to be little more technological separation between the civilian and military nuclear programs, these above said clauses of the Nuclear Non Proliferation Agreement began to happen to be in contradiction. To increasingly sweeten the treaty and encourage the acceptance of the treaty, Article 10 of the treaty assured that it would be the signatories that they could withdraw from the Nuclear Non Proliferation Agreement by giving a 3 months prior notice if any of the newer circumstances jeopardized according to their national security interests.(Jessica Mathews:1991)

3.12 Proliferation tide

Even though the roots of Nuclear Non Proliferation in South Asian region are to be found critically in the dynamics of Sino Indian and Indo Pakistani relations perspective, the emerging proliferation tendencies in the other parts of the world such as Middle East, Central Asia and Northeast Asia began to add to the proliferation pressures in the South Asian region. Conversely, it could not be

even argued that if the South Asian region is been armed with nuclear capability, holding back a Nuclear Non Proliferation tide elsewhere in the world would become more difficult. Many of these nuclear non proliferation trends would even appear to be beyond U S control. The North Korea's earlier efforts to build an atomic bomb at its Yongbyon nuclear complex may not carry any immediate security implications for South Asian region except the fact that it need to demonstrate the failure of the Nuclear Non Proliferation Agreement to check the spread of the weapons spread among the treaty's signatories. The most worst scenario that might envisage a South Korean response in kind to North Korean nuclear weapons production, followed by Similar nuclear responses in Taiwan and Japan who trying to trigger a complex kind of nuclear arms race among these two countries and along with China. But the more serious Nuclear Non Proliferation linkages with South Asian region were to be found usually from the parts of Middle East and Central Asia. Previously Indian concerns in the 1980s came across from the possible Libyan-Pakistani connections that in the development of an Islamic nuclear bomb. (The international herald tribune:1991) India even had to alleged in the early 1980s that various Libyan nuclear holding companies were set up by Pakistan to channel the Libyan petrodollars and uranium ore from Niger. Iraq had experienced a high level of crisis during the 1990-91 Gulf war and the war could have provided some Sort of dangerous lessons that the proliferators elsewhere in the world including several states in the subcontinent. Irrespective of all the wrongs doings of the Iraqi invasion and their attempt to annex the Kuwait, one lesson that was learnt by the near nuclear weapons states is that if Iraq had possessed even a small amount arsenal of crude nuclear devices that could have annexed Kuwait, the events would have been different. Either the Iraq was threatened of an attack from the U S lead coalition might have been stopped them or the Iraq attack might have been halted until the security of Iraq's neighbors, especially country's like Israel and Saudi Arabia, were assured and until probable casualties to Western forces from Iraqi chemical and nuclear weapons attacks could be avoided. Iran has

also made some unsuccessful attempts so far to develop a gas centrifuges for Enrichment purpose, they tried to purchase a small amount of plutonium enrichment reactor from China, and to buy the independent research technology from India. (Andrew Higgins:1992).

3.13 Unstable nuclear relationships

The Proliferation in the West and Central Asian region will eventually constitute to a much more positive trend for the Pakistan but also a disturbing development for India. For the Pakistan the existence of more friendly Islamic nuclear weapons states would reduce the relative strategic nuclear power of India in the south Asian region. It has been Faced with multiple deployments of nuclear weapons in China, for Pakistan and also for some of the Muslim countries which had further west, the credibility of an Indian nuclear deterrent policy would become more and more complex, and perhaps even become ineffective. The Israeli reactions to such sort of newly emerging trends would be further making thing more complicated under the delicate circumstances that would affect the balance of mutual deterrent relationships with West, Central and South Asia. The total outcome of these positions would be unstable nuclear relationships all around the regions. The Arguments in India before the year of 1998 was that the south Asian regional security was greatly affected by the unamounded growth of nuclear weapons among the five nuclear weapons states, especially during the period of Cold War. Therefore, the Indian administration had the right to exercise its independent nuclear option if necessary. (New York times:1993)The Global arguments which was in favour for an Indian nuclear deterrent usually revolved around the kind of discriminatory nature of the Nuclear Non Proliferation regime which allowed the pre-1968 five nuclear weapons states (all permanent members of the United Nations Security Council), to expand and improve their nuclear arms buildup unchallenged. India had always called for global security during the Cold War, that global security was not only affected by

the increase in the numbers of nuclear weapons among prevailing non nuclear states, but it has also the dimension of unmitigated growth of nuclear weapons for mass destruction among the permanent UN security council members, the unchallenged five nuclear weapons states. Throughout the period of Cold War, the amount of vertical proliferation increased and even continued among the five nuclear “Haves” with the newer areas of weapons development which are not restricted by any sorts of arms control agreements. This has contributed to the Strategic Arms Limitation Talks essentially for a controlled S U and U S nuclear arms race. This was kind of hardly disarmament as required by Article 6, or even any sort of arms control. It was only the INF treaty of 1988 that it was for the first time that eliminated a whole class of intermediate range of nuclear weapons delivery systems of the major two superpowers in Europe, without even touching those of Britain, France and China. The Strategic Arms Reduction Talks had always showed some genuine inclinations towards nuclear weapons reductions but it became more of a reality only after the end of the Cold War period when the disintegration of the S U in 1991 ended the threat aroused to the Western world. (The Defense Monitor: 1992)

3.14 Reduction of nuclear warheads

The START 1 program was duly signed in the year of 1991 and the second phase of it START 2 in the year of 1993. Under the START 2 agreement, the already amounted and procured nuclear warhead stockpiles of the U S and Russia was to reduce to 3,500 within 10 years of time. This arms buildup was still an effective reservoir of total destruction power, exceeding the capability of Hiroshima and Nagasaki bombs which are several thousand times over the current ones capacity. There is No doubt, that the end of the Cold War was significantly stopped and even reversed the upward image of spiral of vertical nuclear weapons proliferation between the United States and Russia, the successor state to the S U. Both the countries, Britain and France has large amount of

nuclear weapons that are kept on hold. The exceptions that are created among the nuclear “Haves” was that China which continued its nuclear weapons and missile development programs. But France and China which are two only nuclear non proliferation treaty “hold out” countries which signed the NPT in the year 1992 and subsequently in the year 1993. Whether the nuclear non proliferation treaty is now strengthened with the inclusion of the remaining two nuclear weapons states will remain somewhat dubious. (John O Pastore:2000) Nuclear non proliferation treaty did not halted France and China from testing their nuclear weapons till adhering to the controversial CTBT in the year 1996. Some of the nuclear tests were conducted above ground , contravening the 1963 Limited Test Ban Treaty which neither China nor France had signed at the time. Such actions set a precedent for India and Pakistan to conduct further nuclear tests before signing the CTBT. “Going nuclear may well be a function of both technological capabilities in the making of nuclear weapons and perceptions of security threats to a state.” as long as nations do not hold the needed nuclear weapons technology like Nigeria, or to possess the technological capability but do not have serious threats to itself like Canada, the NPT will remain an acceptable but irrelevant treaty. What is relevant in here is that those states that perceive nuclear threats to themselves and also to possess both the technological and economic capacity to undertake a nuclear weapons and also a missile delivery program.(David E.Sanger:1992)

3.15 Peaceful civilian programme

The India’s indigenous development of various sizes of nuclear weapons is another major advantage of a parallel “peaceful” civilian programme being undertaken by the Departments of Atomic Energy and Space that directly contributes to India’s nuclear weapons and missile capabilities. But Despite all those technical setbacks, that the Indian program had cost overruns and prolonged delays in India’s nuclear energy program and schedules, nuclear reactors and reprocessing facilities have provided India

with the crucial plutonium for the development of atomic and thermonuclear bombs. Likewise, the Indian civilian space programme also shares the military missile programs, the common needs for equipments like such as cryogenic booster engines, special aluminum alloys, launch motors, gyroscopes, liquid and solid propellants, stabilizers and guidance systems. The Civilian technological development in these areas of aeronautics, shipbuilding, automotive, and electronics benefits a lot to the defense sector also, but they are not at all comparable in its technical standards as required. (David E.Sanger:1992) India has a growing technological capability and it is even accumulating plutonium stockpiles from its reprocessing facilities all around the country that could have similarities to the Japanese nuclear energy programs which is technologically more advanced and which is in need of routinely stockpiling of large quantities of plutonium. Japan is now using enriched uranium which is supplied by the U.S. The fuel that is spent is then reprocessed in Europe and the plutonium will be then transported back to Japan, each shipment is sufficient enough to make 100 to 150 bombs. Due to the safety risks involved in the transportation of this fissile material over long distances, the Japan has already created its own technology of “plutonium cycle” that would give it an annual weapon making capability several times larger than that of India. But there have been no international pressures over Japan to stop the development and stockpiling of huge quantities of nuclear fissile materials. But India’s main motivation for initiating a peaceful nuclear energy program was always been to keep its much priced nuclear weapons option open. Conversely, the need for maintaining the nuclear weapons option justified the Indian nuclear energy programme. The civilian nuclear energy program which allows India to acquire and maintain a nuclear weapons capacity at huge cost. And It is also important to note that while looking at the total opportunity costs of nuclear weapons and missile programs that India has, the economic burden of such a nuclear defense system may not be as high as it may seem. Consequently, by barring to the marginal effects of international economic sanctions on India after the 1998

nuclear tests, there has been a huge marginal impact on the Indian economy. (Barry Bearek:2000)

NOTES.

1. Realism is always the driving force behind the evolution of U.S. policy toward South Asia. Realists argue that there is no eternal friend or eternal enemy, only eternal national interest. The U.S. eternal interest is to preclude a hostile power from dominating Europe or Asia. In order to maintain that interest the United States built a global alliance system to contain the Soviet Union during the Cold War era, and wanted India, the dominant state in South Asia, to join it
2. One of the main goals of the Bush administration's South Asia policy was to prevent the proliferation of WMDs. Due to strategic considerations, President Bush at first chose to ignore Pakistan's clandestine development of nuclear weapons. Like President Reagan, Bush's priority goal was to contain Soviet influence in Afghanistan, Therefore, he needed the cooperation of Pakistan.
3. The American sanctions had great impact on Pakistan. The cut-off of American economic assistance caused the Pakistani economy to further deteriorate. The suspension of military aid meant that Pakistan could not obtain the F-16 fighters it had ordered and also must try to get from other countries the spare parts to the American made fighters, tanks, and other weapons it had already bought. The sanctions weakened Pakistan's conventional force deterrence to India and increased its sense of insecurity that strengthened the call in Pakistan for the development of nuclear weapons. Washington's sanctions not only failed to achieve its objectives, but also weakened its influence on Pakistan
4. In mid-January 1995, Defense Secretary William Perry visited South Asia. During his stay in India, he signed with his Indian counterpart a security agreement whereby a "Defense Policy

Forum” was established to review strategies in the post-Cold War era, promote exchange of senior officials and military officers, and gradually upgrade the scale of training and joint exercises.

5. There were three main reasons for the change in American attitude toward Pakistan. First judging from the effect of sanctions the United States had imposed against Pakistan since 1990, Washington not only failed to realize its objectives, but also greatly weakened its influence in Pakistan. Second, as the armed conflicts and terrorist activities in the Middle East and the Balkans continued to increase, the United States recognized the strategic importance of Pakistan as a moderate Muslim country. Third, the security challenges the United States faced in the 1990s and even in the 21st century included the proliferation of WMD, the international narcotics traffic, and Muslim fundamentalism. In all these issue areas, Pakistan could play an important role.
6. Pakistan would agree to sign the NPT and give up its nuclear weapons, provided that India did the same. India accused the NPT of legalizing “nuclear apartheid” in the world and would agree to sign it and to give up its nuclear weapons on the condition that the five nuclear powers destroy their own nuclear weapons first. Washington naturally rejected the condition.
7. The Bush administration inclined to take an “India First” policy toward South Asia, partly because Pakistan supported the Taliban regime of Afghanistan that backed Al Qaeda. However, the terrorist attacks against New York and Washington D.C. on September 11, 2001, suddenly changed the power context in South Asia. The anti-terrorist campaign in general and the U.S.-led war against the Taliban and Al Qaeda in particular, revived the strategic value of Pakistan to the U.S.
8. The September 11 attacks dramatically changed the focus of U.S. global strategy. The U.S. strategic priority shifted from

the concern with the “China threat” to the global war against international terrorism. Pakistan was clearly the crucible of the U.S. campaign against Al Qaeda and the Taliban for both geographic and strategic reasons. Islamabad was one of the few countries that recognized the Taliban. Though India’s offer of support to the U.S. war against terrorism was immediate and unconditional, it could not provide what Pakistan had: a long border of 2500 kilometers with Afghanistan and a long, close association with the Taliban. Thus the Cold War history was replayed with the United States treating Pakistan as a frontline state facing Afghanistan.

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Chapter IV

U.S. RESPONSE TO POKHRAN II

Pokhran 2 refers to second series of nuclear tests which included the series of five nuclear bomb test explosions conducted by India at the Indian Army's Pokhran Test Range in month of May 1998. First test was also a great success it was code named as Smiling Buddha, it was conducted in May 1974. Pokhran 2 also consisted about five detonations, among which the first one was a fusion bomb and the rest four were fission bombs. All these nuclear tests resulted in a variety of economic and technology sanctions against India by a number of major nations, including Japan and the U.S. The India has a very long history of undertaking domestic research and efforts in the nuclear and related technology. The history of the Indian nuclear programme goes back to 1944, when the renowned physicist Homi Jahangir Bhabha submitted a special report on the potentials of nuclear energy to the Indian Congress. After a year he established the Tata Institute of Fundamental Research (TIFR) which is still a pioneer organization in the nuclear field. As from early as the year of 1950s, there were several preliminary studies that were conducted at the Bhabha Atomic Research Centre (BARC), and the plans of BARC were developed to produce plutonium and other nuclear bomb components. In the year of 1962, India was irritated by China when it lost some of its northern territory to china, and in 1964 the Chinese nuclear test made India into militarizing its civilian nuclear programme. After the death of Nehru and Bhabha, the whole nuclear programme became more intensified and advancements were properly revived and transferred under the chairmanship of Vikram Sarabhai, who in the year 1965 was made director of the Indian Space Research Organization (ISRO) by the then Prime Minister Lal Bahadur

Shastri. After the death of Lal Bahadur Shastri, the nuclear programme got momentum under the leadership of Prime Minister Indira Gandhi and delegated to Raja Ramanna in 1967. The Prime Minister Indira Gandhi took firm decision to develop high powered nuclear weapons after learning of another test by China.(Sublette Carey:2011)

4.1 Pokhran II background

After the creation of the Nuclear Suppliers Group (NSG), Indian nuclear programs were severely affected due to the test in 1974. The world's major nuclear nations began to impose nuclear embargo on both India, and Pakistan which was technologically competing to meet with India's challenge. After *Pokhran I*, the nuclear program of India had to struggle for many years, in order to gain credibility and its progress was shunted by the lack of indigenous nuclear resources and it's too much dependence on imported nuclear technology and technical assistance. But Indira Gandhi had already declared that India's nuclear program was not militarizing purpose, and at the same time she did authorize preliminary work on developing a fusion boosted fission design. But, even after the 1975 state emergency declared by her and the ouster of Indira Gandhi in 1977, there was a gap in the national leadership of India and even in the basic democratic management of the nuclear programme. The new work group that was set up to work on the new fusion boosted design was headed by M. Srinivasan but under him the work's progress was too slow. The main Indian peace activist and one of the anti-nuclear weapon advocates, Morarji Desai, took over the office as the Prime Minister of India. On June 1978, Desai removed deliberately Ramanna from the nuclear development programme and he then posted him at the Ministry of Defence. Desai government was not at all concerned with much progress in the field but even after that without much progress in nuclear programme and nuclear program began to grow at a desirable rate. The most Disturbing news at that time came from Pakistan when the world began to discover the

Pakistani clandestine atomic bomb projects which were ongoing for several years. In contrast to India's hardcore nuclear development programme, Pakistan's atomic bomb programme was completely under military supervision. Pakistan's atomic bomb programme was relatively huge; it was lavishly funded, but discreet and well organized. India began to realise that Pakistan was likely to succeed in this project in matter of two years and this will adversely affect Indian strategic interest in the region. The 1980 general elections in India marked the return back of Prime minister Indira Gandhi who again initiated the Indian nuclear programme. In the year of 1981, Ramanna was appointed back as a director to the nuclear programme and he accelerated the whole program. In the year 1983–85, Prime Minister Indira Gandhi denied the nuclear test option when she saw that the Pakistan exercising the *Brinkmanship*, though the Indian nuclear programme continued to advance. It was then 1980s that the work about hydrogen bombs and the missile delivery programs were started, and Dr. APJ Abdul Kalam, an aerospace engineer, who later became Indian president, who developed the launch vehicles for ISRO space missions, and he was made the director of the missile programme.(The Momentum builds:2011)

4.2 Pressure on India

The U S government under the supervision of President Bill Clinton tried to impose enormous amount of pressures on Rao, in order to stop the preparations. The Prime Minister Benazir Bhutto tried to issue harsh and very severe statements against India on Pakistani news channels. Thus she jeopardized the relationship between two nations. Tension amounted when the Premier Benazir Bhutto intensified her policy on Kashmir in the year of 1995. In a speech that delivered by Yousaf Raza Gillani , stressed that the "Kashmir issue" is really endangering the peace and security in the whole south Asian region. The then Indian delegation that were headed by Atal Behari Vajpayee, reiterated that the "UN

resolutions only call upon Pakistan the occupying force to vacate the "Jammu and Kashmir Area." (Masood Haider:2011)

4.3 Respect on world stage

Pakistan, there is a conservative force, the Pakistan Muslim League (PML), which was also in power at that time with an exclusive mandate which was headed by the then Prime Minister Nawaz Sharif who was defeated by the left wing forces headed by Benazir Bhutto in the year of 1997 general Elections in Pakistan. During the BJP campaign in India, Atal Behari Vajpayee opened up that his government would "take back that part of Kashmir that is under Pakistan's control." When this declaration, was made the BJP platform cleared their intention to "exercise the option to induct nuclear weapons" and "India should have become an open nuclear power which was to garner the respect on the world stage that it deserved." In the month of 18 March 1998, Vajpayee had publicly started his lobbying for nuclear explosion and he even went a step ahead and declared that "there is no compromise on national security; all options including the nuclear options will be exercised to protect security and sovereignty." In the month of March, A B Vajpayee began to consult Abdul Kalam, R. Chidambaram and officials of the Indian Department of Atomic Energy on the nuclear options that they can exercise. Chidambaram already briefed A B Vajpayee extensively about the nuclear programme and Abdul Kalam began to present the status of the missile programme. On the month of March 28, 1998, the A B Vajpayee administration took advises from the scientists about the matter of preparations within the shortest time possible, and the preparations were quickly made. It was this time that the most tense atmosphere aroused when the Pakistan, at a Conference on Nuclear Disarmament, offered a peace rhetoric agreement with India for "an equal and mutual restraint in conventional, missile and nuclear fields." (Kheli:1997)

4.4 Extensive planning

There was an Extensive planning which done by a very small group of scientists, senior military officers and senior politicians made to ensure that all the test preparations would remain in absolute secret and even the senior most members of the Indian government did not know the things that were going on. The chief scientific adviser and the director of Defence Research and Development Organization, DR. A P J Abdul Kalam, and Dr. R. Chidambaram, the director of the Department of Atomic Energy DAE, were the chief coordinators of this test planning. The scientists and engineers of the BARC, the AMDER, and the DRDO were involved in the nuclear weapon assemble, layout, detonation and obtaining test data. A very small group of senior scientists who were involved in the detonation process, scientists were all asked to wear the Indian army uniforms in order to preserve the secrecy of the nuclear tests. Since the 1995, the 58th Engineer Regiment had learned a lot about to avoid satellite detection. Their Work was carried out mostly during night, and all the equipment were returned to the original place At morning to give the impression that those things were never moved. There were a total of Five nuclear devices that were detonated during the Operation Shakti. (Times of India:2012)

They were:

- Shakti I – A thermonuclear device yielding 45 kt, but designed for up to 200 kt.
- Shakti II – A plutonium implosion design yielding 15 kt and intended as a warhead that could be delivered by bomber or missile. It was an improvement of the device detonated in the 1974 Smiling Buddha (Pokhran-I) test of 1974, developed using simulations on the PARAM supercomputer
- Shakti III – An experimental boosted fission design that used "non-weapon grade" plutonium, but which likely omitted the material required for fusion, yielding 0.3 kt.

- Shakti IV- A 0.5 kt experimental device.
- Shakti V – A 0.2 kt experimental device that used uranium-233. (Nuclear weapon archive:2012)

4.5 Reactions in India

India after the tests became the sixth country that have tested nuclear bomb in 1998 and thus India joined the elite nuclear club. After the tests, immediately a press meet was convened at the prime minister A B Vajpayee's residence in New Delhi and he made the following statement: "India conducted three underground nuclear tests in the Pokhran range. All The tests conducted today were with a fission device, a low yield device and a thermonuclear device. The measured yields are in line with expected values. Measurements have also confirmed that there was no release of radioactivity into the atmosphere. These were contained explosions like the experiment conducted in May 1974. I warmly congratulate the scientists and engineers who have carried out these successful tests". News of the tests were greeted with great celebration and great approval by the Indian citizens. The Bombay Stock Exchange (BSE) even registered a huge significant gains and it led to great leap in the stock markets in the following days. Newspapers and television channels began to praise the government for its strong decision on the matter; even the editorials of all newspapers were full of praise for the country's top men leadership and also advocated the development of an operational nuclear arsenal for the country's armed forces. But, on the other hand, the Opposition, which was led by Congress Party criticized the Vajpayee government for carrying out nuclear tests. (BBC Economic Review:2013)

U.N. Sanctions

On the month of 6 June, the United Nations Security Council (UNSC) began to start the process and it adopted *Resolution 1172* condemning the nuclear test of India and that of Pakistan. China

even issued a vociferous condemnation calling for the international community to put high pressure on India to sign the Non Proliferation Treaty and they urged India to eliminate its nuclear arsenal. When India joined the group of countries possessing nuclear weapons, a new era of strategic dimension began to emerge in Asian continent, particularly South Asian continent. (Dittmer,L:2005)

United States

By keeping with its preferred attitude to the foreign policy in the adjacent decades, and also in compliance with a 1994 anti nuclear weapons proliferation law, the U S imposed highly valid economic sanctions on India. The economic sanctions even consisted about cutting off all the economic assistance to India except that for the humanitarian aid, it also did banning over the export of certain defence material and technologies, by ending American credit and credit guarantees to India, and also made requiring the U S to oppose lending by international financial institutions to India. The U S even issued a strong statement condemning India and promised they promised that the sanctions would follow. (BBC Release:2015)

Japan

Japan also began to impose heavy economic sanctions on India. The economic sanctions by consisted of freezing all the new loans and grants that were given to India except for humanitarian aid. Even Some other nations also imposed same types of economic sanctions on India; primarily it was in the form of suspension of foreign aid and other credit lines. However, during this period the overall effect on India's economy and its technological progress was marginal.(CMM News:2011)

China

In the month of May 12, the Chinese Foreign Ministry stated in a press release that "The Chinese government is seriously concerned about the nuclear tests conducted by India," and that the tests "run counter to the current international trend and are not conducive to peace and stability in South Asia.". The very next day the Chinese Foreign Ministry issued another statement by clearly stating that "it shocked and strongly condemned" the Indian nuclear tests and called for the international community to "adopt a unified stand and strongly demand that India immediate stop development of nuclear weapons".(CNS Report:2012)

Pakistan

The most biggest and strong reaction to Indian nuclear explosion came from the Pakistan. With Great protest Pakistan began blaming India for initiating a total nuclear arms race in the south Asian region. Then Pakistan Premier Nawaz Sharif vowed that his countries will definitely give back a suitable reply to the Indians. The day after the first tests, the Pakistan Minister of Foreign Affairs Gohar Ayub said that Pakistan is ready to conduct a nuclear test of its own. As he said: "[Pakistan] is prepared to match India, we have the capability.... We in Pakistan will maintain a balance with India in all fields", he said in an interview. "We are in a headlong arms race on the subcontinent." On 13 May 1998, Pakistan bitterly condemned the tests, and Foreign minister Gohar Ayub by quoting that Indian leadership seemed to "have gone berserk and was acting in a totally unrestrained way." (BBC Report:2013)

4.6 U.S Response to Pokhran

After the series of nuclear tests, which were known as Pokhran II, which was conducted by India, the burgeoning economic and security ties between India and the U S have been punctuated and the major political ambience in the bilateral relationship between both countries came to a point of defiance. After the tests nuclear

tests by India surprised all and even the powerful intelligence community of the U S was intelligently fooled by India. The U S Deputy Secretary of State Strobe Talbot had characterized the nuclear tests by India and then by Pakistan as a path leading to a "dead end" and he advised others not to "follow down that path" (Economic Times:1998)

Official stance

The United States State Department officials and the American diplomats had an impression that India should have to be spelled out its nuclear programme. To them, India and U S were in the process of conducting a massive "strategic dialogue" in the new context of the post Cold War era. The U S Ambassador to the United Nations, Bill Richardson was in Delhi not a long time before the Pokhran II nuclear tests and he felt unattended that his Indian counterparts didn't have any signs to him about their plans. There was a massive lobbying activity done by the Bill Clinton Administration which eventually led to the enactment of the Brown Amendment by the U.S Congress. Interestingly, the bill Clinton Administration, which claims to have put the Non Proliferation Treaty on top of its agenda in U S foreign policy, it was instrumental in diluting the Pressler Amendment. And the U.S inaction over the Sino-Pakistan nuclear and missile cooperation, in addition, sets shows another example of U.S soft policy towards Pakistan's nuclear activities.(Chintamani Mahapathra:1998)

4.7 Nuclear history

Moreover, these events are now part of the nuclear history of the whole world that India's nuclear test explosion in 1974 had already triggered the U S and international efforts of a series of dialogues to control the regimes and also the mechanisms that are to be checked for nuclear proliferation. This was an indication that even when in the midst of the Cold War, the U S was not even prepared to accept India's emerging role as a powerful country in the region. It was the U S which had led several crusades against Non

Proliferation Treaty and it was the Bill Clinton's Administration in particular that which had instituted a series of conservative measures known as "Counter-Proliferation Initiatives." Which were carried out against the Non Proliferation Treaty. In the backdrop of all these developments in the international arena, it was totally natural that the New Delhi Did not wanted to inform Washington about its nuclear options and other related developments. According to the U S perception, India had taken a step which was bound to hamper the rising security threats and economic cooperation between the both countries. (Reuters News Media:1998) From the year 1994, a new American law which was known as the Nuclear Proliferation Prevention Act, has been in place and this was an important one. This Act in total combined all major efforts of previous legislations on proliferation issues to facilitate a clearer position of the U.S on the subject of both Indian threat as well as their stance on Non Proliferation Treaty. One of the key parts of this legislation was the incorporation of the Glenn Amendment which authorized any sanctions against countries that detonates one or more nuclear devices. Acting under this law, President Bill Clinton imposed the following sanctions on May 13, 1998:

- Termination of assistance under the Foreign Assistance Act of 1961, except for humanitarian assistance for food and other agricultural commodities;
- Termination of sales of defence articles, defence services, or design and construction services under the Arms Export Control Act, and termination of licenses for the export of any item on the United States munitions list;
- Termination of all foreign military financing under the Arms Export Control Act;
- Denial of any credit, credit guarantees, or other financial assistance by any department, agency or instrumentality of the United States government;

- The United States' opposition to the extension of any loan for financial or technical assistance by any international financial institution;
- Prohibition of United States banks from disbursing any loan or providing any credit to the Government of India, except for the purposes of purchasing food or other agricultural commodities; and Prohibition of export of specific goods and technology subject to export licensing by the Commerce Department.(The Hindu:1998)

4.8 U.S sanctions and pressures

The U S imposition of various economic and military sanctions soon imitated various kinds of wide speculation in India, U S and everywhere. While the Government of India kept issuing several statements to the effect that India is capable of sustaining American pressures and other sanctions. The U S government officials initially expected that the Indian economy will face lots of pressure due to the loss of several billion dollars of financial assistance and other foreign investments due to the economic sanctions. Japan, Australia, New Zealand and a few other European countries also followed the U.S line and they too imposed economic sanctions. (Economic Times:1998) While all these developments were happening, no one knew the exact nature of the economic sanctions, and also that to what extent of their implications and the degree of their effectiveness by imposing these sanctions. The U S officials were still searching in the dark, and since it was the very first time that the Glenn Amendment had been invoked. Jagdish Bhagwati, a renowned economist, said on May 25, 1998, that "the economic impact of the U.S sanctions would be very little.... Unilateral trade sanctions almost never work(Economic times:1998). Even after when the imposition of sanctions everything was business as usual for the American banks in India, as the U S executive gave out orders and were yet to be issued about the role of these banks in operating in India.(Jagdish Bhagawati:1998)

Protecting U.S. interests

While all these events happened, Pakistan conducted their own series of nuclear weapon tests in May itself after couple of weeks of Pokhran II nuclear tests. This event suddenly took off the heat off India. Then the U S was bound to impose more economic sanctions on Pakistan as well. On the month of June 18, the State Department of U S even detailed several of the economic sanctions imposed against India and Pakistan and They said that while imposing sanctions the U S is trying to make both parties understand the trauma of the world. (Palmer: 1989) At that time the Bill Clinton Administration perhaps could have taken a strict stand in the World Bank for this reason but due to the domestic pressure from the business houses in U S and also from the farming communities. The statements from both the White House and other U.S officials was already began to indicate a change of policy before the World Bank which cleared the loans for India. The whole nature of the economic sanctions law was such that it had already tied the hands of the Administration. Once the economic sanctions are imposed, it is only with the help of another Congressional legislation that can lift these economic sanctions. The first step towards dealing with this law thus remained a major preoccupation of the Bill Clinton Administration. (Reuters:1998) The U S business and agriculture lobbying groups came to support the Bill Clinton Administration's legislative position on this issue. There were two results that came out of the Bill Clinton's White House efforts towards making the past law more flexible. First was step was a unanimous vote in the U S Senate in the second week of July in order to exempt credit and other guarantees provided by U S authorities to support food and medicine exports from the Arms Exports Control Act. The second result after this was the Senate decision which was a day after Clinton signed the Bill exempting farm products from the clutches of sanctions in order to support a measure by giving U S President full power to waive most of the economic sanctions under the Glenn Amendment. One week earlier, the Assistant Secretary of State Inderfurth had

already pleaded in front of the Senate about the importance to make the economic sanctions law much more flexible with a Constant assurance that the implementation of the new legislation would force on India and Pakistan by changing their ways. He even said that the U S wanted both the nations to "conduct no further nuclear tests; sign and ratify the CTBT immediately and without conditions; refrain from deploying nuclear weapons; participate constructively in negotiations towards a fissile material cut-off treaty; formalize existing policies not to export weapons of mass destruction and missile technology and equipment; and resume direct dialogue to address the root causes of tension between them, including Kashmir." (USIS:1998)

United States bargaining

There was no doubt that the lines said by Inderfurth in his statement was that he was spelling out the outer line of the U S position. He even was aware of the position taken by India and Pakistan as well in this matter. India does not only like to become recognized as a controversial nuclear weapon power but India also does not like to link this to the Kashmir issue with the nuclear issue, this was among the other demands. The visit made by the members of the Senate Task Force on Sanctions in the subcontinent, and the rethinking done by the U S State Department on the issue, of the articulation of the Whole point is that the idea of U S is not to punish the Indian people and they even said that they are always welcome in the process of developments. (Hindustian Times:1988) And finally the U S was approached towards technology transfer, scientific collaboration. India and the U S had one of the biggest collaboration efforts in ever in the science and technology. But the U S at this time came to be perceived in India just as a power which has not only the one who started to discourage the scientific collaboration with Indian scientists but they were the ones who also as one which seeks to deny India the fruits of their own scientific achievements. The economic sanctions imposed on India over the important cryogenic rocket engine deal with Russia and the latest

U S decision to deny the visas for Indian scientists and they even went on deporting Indian scientists who were working in the U S establishments anywhere in the world have strengthened such a perception and have generated a certain amount of anti American attitude in the country. The United States policy of liberal attitude towards Pakistan, and even their closer defence and security cooperation with China made a hard line posture over the Indian nuclear tests would possess a handful of considerable hurdles in restoration of normal ties between India and the U S. It will definitely take quite some time before the dark clouds over India U S relations are restrained with fresh wind of friendly cooperation. (The Hindu:1998)

4.9 Evolution of CTBT

Till today, there were over 2,000 nuclear tests that have been carried out at different places around the world. Arms control advocates who had always campaigned for the adopting of a treaty which bans all sorts of nuclear experiments since the early year of 1950s, when the general public was really concerned about this matter. There was tension due to the wider knowledge of nuclear tests as a result of this everyone was worried about a radioactive fallout from atmospheric nuclear tests and the increasing arms race. There were over 50 nuclear explosions that were registered between the period of July 16, 1945, and December 31, 1953 when the first among the nuclear explosive test was conducted by the U S at the White Sands Missile Range near Alamogordo, New Mexico. The Indian Prime Minister Jawaharlal Nehru of India voiced the increasing international concern in 1954; He even proposed the elimination of all nuclear test explosions in a worldwide manner. But within the context of the Cold War, there were several skepticism about the capability to verify the compatibility with a comprehensive nuclear test ban treaty which posed a major obstacle to any agreement. There was limited success that was achieved by the signing of the Partial Test Ban Treaty in 1963, which went for banning nuclear tests in the

atmosphere, underwater and in space, but not in the underground. But at that time both France and China did not signed the PTBT. However, the treaty was still ratified by the U S by an 80 to 19 vote in the U S Senate.(Dary Kimbell:2012)

4.10 Nuclear Non-proliferation Treaty

A greater step that was put towards a non nuclear proliferation of nuclear weapons came with the signing of the Nuclear Non proliferation Treaty (NPT) in 1968. Under the Nuclear Non proliferation Treaty, the non nuclear weapon states were prohibited from, possessing, manufacturing or even acquiring nuclear weapons or other nuclear explosive kinds of devices. All the signatories, including the nuclear weapon states, were heavily committed to the goal of a complete nuclear disarmament. But with India, Pakistan and Israel they have declined to sign the Nuclear Non proliferation Treaty on grounds that such a treaty will fundamentally be a discriminatory as it places Several limitations on all these states that do not even have a nuclear weapons while making no efforts to curb these nuclear weapons development that are declared as nuclear weapons states.(Dary Kimball:2012)

4.11 Adoption of the CTBT

There were Intensive efforts that are made over the next three years which were to draft the Nuclear Non proliferation Treaty text and its two combined annexes. But the Conference on nuclear Disarmament, in which several negotiations were being held, did not succeed in reaching an agreement on the text. “Under the direction of Prime Minister John Howard and Foreign Minister Alexander Downer, Australia then sent the text to the United Nations General Assembly in New York, where it was submitted as a draft resolution. On September 10 1996, the Comprehensive Test-Ban Treaty (CTBT) was adopted by a large majority, exceeding two-thirds of the General Assembly's Membership” (Un Resolution: 2011).

4.12 Evolution of NPT

The agreement on the Non-Proliferation of Nuclear Weapons, was commonly known as the Non-Proliferation Treaty or NPT, is an international treaty whose objective was to prevent the widespread of nuclear weapons and weapons technology around the world. It was also aimed to promote a constant cooperation in the peaceful purposes of nuclear energy and even to further the goal of achieving nuclear disarmament and general and complete disarmament. It was opened for signature in the year of 1968, the Non-Proliferation Treaty came into force in the year of 1970. On May 11, 1995, the Non-Proliferation Treaty was extended indefinitely. More and more countries began to sign to the Non-Proliferation Treaty than any other arms limitation and disarmament agreement; this was a testament to the Treaty's significance. A total of 190 states have joined the Non-Proliferation Treaty, although North Korea, which signed the NPT in 1985, later announced its withdrawal in 2003 from the treaty. Four U N member states who did not sign the Non-Proliferation Treaty are India, Israel, Pakistan and South Sudan. The Non-Proliferation Treaty had recognized five states as major nuclear-weapon states, the United States, Russia, the United Kingdom, France, and China. They are also the five permanent members of the United Nations Security Council. Four other nations are known to possess nuclear weapons. India, Pakistan and North Korea have openly tested and declared that they have nuclear weapons in their possession, but even at this time Israel had a policy of creating shadows regarding its own nuclear weapons programme. The Non-Proliferation Treaty consists of a preamble and eleven articles. Although the concept of All these "pillars" are not at all expressed anywhere in the Non-Proliferation Treaty, the treaty is nevertheless sometimes interpreted as a whole of *three-pillar* system, which has an implicit balance among them:

1. *non-proliferation*,
2. *disarmament*, and

3. right to peacefully use nuclear technology.

The Non-Proliferation Treaty has often been seen as something based on a central bargain: “the NPT nonnuclear- weapon states agree never to acquire nuclear weapons and the NPT nuclear-weapon states in exchange agree to share the benefits of peaceful nuclear technology and to pursue nuclear disarmament aimed at the ultimate elimination of their nuclear arsenals.”(Thomas C.Read:209)

Treaty "pillars"

The NPT has been first commonly described as having three main "pillars": the nonproliferation, disarmament, and peaceful use. The "pillars" concept has been questioned by some who believe that the NPT is, as its name suggests, principally about nonproliferation, and that "three pillars" language misleadingly implies that the three elements have equivalent importance.

First pillar is non-proliferation

The Five states which are recognized by the whole Non-Proliferation Treaty as nuclear weapon capable states (NWS) are China (signed 1992), France (1992), the Soviet Union (1968; obligations and rights now assumed by the Russian Federation), the United Kingdom (1968), and the United States (1968) (The United States, UK, and the Soviet Union. The World War II's “Big Three” — were the only states openly possessing such weapons among the original ratifiers of the treaty, which entered into force in 1970). These five NWS agree not to transfer "nuclear weapons or other nuclear explosive devices" and "not in any way to assist, encourage, or induce" a non-nuclear weapon state (NNWS) to acquire nuclear weapons (Article I). NNWS parties to the NPT agree not to "receive," "manufacture" or "acquire" nuclear weapons or to "seek or receive any assistance in the manufacture of nuclear weapons" (Article II). NNWS parties also agree to accept safeguards by the International Atomic Energy Agency

(IAEA) to verify that they are not diverting nuclear energy from peaceful uses to nuclear weapons or other nuclear explosive devices (Article III).

Second pillar: disarmament

Article VI of the Non Proliferation Treaty represents that the one and only binding commitment in this multilateral treaty is the goal of disarmament by the nuclear-weapon States. The Non Proliferation Treaty's preamble contains the language that affirming the desire and ambitions of treaty signatories to release international tension and by that add strength to international trust and this will create someday the conditions which halt to the production of nuclear weapons, and treaty on general and complete disarmament that liquidates, in particular, nuclear weapons and their delivery vehicles from national arsenals. (UN report:2007)

Third pillar: peaceful use of nuclear energy

The third and final pillar that wholly allows for and agrees to the transfer of the nuclear technology and related materials to Non Proliferation Treaty signatory countries for the development of peaceful civilian nuclear energy programs in such countries, as long as these countries can at least demonstrate that their nuclear programs are not being used for the development of mass killing nuclear weapons. But only a very few of those states with nuclear energy programs are willing to abandon the use of nuclear energy for weapon production. The third pillar of the NPT under Article IV provides other states with the possibility to do the same, but under conditions intended to make it difficult to develop nuclear weapons. (IAEAReport:2003)

Key articles

Article I: Each nuclear-weapons state (NWS) undertakes not to transfer, to any recipient, nuclear weapons, or other nuclear

explosive devices, and not to assist any non-nuclear weapon state to manufacture or acquire such weapons or devices.

Article II: Each non-NWS party undertakes not to receive, from any source, nuclear weapons, or other nuclear explosive devices; not to manufacture or acquire such weapons or devices; and not to receive any assistance in their manufacture.

Article III: Each non-NWS party undertakes to conclude an agreement with the IAEA for the application of its safeguards to all nuclear material in all of the state's peaceful nuclear activities and to prevent diversion of such material to nuclear weapons or other nuclear explosive devices.

Article IV: Nothing in this Treaty shall be interpreted as affecting the inalienable right of all the Parties to the Treaty to develop research, production and use of nuclear energy for peaceful purposes without discrimination and in conformity with Articles I and II of this Treaty. All the Parties to the Treaty undertake to facilitate, and have the right to participate in, the fullest possible exchange of equipment, materials and scientific and technological information for the peaceful use of nuclear energy. Parties to the Treaty in a position to do so shall also co-operate in contributing alone or together with other States or international organizations to the further development of the applications of nuclear energy for peaceful purposes, especially in the territories of non-nuclear-weapon States Party to the Treaty, with due consideration for the needs of the developing areas of the world. (IAEA report:2003)

Article VI: The states undertake to pursue "negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament", and towards a "Treaty on general and complete disarmament under strict and effective international control".

Article X. Establishes the right to withdraw from the Treaty giving 3 months' notice. It also establishes the duration of the Treaty (25 years before 1995 Extension Initiative). (IAEAReport:2003)

History

The reason for the creation of Non Proliferation Treaty was the major concern for the safety of a world with many nations with large numbers of nuclear weapons. In the end of the cold war the deterrent relationship between the U S and S U became completely fragile. The Non Proliferation Treaty process was already initiated by Frank Aiken, Irish Minister for External Affairs, in 1958. It was opened for signature in 1968, with Finland the first State to sign. There were Several Non Proliferation Treaty signatories that have agreed to give up their nuclear weapons or nuclear weapons programs. The South Africa had already undertook a nuclear weapons program in their past, but it has renounced it and signed the treaty in 1991 after destroying its small nuclear arsenal and soon the remaining African countries too signed the treaty. Several former Soviet Republics like Ukraine, Belarus and Kazakhstan, destroyed or transferred to Russia the nuclear weapons they inherited from the Soviet Union. The former Soviet republics joined Non Proliferation Treaty by 1994. (Mohamed El Baradei:204)

4.13 United States-NATO nuclear weapons sharing

At the time Non Proliferation Treaty was being negotiated, North Atlantic Treaty Organization had placed a secret nuclear weapons sharing agreement in which the U S had agreed to provide nuclear weapons that are to be deployed other North Atlantic Treaty Organization states. Some argue this is an action of proliferation by violating Articles I and II of the Non Proliferation treaty. But there was a counter-argument which is that the U S controlled all the weapons in storage within the North Atlantic Treaty Organization states, and that no means of transfer of the weapons or any control over them was intended "unless and until a decision were made to go to war, at which the treaty would no longer be controlling", so there is no breach of the Non proliferation treaty. These agreements were disclosed only to a few of the states, including the S U, after negotiating the treaty, but most of the states

that signed the Non proliferation treaty in 1968 would not have known about these agreements and interpretations at that time. (Hans M Kristensen:2005)

At the end of 2005, it was estimated that the U S still provides about more than 180 tactical B61 Nuclear bombs that are to be used by Belgium, Germany, Italy, the Netherlands and Turkey under these North Atlantic Treaty Organization states agreements. Many of these states, and also the Non-Aligned Movement, argues that this action of U S violates the Non proliferation Treaty Articles I and II of the treaty, and are exerting diplomatic pressure to terminate these agreements. They have successfully pointed out that the pilots and other staff of the "non-nuclear" North Atlantic Treaty Organization states practice handling and delivering the U S nuclear bombs, and even non U S warplanes have been adapted so as to deliver U S nuclear bombs which must have involved the transfer of some technical nuclear weapons information. North Atlantic Treaty Organization states believe its "nuclear forces continue to play an essential role in war prevention, but their role is now more fundamentally political." (Hans M. Kristensen:2005)

NOTES.

1. Pokhran-II refers to the series of five nuclear bomb test explosions conducted by India at the Indian Army's Pokhran Test Range on May 1998. It was the second nuclear test since the first test, code-named *Smiling Buddha* conducted in May 1974.
2. After the *Pokhran-I*, the nuclear programme had struggled for years to gain credibility and its progress crippled by the lack of indigenous resources and dependent on imported technology and technical assistance.
3. The Indian intelligence had been aware of U.S. spy satellites and the American CIA had been detecting Indian test preparations since 1995; therefore, the tests required complete

secrecy in India and also needed to avoid detection by other countries, specially the *ISI*

4. News of the tests was greeted with jubilation and large-scale approval by the society in India.^[1] The Bombay Stock Exchange registered significant gains. Newspapers and television channels praised the government for its bold decision; editorials were full of praise for the country's leadership and advocated the development of an operational nuclear arsenal for the country's armed forces
5. By the time India had conducted tests, the country had total of \$44bn in loans in 1998, from IMF and the World Bank.^[18] The industrial sectors of the Indian economy such as the chemicals industry, was likely to be hurt by sanctions.^[18] The Western consortium companies, which invested heavily in India, especially in construction, computing and telecoms, were generally the ones that were harmed by the sanctions.^[18] In 1998, Indian government announced that it has already allowed for some economic response, but is willing to take the consequences.
6. The most vehement and strong reaction to India's nuclear explosion was from its neighbouring country, Pakistan. Great ire was raised in Pakistan, which issued a severe statement blaming India for instigating a nuclear arms race in the region. Pakistan Prime Minister Nawaz Sharif vowed that his country would give a suitable reply to the Indians.^[7] The day after the first tests, Minister of Foreign Affairs Gohar Ayub indicated that Pakistan was ready to conduct a nuclear test of its own. As he said: "[Pakistan] is prepared to match India, we have the capability.... We in Pakistan will maintain a balance with India in all fields," he said in an interview. "We are in a headlong arms race on the subcontinent."
7. U.S President Bill Clinton found the nuclear tests by India an affront to U.S efforts to prevent nuclear proliferation. He stated that he was "deeply disturbed by the nuclear tests," he

did not believe that such tests contributed to "building a safer 21st century" and added that "this action by India not only threatens the stability of the region, it directly challenges the firm international consensus to stop the proliferation of weapons of mass destruction.

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Chapter V

INDO-US NUCLEAR DEAL

5.1 Introduction

Indo-US nuclear relations of last six decades saw fundamental differences on nuclear issues. This conflicting situation jeopardized the bilateral relations for three decades. The Indian nuclear program was the result of the efforts made by H. J. Bhabha, a Cambridge-educated scientist, who was greatly inspired by Manhattan project of the US as a student and wanted to make India a nuclear power. Therefore, he established an institution known as 'Tata Institute of Fundamental Research' in India in 1944. After independence, Bhabha and other scientists persuaded Jawaharlal Nehru, first Indian prime minister, about fissile material as a potential source of energy. Nehru was also convinced that scientific community could speed up India's development by using atom for peaceful purposes enabling India to move from dung power to nuclear power. In 1948, Indian Atomic energy Commission (AEC) was established and Bhabha was appointed its first chairman. India wanted self-reliance in nuclear energy but it was not possible without foreign assistance. So British-designed research reactor APSARA was constructed in September 1955 and another reactor known as CIRUS was obtained from Canada in 1956. During these years, the US actively supported India under the Eisenhower's policy 'atom for peace' and helped in constructing nuclear power reactors (Tarapur) for civil nuclear energy and provided one ton of heavy water in 1956 for the CIRUS research reactor. During this period, nuclear scientists and researchers from India were also allowed to get education at American institutions and nuclear laboratories.(Cohen:2001)

5.2 Nuclear Non-Proliferation Treaty and Nuclear Debate

Indo-China border war of 1962 brought humiliating defeat for India, which reinforced strategic concerns and brought intensive debate over nuclear capacity. China exploded its first nuclear device in 1964 and became nuclear power, which was viewed by America as a threat and the latter intended to support India for nuclear capability. Being an idealist, Nehru refused to make India a nuclear power. However, it was widely assumed that China had retained conventional lead over India and that was hard case for New Delhi. After Chinese explosion in 1964, multilateral negotiations on nuclear non-proliferation began in Geneva in a Conference on Disarmament (CD). Ultimately Nuclear Non-proliferation treaty (NPT) was finalized in 1968. India participated in negotiations but did not sign the treaty calling it discriminatory. (Talbot:2004) India hoped that the NPT would work for general disarmament. But Article 6 of the treaty contains a weak promise about those states, which possess nuclear weapons. According to NPT “to pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament, and on a Treaty on general and complete disarmament under strict and effective international control”. This article was never taken seriously by nuclear weapon states (NWSs) and it was only a sop to the non-nuclear states, “more likely to be honored in the breach” Under the NPT, nuclear power of five permanent members of the UN Security Council was legalized as they gained this capability before 1967 and it forbade all other countries from becoming nuclear weapons states (NWSs). Article 9 of the treaty provided the definition of NWS as one which had conducted nuclear tests and built nuclear weapons before 1 January 1967 and others were defined as nonnuclear weapon states as they did not detonate nuclear devices (Epstein: 1976). In principle, nuclear ability was not the matter of division but evidence of explosive ability was the reason to determine the nuclear status of a state. This so called division produced a system of “global nuclear apartheid” as Indian negotiator V.C. Trivedi called it and

India remained an ‘underdog’ in nuclear order. This discrimination was alarming for India, which was wrestling to keep its nuclear option open. George Perkovich, a nuclear analyst commented that “the final version of the NPT was unlikely to offer security guarantee to India especially against China.”(Ibrahim:2007)

The NPT was enforced in 1970, while India, Pakistan, Israel and Cuba were no signatories. Contrary to the Partial and Comprehensive Test Ban Treaties (CTBT), which globally constrain legal mechanisms for slowing down and eventually halting the increase in nuclear weapons, the NPT was taken as a legal instrument for overcoming the inherent ambivalence in nuclear arena. It precluded the expansion of nuclear weapon technology beyond those states that had already achieved and tested nuclear capability. The NPT made no efforts to discourage the states to get nuclear weapons as source of prestige or power but froze the nuclear status quo effectively.(Ibrahim:2007)

5.3 India on the Road of Nuclearization

After the border war, anti-Chinese feelings were dominant among politicians and nuclear scientists in India. But the cost was the major issue for a poor country because of heavy estimates of the project. However, India received heavy military grants from the US and the Soviet Union after Sino-India border war of 1962. But the Indo Pakistan war of 1965 reduced American interests and the US dropped the subcontinent from its agenda. India could not obtain security guarantee from the US or the Soviet Union against hostile nuclear China. In this scenario, India was not ready to undercut its nuclear program and was reluctant to join the NPT. India pleaded that technology involved in preparation of nuclear weapons and peaceful nuclear device was the same, and technology in itself was not an evil. It did not mean that the poor and developing nations should keep away from technology due to fear of its use for military purposes.(P.Limay:1993) In May 1974, India detonated its first plutonium device named Pokhran-I in Rajasthan desert and became the sixth nuclear power in the world.

It was a weapon test but was portrayed as a “peaceful nuclear explosion” (PNE) due to Indian reservations during the NPT negotiations. The message sent to Indian Prime Minister Indira Gandhi by Indian scientists was that “the Buddha has smiled.” After this explosion, Indira showed her interest in a global approach to nuclear disarmament and repeated its rejection of the NPT on the ground that it was discriminatory (Talbot:2004)

India achieved the position to build a missile capability and moved to the deployment of nuclear weapons, starting it with defensive capability declaring a ‘no first use’ policy. Indira was facing political crisis and nuclear explosion was aimed at securing her shaky political position of that time. However, domestic political chaos remained, which led to the 1975-77 emergency and Morarji Desai, an idealist in approach rather than realist, became the prime minister of India. Desai was not interested in nuclearization but a few scientists remained busy in nuclear development. Most of the stringent instruments of the non-proliferation regime were enforced after nuclear test of 1974. After this test, President Carter made nuclear non-proliferation as the center piece of his foreign policy and singled out South Asia as an important target. By 1990, the US policy was mainly focused on proliferation. (Cohan:1998)

After several years of 1974 explosions, architects of the tests disclosed that these were nuclear weapons tests rather than “demonstration” of capability as Indira Gandhi commented. However, this statement exposed future designs of building nuclear weapons. Later, it came to know that it was not a political decision but to build nuclear weapons (Singh: 1985). Whatever were the reasons might be, its impacts on Indo-US relations were adverse and it took decades to recover. Canada was also victimized for providing CIRUS reactor to India and this reactor was utilized for production of plutonium that was used in explosive devices. The heavy water supplied by the US was used in these reactors. Condition of nuclear exports for nonnuclear- weapon states became problematic and Tarapur reactors were its victim, which were constructed by American firms for low-enriched uranium,

following the nuclear cooperation treaty of 1963 (Chari:2009). Moreover, Congress passed the Nuclear Non-Proliferation Act of 1978 (NNPA, P.L. 95-242). This Act was enacted to determine American nuclear relations with world community in legal terms. It was also to end cooperation with those states that had violated nuclear cooperation treaties with the US along with those states that detonated nuclear explosives (Limay, 1993). It brought tough policy regarding the US nuclear exports to non-nuclear-weapon states. This legislation was a unilateral attempt to alter the conditions of existing bilateral cooperation under nuclear policy.

In spite of that, the Carter administration issued an executive order to export two more uranium shipments and spare parts for Tarapur reactor but the Nuclear Regulatory Commission (NRC) did not issue an export license under the nonproliferation legislation. Congress voted against the executive order of the President (Rubinoff: 1992). The supply of enriched uranium for Tarapur was suspended but Desai gave a personal promise to Carter that his government would not pursue nuclear weapons and avoid nuclear testing (Limay: 1993).

Reaction of the international community was severe to the nuclear test of 1974. The NNPA 1978 had imposed a unilateral set of norms on nuclear trade but it was insufficient. The US took initiative to the formation of London Supplier Group for controlling nuclear proliferation and implementation of nuclear export control laws. Later it was renamed as the Nuclear Suppliers Group (NSG) and published its guidelines in 1978. This act allowed transfer of nuclear energy for peaceful purposes but with restrictions to control its diversion in nuclear explosive activities or nuclear fuel cycle unguarded. (Sathasivam: 2005) US commitment to nonproliferation policies is linked with its national interests as past practice indicates. It has mixed records on commercial and other strategic exports. It enacted legislation that restricted the export of nuclear-related material and technology to those countries that did not accept full scope safeguards under the authority of International Atomic Energy Authority (IAEA). India

refused to sign the NPT as well as to submit itself to IAEA. India also refused to accept the full scope safeguards. This inconsistency was also showed in the case of Pakistan, when the US ignored nuclear program for the cause of Afghan War of 1980s. Pakistan was acquiring nuclear capability without testing or declaring to become a nuclear weapon state. India alleged in 1987 and again in 1990 that it was under the threat from Pakistan and sought Indian security community to response it with embarking upon a nuclear program. India called both China and Pakistan as greater threats to security (Saeed: 2004) Indo-US relations remained cool and India became target of the US nuclear sanctions, which gave a blow to its civilian nuclear program. India blamed the US for providing covert nuclear capability to Pakistan during the Afghan War. It also alleged Washington of adopting double standard towards horizontal proliferation and ignored nuclear program of Pakistan and Israel, while castigated India and Cuba (Ibrahim:2007). This slack of policy turned India to the Soviet Union and both of them signed a treaty of “peace and friendship” in 1971 for 20-years. Other events that took place in this decade further strengthened this relationship. By the end of the 1980s, the US cut all nuclear exports to India applying the terms of the NNPA. France continued supply to India until adoption of a full-scope safeguards requirements. However, Russia supplied fuel to India from 2001 to 2004 (Palit:2001)

The dissolution of the Soviet Union ended the Cold War that was followed by the first Gulf War of 1990. Changing global scenario brought positive shift in Indo-US relations. Indian Foreign Secretary J. N. Dixit wrote in his memoirs about his visit to Washington in March 1992 that Congress “concentrated entirely on issues of nonproliferation and Kashmir.” Dixit had to face issue of non-proliferation during his meetings, which made him to reiterate that “India was absolutely firm about not signing the NPT” (Dixit: 1996). But this visit did not bring any positive development for Indian nuclear program. In 1993, transfer of cryogenic technology to India from Russia was prevented by the

US as it was against the MTCR. It also directed India to stop missile program. In fact, Indian missile and nuclear program were not only jeopardizing the regional security but also threatening the US military installation in Diego Garcia. The outcome of this activity created tension in Indo-US relation during this period (Palit: 2001)

South Asian Bureau (renamed as Bureau for South and Central Asia) was created in 1992 when the State Department reorganized its regional distribution. An assistant secretary was appointed to run this bureau. This office collected information through satellite images in December 1995, which showed that India was in position to test the nuclear weapons. American diplomats warned India that “a test would backfire against India” (Talbot: 2004). Indian Prime Minister Narasimha Rao cancelled the tests on American reaction (Ibrahim: 2007). President Clinton wanted to improve relations with India but “Indian refusal to join the NPT made it hard for the Clinton Administration to develop attraction with India”. During the visit of Narasimha Rao to Washington, the US mounted pressure on India to join multi-party talks as well as to constrain its ballistic missile programs but India did not change its stance and negotiations failed. This era also witnessed visits of First Lady Hillary Clinton along with cabinet officials including the Secretaries of Commerce, Defense and Treasury to India but even then little progress was made on the proliferation issue (Ibrahim: 2007)

In the post-Cold War era, a new mantra of global economy was dominating the world but non-nuclear states were assertive in their view that increasing aberration in international politics is due to nuclear weapons. International public opinion condemned France and China as they conducted ‘a final round of nuclear tests’ before signing the CTBT. A tussle between India and the US started when a review conference on the 25 years performance of the NPT was held in 1995. There was already a conflict over the CTBT in 1994 when the CTBT employed an unusual provision that all nuclear capable states should sign and ratify the treaty to come into force,

which single out India and a few other states. The provision was outlined in Article 14 and was pushed by Britain, Russia and China that might want to weaken the treaty for strategic reasons India conducted its nuclear tests in May 1998 and Pakistan followed it. The situation in South Asia changed where two states declared them as nuclear weapons states. It was India which took the lead and came under international pressure. The situation became critical as Washington and non-proliferation community showed high mistrust. Other major powers also shared these concerns and supported the UN Security Council Resolution 1172. China remained silent in the beginning but later joined its voice with others at the disclosure of a letter from Vajpayee to Clinton, in which he alleged China as India's main threat, which led India to conduct nuclear test (Rizvi: 2001). Indian Defense minister George Fernandes declared China as number one threat to Indian security in a speech on 2 May 1998. These statements evoked a negative reaction from China Indian Foreign Minister Jaswant Singh tried to reduce tension created by nuclear test as he was staying in Washington. He pleaded Indian case and became a little successful. During this period, Clinton's visit to India inaugurated a new era in Indo-US relations. Jaswant Singh and Strobe Talbott conducted eight rounds of discussions in different countries with hope to generate possibilities of better relations between the two states. Though these negotiations did not yield any agreement yet bring symbolic terms for both sides. The talks provided a foundation for future interaction and helped in clarifying their differences and created goodwill. Strobe Talbott wrote all these details in his book, *Engaging India: Diplomacy, Democracy and the Bomb*.

The change in situation was further confirmed by Clinton's visit to India which was widely ascribed as a path opening the new avenues of cooperation. In the changing scenario, after becoming nuclear power, India distanced itself from liberal internationalism, considering ethical norms and morality as the weapons of the weak states. It indicates a desire to change the rule of global order suitable to its future plans. (Basu: 2007)

5.4 Development towards Strategic Partnership

Since 1990s, the US Defense Department was working with India for better and functional relations in areas other than the nuclear dimension. One reason of this development was India's growing economy and importance in the new century. Here the question arises whether the improvement of bilateral relations was due to nuclear issue. Rejecting this viewpoint, New Delhi alleged that restricted access to dual-use high technologies was hurdle in its nuclear development due to certain historical and political reasons, which were cornerstone to this issue with the US. Keeping it in view, India assumed that there were no clear American statements or approach to legitimate Indian nuclear program outside the non-proliferation framework. To change the situation and overcome the Indian mistrust regarding American intentions, key players of both countries made efforts to improve the situation addressing the nuclear issue directly. Improvement in bilateral relations was possible by accepting the Indian nuclear program with Indian strategic importance and identification with international status. The US discarded its prudent and put aside nuclear concerns and nonproliferation consideration for the sake of a new strategic alignment.

Factors: Seeking a Strategic Partnership between the US and India

Inauguration of the "new world order" and emerging as the sole superpower were perceived an American victory but this brought strategic uncertainties due to shattering of bipolarity. It also enhanced the intrusive presence of China and the US in the South Asian region and both of them attempted to maintain strategic balance. This scenario brought close ties between India and the US. Both countries explored certain areas of convergence of interests at political and strategic levels that supported in building a strategic partnership for gaining certain goals: These are:

- The United States has vital strategic interests in the world's largest reserves of energy lying in the Middle East, Gulf region and South Asia. India occupies the strategic location linking the Indian and Pacific Oceans.
- Other common value is "the freedom of the high seas" and more specifically the sea-lanes emanating from the Hormuz Straits and branch out in the West and East. The US military presence in this area has been strengthened by occupying the base facilities, particularly in South Asia.
- Chinese military power in the Asia Pacific is a challenge to the US dominance. This region has the largest reserves of energy in the world. India also perceives China as a security threat to its vital interests because it is becoming a more powerful by the passage of time with its preponderance of nuclear weapons and military might. Chinese assistance in missile development has strengthened Pakistan in South Asia.
- In international relations, geo-economics and geo-strategic considerations are very crucial and partnerships in enhance the strength of the nations. The US and Indian strategic partnership is inevitable as it is increasing relations and economic interests. For India, the US provides important, dynamic and strategically rich options to counter the emerging threats in the region (Kapilia: 2006).
- All above-mentioned factors led both countries to seek a strategic partnerships as a ladder to access the wider field of cooperation as compared to erstwhile allies of the Cold War relationships. Authoritarian regimes and dictatorships are not in the position to provide the US with the sinews to counter new global challenges. The US chose India to face these challenges as both are democracies, where change of government is peaceful and economic growth is assured.

5.5 Next Steps in Strategic Partnership (NSSP)

India has been seeking foreign aid to develop nuclear infrastructure for energy requirements since late fifties. Its pioneer founder of nuclear program, Homi Bhabha predicted that “by 1987 nuclear energy would constitute 20,000-25,000 megawatts of installed electricity-generation capacity.” His successor Vikram Sarabhai claimed that by 2000 India would be able to generate 43,500 megawatts of nuclear power but estimation of both scientists was not accurate. The cold hard facts remained and 3,300 megawatts nuclear power was generated, which was 3% percent of installed electricity capacity. In India, 4% electricity is generated by wind energy. The government has planned to produce 10,000 megawatts by 2010, 20,000 megawatts by 2020 and 150,000 megawatts by 2050 (Mohammad: 2006).. These claims appeared surreal showing India’s past record of energy production and existing infrastructure. To achieve this target, India required nuclear expertise, cheap materials to produce clean energy, advance technology and improvement in Indo-US relations to fulfill this dream.

Under the new relationship of ‘natural allies,’ a term used by Vajpayee in 2001, India strengthened its case for gaining cooperation in all types of energy needs, particularly nuclear energy. To materialize this cooperation, negotiations were long but hopeful and ultimately an agreement was signed in January 2004 known as the “Next Steps in the Strategic Partnership” (NSSP). President Bush announced it and Vajpayee endorsed it. It included “expanded cooperation in three areas: civilian nuclear activities, civilian space programs, and high-technology trade. In addition, it was suggested to expand dialogue on missile defense” (Fact Sheet: 2004). First phase of this agreement was completed in September 2004 assuring compliance with American export controls and addressing proliferation concerns. The Bush administration removed bulk of technology sanctions from India after concluding the NSSP. This agreement was one of a few foreign policy successes of the Bush administration. Indian lobbyists and pressure

groups also played role. For both countries, military and economic interests were important but former were driven by executive orders while the latter were mostly lying outside the governments' access and would not be much beneficiary. India became a strategic partner and it was beginning of new era. The US National Security Strategy 2002 defined the contours of this partnership and stated that "the United States had undertaken a transformation of its bilateral relationship with India based on a conviction that US interests require a strong relationship with India" (Bush: 2002).

5.6 The Strategic Dialogue between Bush and Manmohan Singh

George W. Bush won the second term of presidential elections in 2004 and continued consistency in his foreign policy. Strategic dialogue with India touched the next level. To accomplish this task, three high bilateral visits were made. Condoleeza Rice arrived in New Delhi in March 2005 and Manmohan Singh arrived at Washington in July 2005. In March 2006, President Bush came to India. Condoleeza Rice brought an outline of the Grand Strategy of the Bush administration for India. She shared with Manmohan Singh that the "US was willing to help India to become a major power in the 21st century" and assured him of American cooperation to India (Balachandra:2005). The 10-years Defense Framework Agreement was signed for mutual cooperation in different areas of security. Agreed Minutes were already signed in 1995. Ending the three decades of opposition to Indian nuclear program, the US made civilian nuclear cooperation as the centerpiece of its policy. India availed of the opportunity and took full benefit of the American offer. This event shed the burdens of the past and brought dawn of a new era. The agreement was announced on 18 July 2005 during the Prime Minister's visit to Washington and India was taken as a "responsible state with advanced nuclear technology." In the joint statement, President Bush announced partnership with India by noting the significance

of nuclear energy for providing cleaner and better environment” (Joint Statement..., 2005).

President Bush expressed his desire to work for gaining full civil nuclear energy cooperation with India. In this connection, Congress required to adjust the US laws and policies. The joint statement expressed that the US “will work with friends and allies to adjust international regimes to enable full civil nuclear energy cooperation and trade with India.” The US showed a reversal in its position. Prime Minister Manmohan Singh conveyed that India “would take the same responsibilities on NSG and practices and acquire the same benefits and advantages as other leading countries with advanced nuclear technology, such as the United States”. Both sides decided to take reciprocal steps to materialize their nuclear cooperation. India agreed to:

- identify and separate civilian and military nuclear facilities and programs in a phased manner and to file a declaration of civilian facilities with the International Atomic Energy Agency (IAEA);
- voluntarily placing civilian facilities under the IAEA safeguards;
- signing of an Additional Protocol for civilian facilities;
- continuation of its unilateral nuclear test moratorium;
- refraining from transferring enrichment and reprocessing technologies to states that do not have them, as well as to support global efforts to limit their spread;
- working with the US to conclude a Fissile Material Cut Off Treaty (FMCT); and
- working to secure nuclear materials and technology through comprehensive export control legislation and through harmonization and adherence to Missile Technology Control Regime (MTCR) and NSG guidelines (Albright and Basu:1998)

5.7 Significance of the July 2005 Agreement

The July 2005 joint statement was examined at different levels by experts, think tanks, politicians and commentators of media in both countries. There were a few reservations on different areas. Politically, agreement of July 2005 had the most important and far-reaching impacts. It established Indian relationship with the US without excluding Treaty of Friendship and Cooperation of 1971 between India and the Soviet Union. India was recognized as a de facto nuclear power and there was possibility of American favor for becoming a global power and permanent membership in the Security Council with veto power (Mansingh: 2006). This agreement removed thirty years old technological sanctions and provided multi layered cooperation of powerful economy of the world. It also offered energy options in nuclear area and made it a viable source for Indian flourishing economy. Strategically, this agreement was an enormous global leverage for India being partner of the US. It ensured India's security in its neighborhood vis-à-vis Pakistan and China. The US amended its domestic laws and tried to accommodate India by persuading the members of the NSG to resume nuclear cooperation and trade with India. President Bush toured India in March 2006 and both leaders issued a joint statement that was an outcome of new relationship. It was evidence of India's commitment for pursuing its strategic goals. From nuclear energy aspect, the deal was "an effort to strengthen India's ability to expand civilian nuclear energy and to contribute its large and rapidly growing electricity needs, rather than a closet 'atoms for war' effort that would have the effect of covertly accelerating the growth in India's nuclear arsenal"(Tellis: 2007). Rice said in her testimony of Senate Foreign Relations Committee that "Civil nuclear cooperation agreement with India will help meet its rising energy needs without increasing its reliance on unstable foreign sources of oil and gas, such as nearby Iran" (Tellis: 2007).

5.8 Signing Statement and Initiatives of President Bush

The House of the Representatives agreed on 8 December 2006 to the conference report and passed the “Henry J. Hyde United States-India Peaceful Atomic Energy Cooperation Act of 2006” gaining 330 votes out of 359. On December 9, 2006, the Senate also extended a “unanimous consent” to the conference report and President Bush signed the bill and it became law on 18 December 2006. On the occasion of signing the bill, President Bush showed hope of strengthening the strategic relationship between the two countries. About particular provisions, it was stated that executive branch would construe two sections of the bill as advisory, one is about policy statements of Section 103 and other is the constraint of Section 104 (d) (2) for sending items to India that are out of the NSG guidelines. On the signing ceremony, it was also pointed out that the “executive branch would construe provisions of the Act that mandate, regulate, or prohibit submission of information to the Congress, an international organization, or the public, such as sections 104, 109, 261, 271, 272, 273, 274, and 275, in a manner consistent with President’s constitutional authority to protect and control information that could damage foreign relations, national security, the deliberative processes of the Executive, or the performance of the Executive’s constitutional duties.” The agreement strengthened the authority of the President “to waive the full-scope safeguards requirement for civil nuclear cooperation with a non-Nuclear Weapon State under the Atomic Energy Act of 1954.” It also reaffirmed the US policy to control the enrichment and reprocessing technology by reiterating its commitment to the NPT by expressing its plan to strengthened nonproliferation around the world.(Squassoni:2007)

A joint resolution of Congressional approval was required to come into force with seven requirements. These are:

- approval from Board of Governors of IAEA for agreement of nuclear safeguards;
- substantial progress for concluding an Additional Protocol;

- Indian support to conclude a treaty to ban fissile material production for nuclear weapons;
- standing with international community to prevent the transfer of sensitive nuclear technologies, particularly for enrichment and reprocessing purposes;
- Controlling nuclear, sensitive materials and technologies by taking necessary steps including adherence to NSG and MTCRV and other multilateral control regimes;
- preparation of a separation plan for Indian nuclear facilities; and to make India an exception, a consensus decision is required by the NSG

5.9 Consultation with Congress and Agreements for Cooperation

The US concluded bilateral agreement for peaceful use of nuclear power that required provision of existing law. Atomic Energy Act of 1954 was amended by NNPA Act of 1978 to include “among other things, a requirement for fullscope safeguards for significant nuclear exports to non-nuclear weapon states.” The main issue is the full-scope nuclear safeguards with fulfillment of its requirements. Its three provisions are about its restrictions. Section 123 of the AEA is to approve the treaty for cooperation. Section 128 is to get license for nuclear exports and last is Section 129 that requires eliminating nuclear export in case of a NNWS that is testing nuclear devices or nuclear weapon program is working without fulfilling required steps for such activities. India has neither signed the NPT nor adopted the safeguards. Another reason is its nuclear weapons program that precludes it to adopt full-scope safeguards. (Bidwai: 2007).

The requirements in Section 129 prohibit exports to a those states that conducted a nuclear test after 1978 and are listed as NNWS while made several nuclear explosions in 1998 (Atomic Energy Act of 1954, 2000). Section 123 of the AEA (42 U.S.C. 2153) specifies conditions, which are required to enter into nuclear

cooperation. The US has concluded 123 agreements with 24 countries up to this time and India contains last number. Both Congress and the President felt that agreement required to be headed and governed by “India-specific US Act or the Hyde Act,” a specific law. The US had already an agreement with India, which was signed in 1963 and ended in 1993. Such agreements are called “framework” agreements that never provide guarantee for cooperation or transfer of nuclear material, but determine the terms of reference and extend authority for cooperation. The US-India treaty of 1963 was strange in its nature as it facilitated Tarapur reactors for fuel while other US nuclear cooperation agreements never included such guarantees (US General Accounting Office: 1985).

In October 2008, despite passing more than three years, the deal had yet to become a “Done Deal”. After passing the Hyde Act in December 2006, Congress gave a free hand to India. Later in March 2007, the 123 agreement was finalized. There are three hurdles to be crossed, at first step India has to negotiate its specific safeguards with IAEA. The second is for the US to persuade NSG to amend its guideline and made India an exception to its mandate. Finally, the US Congress had to pass the 123 agreement to incorporate the IAEA and NSG requirements (Chari:2009)

In Indian case, the most difficult step is to meet full scope safeguards’ requirements that are compulsory due to India’s status of non-nuclear weapon state under the rules of NPT, as it tested nuclear device after January 1, 1967 Under the law, the President has the authority to exempt any requirement of Section 123a. The exempted treaty would not enforce “unless the Congress adopts, and there is enacted, a joint resolution stating that Congress does favor such agreement” (Export Administration Act of 1985). It indicates that compulsory approval from both the houses of Congress is necessary for the agreement even if it does not fulfill requirements of the Section 123 a. Congressional approval of an agreement would exempt the concerned state that has not adopted full-scope safeguards (Section 123 a. (2)) by waiving the Nuclear

Regulatory Commission's (NRC) "obligation for full-scope safeguards as an export license authorization criterion under Section 128." However, ultimate authority rests with Congress to review export license authority annually after execution of the agreement.

5.10 Separation Plan for Civilian and Military Facilities

In March 2006, both the countries agreed on separation plan. The key points of this separation plan are:

- Eight indigenous Indian power reactors will be placed under an India specific safeguards agreement, the total number of power reactors is 22 and 14 will be brought under safeguards (6 are already under safeguards).
- Future power reactors would be placed under safeguards, if India declares them as civilian. Some facilities in the Nuclear Fuel Complex e.g., fuel fabrication will be specified as civilian in 2008.
- Nine research facilities and three heavy water plants would be declared as civilian.
- The following facilities and activities are outside the separation list:
 - Eight indigenous Indian power reactors
 - Fast Breeder Test Reactor (FBTR) and Prototype Fast Breeder Reactors (PFBR) under construction
 - Enrichment facilities
 - Spent fuel reprocessing facilities (except for the existing safeguards on the Power Reactor Fuel Reprocessing (PREFRE) plant
 - Research reactors: CIRUS (which will be shut down in 2010), Dhruva, Advanced Heavy Water Reactor
 - Three Heavy water plants

- Various military-related plants (e.g., prototype naval reactor) (Squassoni: 2007). Apart from this, the US suggested India to place its FBRs under safeguards either current or future. About FBRs, India claimed to prepare with domestic test program, still in its initial stages and not in a position to be declared as civilian. India has planned to use FBRs for fulfilling energy needs in future to cover deficiency of natural uranium with vast thorium reserves that are found in India (Sudarshan: 2006).

Indian scientists feel fear of disclosure of their indigenous research by placing FBRs under safeguards that would bring external inspections and India's intellectual property rights may be diluted over this new technology in case of monitoring of every process and stage of Indian research laboratories (Malik and Kanwal: 2006). The Chairman Atomic Energy Commission Kakodkar commented, "FBRs' declaration would harmful to Indian weapons program". Nuclear experts are wellaware that origin of the FBR technology is in France and Indian claim of ingenuity is not reliable. Some Indian scientists objected on American insistence for bringing maximum number of nuclear facilities under safeguards as an attempt to control Indian fissile material production. It was strongly resisted by the Indian Atomic Energy Commission and Prime Minister Singh also supported his scientists' viewpoint and refused to accept safeguards on indigenous fast breeder program. He said, "We have taken into account our current and future strategic needs and programs after careful deliberation of all relevant factors, consistent with our nuclear doctrine. There has been no erosion of the integrity of our nuclear doctrine, either in terms of current or future capabilities...it will be the autonomous Indian decision as to what is 'civilian' and what is 'military'. Nobody will tell us what is 'civilian' and what is 'military'... the number of thermal nuclear reactors that India would agree to put under civilian list would be equal to 65% of the total installed thermal nuclear power capacity.

Commenting on Singh's statement in his testimony before Senate Foreign Relations Committee, Gary Milhollin labeled this offer as

“a counterfeiter with a 22 room house, which offers to let the police look into 14 rooms as long as they stay out of all the others. It is open secret that 8 undeclared will make the bomb” (Milhollin, 2006). India succeeded in keeping the FBRs out of the civilian list, which was a great concession as Perkovich commented, “This is Santa Claus negotiating. The goal seems to give away as much as possible” (Weisman: 2006). According to an IAEA explanation, since 1974, the duration of INFCIRC-66 type agreements is linked with actual use of transferred items, rather than a fixed time, which would help in lifting safeguards on the reactors if they are no longer using safeguarded material (Squassoni, 2007). It is perceived that this was due to violation of using peaceful nuclear technology for nuclear weapons purposes at the time of Indian nuclear tests of 1974. The Bush administration confirmed, “Any items sent to India would be subject to safeguards, and implementation of the Additional Protocol that would provide further assurances of the non-diversion of such items or material.” The Indian officials assured of adopting voluntary safeguards arrangement like NWSs strictly. (Gilinsky and Leventhal: 1998). The Bush administration emphasized that “India’s separation plan must be credible, transparent, and defensible from a nonproliferation standpoint, and safeguards must contribute to nonproliferation goals.” For some analysts, if all power reactors that supply electricity would list as civilian in terms of their civilian use then separation plan may not appear reliable. In the past, CIRUS, a reactor for peaceful nuclear use, produced plutonium for nuclear weapons. Secretary Rice opined that “more reactors under safeguards mean more transparency, more physical security, better nuclear safety, and therefore increased safety for the United States” (Rice, 2006). The enrichment, reprocessing plants, and breeder reactors under safeguards would support the National Security Strategy 2002 for combating weapons of mass destruction as the US pledged to “continue to discourage the worldwide accumulation of separated plutonium and to minimize the use of highly-enriched uranium”.(Gilinsky and Levanthal:1998)

5.11 Evolution of Indo-U S Nuclear Deal

The Indo U S Civil nuclear agreement has been also known as the Indo U S nuclear Deal which has been referred as a bilateral deal on civilian nuclear co operation between the USA and the Republic of India. The framework for this deal was on July 18 2005 in a joint statement that has been issued by the then Indian Prime Minister Man Mohan Singh and the then U S President George W. Bush under which India agreed to separate its civil and military nuclear facilities and place all its civilian nuclear facilities under the watch of International Atomic Energy Agency (IAEA) safeguards and in exchange, the U S agreed to work with India towards a fully functional civil nuclear co operation with India. The U S - India deal had took more than 3 years, to come to a reality as it had to go through multiple complex stages that includes amending some of the U S domestic law, as well as civil military nuclear separation, plan in India. This deal has been seen as a new opening in U S India relations and also introduces a new aspect into international non proliferations efforts. First in order to introduce the joint statement which was released by President George W Bush on the month of July 18 2005, the deal is also entitled to lift a 3 decade U S sanctions on nuclear trade with India. This provides US assistances to Indian civilian nuclear energy programs and also to expand U S - India co-operation in the field of energy and satellite technology. (Nilova Ray Chaudhary:2007)

Terms of the Deal

The comprehensive details about the deal include the following. India has agreed to allow the inspectors from the IAEA, the U N nuclear Watch Dog group, have complete access to its civilian nuclear programs. India has also promised to place 14 of its 22 civilian nuclear power reactors under IAEA safeguards permanently. India has also promised that all future civilian thermal and breeder reactors shall be placed under IAEA safeguards permanently.

1. India commits to sign in an additional protocol which allows more intrusive IAEA inspections of its civilian facilities.
2. India agrees to continue its moratorium on nuclear weapon testing.
3. India commits to strengthening the security of its nuclear arsenals.
4. India works toward negotiating a FMCT with the U.S.
5. US companies will be allowed to build nuclear reactors in India and provide nuclear fuel for more of its civilian energy programme. (Annapurna Nautiyal:2006)

5.12 U.S Objectives and Interests

The move of the U S president George W Bush's administration concerning the nuclear deal is being termed as an unusual one because of the nuclear relationship crisis between both India and the U S has historically been one of the prime factors responsible for India's problematic relations with the U S, Interestingly, India, which is now currently being lured and being pressurized by the United States sanctions, pressure and consequent denial of high technology because of its military based nuclear program, and its decision to not to sign the highly discriminatory Non nuclear proliferation treaty. Since India had already developed most of it's nuclear program indigenously, therefore, India has always against the International Atomic Energy Agency guidelines on nuclear safeguard, control and inspection systems in its nuclear plants.(C.Uday Bhaskar:2007) Due to this India not only lacked access to the International Atomic Energy Agency trade, but also found it Very difficult to get the supplies that are needed for running its nuclear power plants which have always been considered as very crucial in meeting India's energy needs. Ironically, India's nuclear program like the program like the prestigious Indian Institutes of Technology (IIT's) was initiated with U.S. help. The U S policy has always moves at aiming to enable India to overcome obstructions for its Wide range of global

aspirations that were seen as very important matter for U S interests in the post-Cold War era of changing the priorities in the region and also developing a number of new alliances and friendships. As these moves, especially after the 9/11 counter terrorist attacks initiated by U.S. policy, were not only unexpected and unusual but took the majority of think tanks and policy analysts by surprise. Though a long historical legacy of bitterness, uncertainties, distance and differences among the world's oldest and largest democracies was not that easy to overtook, yet the civil nuclear deal, despite the inherent controversies, has certainly opened a new vista for the relationship between India and the United States. (Neil King Jr.:2007)

5.13 Objectives and Interests of India

India came out the major beneficiary by signing this deal with the U S. This has been considered as a remarkable achievement for India to expand its nuclear program in its domestic terrain. The Indo US nuclear 'deal would greatly increase the Indian capacity of developing more and more nuclear warheads, since it provides complete assurance on uninterrupted nuclear fuel supply. Because of this nuclear deal, India had become the one and only country in the World with the de-facto nuclear status despite of the fact that India is not at all a signatory of Non Proliferation Treaty (NPT). While commenting the significance of the nuclear deal Prime Minister Man Mohan Singh said, "The agreement would not hinder or otherwise interfere with India's nuclear activities, including our military facilities." One of the former senior Indian intelligence official reaffirmed when he said that "the assurance of nuclear fuel supply from the U S and the Nuclear Suppliers Group would free India's existing capacity to produce highly enriched uranium and plutonium for its nuclear weapons program. Under the deal, India will get the capacity to produce 50 warheads a year." The Indo U S nuclear agreement will improve India's nuclear arsenal quantitatively as well as qualitatively. Moreover, the deal does not have any other provision which cannot force India to give up its

right for nuclear testing. Similarly, India has not agreed to sign the Comprehensive Test Ban Treaty (CTBT). (Neil King Jr.:2007)

Conclusion

When the whole nuclear deal is viewed under the limited options for other sources of energy and also the pressures from international community for using clean energy sources on account of the threat of global warming there has been a little choice left for India because of its isolation in international relations. Since India willingly imposed a moratorium on more nuclear tests after the 1998 series of nuclear test, and therefore the acceptance of the civilian nuclear deal would only assist India in its economic growth and use also its full economic potential, India would also have to move forward and clutch the nuclear deal. As an independent nation India has always been maintained its freedom of action and kept an independent foreign policy. Because of this any pressure on India would be seen as a compromise in its democratic standard which will affect its concerned citizens. Actually, in the recent weeks in which, a dramatic situation has been witnessed in the Indian political arena with the political parties of India being divided into clear different camps. Among the Indian political parties there raised many supporters and non-supporters to the Indo U S civilian nuclear deal. This scene began to take shape with the Manmohan Singh led UPA government's decision to go further to the International Atomic Energy Agency and the Nuclear suppliers group to fulfill the complete requirements to make the deal a reality, and even the left parties began to withdraw their support from the ruling government. This situation left the political ground open to all sorts of pressures. India had to witness an ugly political scene where not only the Congress led UPA government received support from unexpected quarters, but allegations were also made that in the parliament about how the money changed hands to sustain and save the government. The doubts on the stability of such sort of government was in the air which is survived by using every possible tactic are still being raised. However it is also

assumed that when the government has been passing the hurdles for sustaining the confidence motion, it would be able to move further in time to actually finalize the nuclear deal before the U S goes to the election mode, and to ensure the economic growth of the U S through the way of nuclear energy. It is still a turbulent situation because the time constraints could also decide the fate of the nuclear deal. In view of the several complications, problems and dilemmas, therefore, India not only needs to tread this path cautiously, but also walk the tightrope of progress and growth with confidence and control.

NOTES.

1. The Indo Us Civilian nuclear agreement also known as the Indo Us nuclear deal refers to a bilateral accord on civilian nuclear co — operation between the United States of America and the Republic of India. The framework for this agreement was a July 18 2005 joint statement by Indian Prime Minister Man Mohan Singh and US President George W. Bush under which India agreed to separate its civil and military nuclear facilities and place all its civilian nuclear facilities under International Atomic Energy Agency (IAEA) safeguards and in exchange, the United states agreed to work toward full civil nuclear co-operation with India.
2. The deal is seen as a watershed in U.S India relations and introduces a new aspect into international non-proliferations efforts. First introduce into the joint statement released by President Bush on July 18 2005, the deal lifts a 3 decade U.S. moratorium on nuclear trade with India. It provides U.S. assistances to India's civilian nuclear energy programs and expands U.S.- India co-operation in energy and satellite technology.
3. Robert Blackwill, the former US Ambassador to India, contents that the deal would make a major contribution towards in mitigating India's energy deficits, which would

otherwise undermine its efforts to reach an eight percent GNP growth rate over the next two decades, and bring hundreds and millions of Indians out of abject poverty

4. The US ambassador to India, David Mulford, contends that the deal is an “answer to India’s long term energy problems” Critics, however, argue that importing high- priced reactor dependent on imported fuel makes little economic or strategic sense.
5. Under the new civil nuclear agreement, India has agreed to separate its civilian and military programs and to put two-thirds of its existing reactors, and 665% of its generating power under international safeguards for verification. In return, United States will supply nuclear fuel and technology to India.
6. India came out the major beneficiary of this deal. This is a remarkable achievement for India to expand its nuclear program. The Indo-US ‘deal would greatly enhance the Indian capability of developing more nuclear warheads, as it provides assurance on uninterrupted nuclear fuel supply.
7. As the result of the deal, India became the only country of the World with the de-facto nuclear status despite of the fact that India is the non signatory of Non-Proliferation Treaty (NPT).
8. The Indo-US agreement will improve India’s nuclear arsenal qualitatively as well as quantitatively. Furthermore, the deal does not have any provision which can allow India to give up its right for nuclear testing. Similarly, India has not agreed to sign the Comprehension Test Ban Treaty (CTBT).
9. Though President Clinton’s visit to India in March 2000, the first undertaken by any U.S. President after a gap of 22 years, promoted the movement of relations with India and removing acrimony in their relationship, instead of putting pressure on the nuclear issue, preferred to adopt some other methods to bring India under the nuclear regimes. The nuclear agreement intimated during Indian Prime Minister Man Mohan Singh’s

visit to the United States in July 2005, and finalized during President Bush's visit to India in March 2006, was therefore termed as exceptional and unique because it was with a non-NPT signatory country and U.S. law prohibits any agreement with the countries that refuse to follow the guidelines of the IAEA, and thus not sign the NPT

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Chapter VI

U.S NUCLEAR POLICY TOWARDS SOUTH ASIA UNDER OBAMA

For the first time since the end of Cold War, the top priorities for American nuclear policy put Pakistan in the spotlight. The Obama Administration realized that the nuclear security environment within and around Pakistan is of significant concern to the United States. During the Cold War, the United States worked with Pakistan to meet common security challenges in Afghanistan and the region. But the advent of Non- State Actors in the security dynamics of South Asia, especially in Pakistan forced the United states to a new look at its nuclear strategy. United States realized that Pakistani territory and the surrounding region emerged as a hot spot for the sub-national radical Islamist groups that oppose the United States and its allies. Pakistan's limited and tenuous control of much of its territory, the growing strength of radical Islamist groups in Pakistan, the poor state of Pakistan's economy, and ongoing political turmoil among Pakistani political elites all undermined Pakistan's ability to effectively control radical Islamist elements and to ameliorate growing environmental, economic, and other stresses. Pakistan's status as a nuclear weapon state, its traditional enmity with India, and proximity to Afghanistan and the West Asian region all heighten its importance to U.S. strategic interests.

When President Barack Obama launched his new strategy on Afghanistan and Pakistan in Washington in late March 2009, there was a reinvigorated interest in the regional dimensions of the problem. The Bush administration had a rather myopic view on the role of Pakistan's neighborhood: it was one issue and one country

at the time, in contrast to the more comprehensive perspective that Obama announced. In 2009 President Obama emphasized the importance of the region and his willingness to work with all parties, to stabilize Afghanistan and to prevent Pakistan from imploding. The appointment of Richard Holbrooke as US Special Representative to Afghanistan and Pakistan came with strong signals of a regional turn. The most concrete measures suggested in the March 2009 White Paper were a regional Contact Group and a new forum for security and economic cooperation, neither of which has come to existence by late 2010. For over three decades, Afghanistan has been a battleground in which many of the states of the larger neighbourhood have been involved. The importance of fostering a concerted effort for Afghan peace and stability is increasingly agreed upon. Some analysts emphasize states and their security relationships and see Afghanistan as an insulator caught between different regional state systems, each with a strong dynamic of their own. An alternative perspective which also seems to inform the new US analysis emphasizes various transnational networks, and sees Afghanistan as the core of a larger conflict formation.

6.1 Post Cold War Era and Shift In Us Strategy

The end of the cold war dramatically changed the nature of international relations by ending superpower patronage of local combatants. Foreign policy of many powers had undergone dramatic changes. This change is more visible in U.S. policy towards South Asia, especially the American approach towards Pakistan. In fact the transformation of the global order in general and the changes in the foreign policies objectives of the major powers in particular have influenced the nature and quality of the relationship with the vast majority of the developing countries. The restructuring of the U.S. global strategic agenda has left a great impact on Pakistan. The fact is that Pakistan's relevance to U.S. global interest has diminished significantly (Hagerty :1996). It is evident from the application of the Pressler Amendment to

Pakistan in October 1990, when the U.S. President refused to certify Pakistan's nuclear programme as peaceful. Many factors influenced Washington's approach towards Pakistan (Arnett: 1997). During the cold war Pakistan became the 'frontline' state for furthering U.S. interests in South Asia and Middle East. In the early 1980's Pakistan's importance for the United States increased in view of the Soviet invasion in Afghanistan, the anti-US Islamic revolution in Iran and the Indo-Soviet economic and security co-operation, Islamabad assumed a centre stage against the US activities against the Soviet in Afghanistan. In addition, it was included in the security consensus in the Gulf along with Saudi Arabia and US to enable the oil rich Arab Gulf states to defend themselves against the threat of Islamic fundamentalism. The collapse of the Soviet Union drastically changed the conditions that had made Pakistan relevant to US global policies. Simultaneously, India began to project the compatibility of Indo-US security and economic interests in the South Asian region. It is interested in developing a multi faceted partnership with the U.S (Koshy: 2005).

In the post-cold war international environment Pakistan finds itself less relevant to U.S. foreign policy objectives. It is seen as a supporter of Islamic fundamentalism and a serious violator of the nuclear non-proliferation norms. The U.S. concerns over international terrorism and nuclear proliferation effects three areas of Pakistan's interests: Afghanistan, Kashmir and its nuclear programme. The issue of nuclear proliferation occupied the prime agenda of the Clinton administration. Pakistani nuclear strategy was its supreme-priority because of the fluid political situation and its growing nexus with Islamic militant organization. The Clinton administration took several steps to force Pakistan to adopt a nuclear restraint regime in South Asia (Rajan: 1991). In the 1980's, the US overlooked Pakistan's nuclear programme due to their common concern against the Soviet Union. However, Pakistan did assure the US that it would neither detonate a nuclear device nor transfer nuclear technology to any other country. In December 1981, the U.S. Congress approved an aid for Pakistan by waiving

application of the Symington amendment for six years. On the expiry of this period, the waiver was extended for another two and a half years(Hassan: 1995). A broader policy consensus on how to drive the Soviet Union out of Afghanistan overshadowed the U.S. non-proliferation agenda. This created an impression among the Pakistani nuclear establishment that its covert nuclear programme could not be a serious impediment in developing the strategic relationship with the United States. But the demise of the cold war and the Soviet withdrawals from Afghanistan forced the United States to refocus its nuclear non proliferation goals in South Asia, especially towards Pakistan. Pakistan also adopted a new policy for pursuing its nuclear agenda. They adopted a new nuclear strategy by using the nuclear card in its confrontation with India in the 1990 crisis (Duranti: 2001). This led to a hasty intervention by the U.S. and the other western powers, pressuring both New Delhi and Islamabad not to escalate their confrontation.

The new nuclear strategy proved successful. Thus the crisis of 1990 was a watershed event in Pakistan's national security strategy. Nuclear weapons were no longer considered merely a trip wire of last resort in the case of a major invasion of the country. Instead nuclear weapons became a key to Islamabad's assertive strategy of escalation of the struggle in Kashmir under a nuclear umbrella restraining Indian retaliation. In 1991, Islamabad considered the New World Order advocated by the U.S. and especially in the call for non-proliferation, a strategic threat to its independence. The new world order does not allow any country in the third world except the American surrogates to possess nuclear weapons(Dunn: 2000). Fully aware that no single country can confront the U.S. on its own, Islamabad stressed the growing significance of nuclear and military co-operation with other radicals as a profound issue of confrontation with the U.S. Islamabad acknowledged that "Peoples Republic of China and North Korea have been supplying Iran and other Muslim countries with medium range missiles and nuclear technology for peaceful purposes. This co-operation now strengthened as the source of

strength for Islamabad's defiance against U.S. pressures, for any alternative would be detrimental to the future of Islam. The Pakistani establishment believed that, if Pakistan surrenders before the Americans with respect to the nuclear programmes, there will be no limit for such a surrender, because the American's endeavour to demolish Pakistan's military power and make her a banana republic so that the Muslim world should be enslaved by the U.S. imposed world order"(Bodansky: 1995).

It was in this context of this strategic perception that the Pakistan military nuclear capabilities were finally admitted officially. On 21 October 1991, Pakistan, for long a known yet not an acknowledged nuclear power, crossed the line and created a precedent. In a Karachi meeting, Dr.Abdul Quadeer Khan, the father of Pakistan bomb, officially acknowledged that Pakistan was a nuclear power(Ziring:2005).Subsequently, the nuclear factor has become a clear and critical factor in the Pakistan national strategy, especially vis-à-vis India and the United States. The United States followed a tough posture towards Islamabad following this development. The U.S. administration could no longer make the certification required by the Pressler Amendment, and the United States military assistance came to a sudden halt. No future contracts could be signed, and all of the equipment already in the pipeline was placed on hold. Besides the F-16 fighter aircraft the equipment included three U.S. Navy P-3C military aircraft, 28 Harpoon surface – to – surface missiles, 360 AIM-9 L "sidewinder" air – to – air missiles and other assorted minor items and spare parts(Lippman W: 1995).

By the time Clinton administration took over in 1993, bilateral relations with Pakistan were badly frayed as a result of the standoff. Debate raged in the administration over how to break the impasse. The non-proliferationists particularly those at the Arms control, and Disarmament Agency, felt that administration should only make concession in exchange for concrete results on the Pakistani nuclear issue. The regionalist, particularly in the State Department Bureau of South Asian Affairs and the Department of Defence

argued for a more multi faceted approach to the U.S. policy towards Pakistan that would allow greater co-operation in the areas of drugs, terrorism, peacekeeping and military training (Reiss: 1995). While the regionalist perspective prevailed in the administration, the non-proliferationists led by senator Glenn and senator Pressler, were stronger in the congress. In the House, although representative Hamilton was sympathetic to Pakistan. Representative Benjamin Gilman and several key staffers on the House International Relations Committee strongly supported the Pressler Amendment. Each of the camps enjoyed strong network both between branches and with ethnic and arms control interest groups, including the Pakistani and Indian embassies and their professional lobbyists, all of whom followed the debate closely(CRS : 1996).The issue first came to a head in 1993 when the Clinton administration decided to submit to Congress a broad rewrite of the Foreign Assistance Act. In late 1993 and early 1993 following repeated crises in Haiti, Somalia, Bosnia and elsewhere, relations between the Congress and the Clinton administration were at particularly low ebb. The redrafted act was widely seen by members and staff as an attempt by the executive branch to reduce, or at least challenge the role of Congress in foreign affairs. It was not well received (Doherty J.: 1994)

Barack H. Obama assumed office as the President of USA in the month of January 2009. As the new U S president he promised change and transformation in global nuclear proliferation. The Change which he said was seemingly imminent as the already gone decade had been completely crisis ridden with various contingencies created by the former U S President George W. Bush's strategic vision, in which the U S relied on unilateral methods like Preemption as a policy doctrine that have guided his nonproliferation nuclear policies as well. Former President George W Bush's major preference for unilateralism began to be viewed as a draconian phenomenon when his counter proliferation initiatives camouflaged political underpinnings like various regime changes. President George W Bush ambitiously promoted active

defense and nuclear weapons modernization that eventually triggered the whole new levels of global instabilities instead of enhancing continued peace and security and even resulted in curbing proliferation. President Barack Obama initiated several change in the foreign policy and nuclear security aspects and he began to initiate a transition to reconciliation and engagement. Beyond changing the preliminary steps of the U S nonproliferation policy, his aim was to replace U S arsenal through the reliable warhead programme. In his April 5 Prague speech, President Obama called for the United States to lead international efforts toward a world free of nuclear weapons. A new Council on Foreign Relations-sponsored Independent Task Force report, co-chaired by former secretary of defense William J. Perry and former national security adviser Brent Scowcroft, says that while "the geopolitical conditions that would permit the global elimination of nuclear weapons do not currently exist," steps can be taken now to diminish the danger of nuclear proliferation and nuclear use. To achieve this radical goal, Barack Obama promised the world to take a 360 degree ultimate turn by reviving the Non Proliferation Treaty, also by ratifying the CTBT and taking courage in activating a Fissile Materials Cut off Treaty (FMCT). One of The most radical ideas that he had, however, was his new proposal to make a sweeping number of reforms in the area of nuclear security, this included the tangible steps to make sure that global security of nuclear materials within a period of four years. Barack Obama also promised the global community that a new nuclear energy architecture design which could accommodate a global chain of fuel banks and even the proliferation resistant recycling technologies at the top end. Most of the above promises were made in a poll mode. But still the U S president took many courageous steps towards these security goals in his first tenure in office. Starting with the first Prague speech that he delivered on April 5, 2009, it was at a venue which was to hosting the Nuclear Security Summit and also signing of the renewed strategic arms reduction treaty (START) in the month of April 2010, U S diplomacy was fully at functional mode to prove that Barack Obama really meant business. And at the same time,

there were a toned down and very much delayed Nuclear Posture Review (NPR) which was succumbing to the needs of military establishment's writ. There were several early indications of Barack Obama's propensity to completely compromise and take up the middle line; he often went on reverting to his predecessor's policies, which began to raise questions regarding the total feasibility of the Obama doctrine. This doctrine, which is still in its evolving stage and it is potent enough to discomfit countries, especially those countries like India whose terms of engagement with the non proliferation entities should potentially be redefined. As Far from its initial fears of being cornered on both the NPT and CTBT, the New Delhi has gained some confidence and they are now abide by the non proliferation norms that are democratic.(J Perry:2012). The U S president Barack Obama's political philosophy is really inspired by the liberal generations' that rose in U S during the period of 1980s that got into the U S campuses for opposing star wars and arms races. He even wrote in the Columbia University magazine which is a highly validated one, *Sundial*, about his future vision for a nuclear weapon free World, he always rallied against first and second strike capabilities, and he was really agitated for elimination of global nuclear arsenals. After Two decades, he still continued his activism as a Senator with liberal ideals, he also did not sustain the same fury against nuclear weapons. (P.Shultz:2010)

6.2 Tenets of Obama's nuclear policy

After assuming the office of president, President Barack Obama used several numbers of platforms to depict his own nuclear policy. His Prague speech was a landmark and it was an indication for the U S change of policy. The Prague speech was a declaration of intent wherein he officially made out his future plans for a nuclear weapons free world vision, in which, he also believes, that it might not come about in his lifetime.

(a) Toward the disarmament goal

In Prague speech, President Barack Obama declared that the U S is always prepared to initiate the move towards a nuclear weapons free world, by starting to reduce the number and role of nuclear weapons in its security strategy. President Barack Obama, however, also made it so clear that as long as the nuclear weapons and its related devices exist, the U S will continue to maintain the most secure, reliable and effective deterrent. The number of nuclear weapons reduction process began with a new strategic arms reduction treaty (START) with the Russia which has the potential to bring down the amount of strategic nuclear warheads to be around 1,500 and 1,675 on both sides. In one such month of marathon nuclear diplomacy, he also released NPR and even hosted a Nuclear Security Summit. These were all in April 2010. The newly initiated START program was signed with Russia on the month April 8, but the issue was that the START programs its ability to clear the U S Congress was under real stress, because the Republicans were constantly questioning the *quid pro quo* on missile defence systems and they were even demanding more and more funding for the nuclear weapons modernization programs along with tighter verification articles in the treaty. Similarly, the NPR came without much expected momentum in order to reduce the salience of nuclear weapons in U S security planning. The main issue is that the document only *commits* to further reduction of their roles in deterring a non nuclear attack, but it also clarifies that any such policy that stress a ‘deterring only’ nuclear attack as the sole purpose of nuclear weapons is unrealistic. The Convention, most probably is the rarest of instances when the U S had endorsed the possibility for a standalone legal treaty to pursue the final phase of nuclear disarmament. (A Vinodkumar:2010)

(b) Reviving treaties

Obama gave out his intentions on Non proliferation treaty In Prague in which he said that the basic bargain of the Non proliferation treaty is to sound the countries which are having

nuclear weapons will need to move towards disarmament, and the countries that doesn't have any nuclear weapons should not acquire them, and all the countries in world eventually can access peaceful nuclear energy. To strengthen the Non proliferation treaty, he said in his speech that, "We need more and more resources and also the authority to strengthen international inspections. We need immediate consequences for countries breaking rules or trying to leave the treaty without cause". This message was really lucid for violators and deserters and he even advocated that they should be punished and the treaty needs a structural strengthening in a holistic way. There were also other areas that are required to have an immediate redressal as well. These redressal actions should include addressing the ongoing conflict between stringent nonproliferation obligations and the increasing constraints on the access to nuclear trade. and this means that they need to effectively deal with threats from the non state actors too. This was something that Non proliferation treaty was not structured to tackle. The persistent expositions made by the president Barack Obama and his own new non proliferation team during the first year in the office, for strengthening the core three pillars of the Non proliferation treaty, their effort started to raise hopes of a grand Barack Obama plan to reinitiate the treaty. FMCT is an internationally verifiable treaty that is capable enough to end the production of weapons grade fissile materials that are seen as the other half of the incremental steps towards disarmament. Barack Obama has already declared his whole hearted commitment to conclude the FMCT, which has already being negotiated at the Conference on Disarmament in an effective manner. (Robert Gates:2010)

(c) Nuclear security and terrorism

President Barack Obama firmly believes in the biggest security risk in the 21st century which is not a rogue country with long range missile systems, but of a terrorist group smuggling a very crude nuclear device across the international borders. Announcing about his nuclear security options in Prague, Barack Obama even

declared his insight to secure all sorts of vulnerable nuclear materials, globally, within a time limit of four years, and augment initiatives like the Proliferation Security Initiative (PSI) and the Global Initiative to Combat Nuclear Terrorism (GICNT), 'in order to stop the smuggling of nuclear materials, phase out highly enriched uranium from the civilian sector, and also to break up nuclear black markets which exists in the world, he also initiated projects to detect and intercept materials in transit and use the financial tools to stop such trade'. The plan was to create a counter proliferation and cooperative threat reduction under the frameworks like the United Nations Security Council Resolution 1540. But for this ambitious target which has been designed to secure all sorts of nuclear materials globally with in a four year time frame. (Kenneth N Lungo 2009)

(d) Counter-proliferation

It was crystal clear from Obama's campaign days that he will not devalue his senior president Bush's counter proliferation initiatives and also the cooperative policing and interdiction efforts, which are considered to be the primary function of the PSI and Container Security Initiative (CSI). President Barack Obama seeks to magnify their scope of peaceful non proliferation efforts through cooperative enhancement and Strict levels of institutionalization. A structured PSI is a stronger PSI, he made this comment in his campaign and also stated that, "will produce greater international intelligence and policing cooperation, maintain tougher export controls and criminal penalties for violations, and apply the tools developed to combat terrorist financing and shutting down proliferators' networks". For an effective border and a better transformational security Barack Obama promised organizational basing and financial support for the CSI and Mega ports Initiatives. In one of the pre election interview, Barack Obama said: "We spend billions on missile defence, but far too little on securing nuclear materials around the world and improving security at our ports and borders". The PSI, although, had some of the notable mentions when linked to the broader nuclear security plan. The

Ballistic missile defense systems are another major stage where Barack Obama has several numbers of dilemmas. As a senator, Barack Obama had voted for major reductions in BMD programs, and he was also non committed with regard to George W Bush's missile deployment plans. Barack Obama said in his campaign that "We must seek a nuclear missile defense and demand that those efforts use resources wisely to build systems that would actually be cost-effective and will work". (Greg Mello:2010)

(e) Nuclear energy

As one among the core pillars the third pillar of the Non Proliferation Treaty, President Barack Obama supported the expansion of the civilian nuclear energy projects and he even detests any hindrance that are made to the civilian nuclear cooperation. And during his speech in Prague, Barack Obama also said, "No approach will succeed if it's based on denial of right to nations that play by rules". In order to facilitate the civilian nuclear energy renaissance, Barack Obama announced a new civilian nuclear energy cooperation framework which chiefly comprising international fuel banks and fuel-supply promises, enabling all those signatory countries to access nuclear energy without increasing any of the nuclear weapons proliferation risks. According to a credible Interpretation by experts, fuel banks could be acting as an energy equivalent to a nuclear umbrella with the development rights being only restricted towards a privileged few, just as in the case of all the nuclear weapons. Since more nuclear non proliferation obligations impeded civilian nuclear trade, Barack Obama could have eventually realized that the need to trade carefully while pushing fuel banks and fuel cycle banks. (M.Grossman:2010)

Besides all the inherent challenges which are present in his move, in each segment of policy making, the Barack Obama doctrine could also be challenged by its unrealistic approach weaknesses. Further, the various divergent perceptions within Barack Obama's

government on how to turn his vision of a nuclear Weapons free world into a reality could be seen as a potential spoiler.

(f) Pushing a Utopian dream

Barack Obama's assertion was that the nuclear disarmament will not happen in his lifetime because it has a retrograde effect. Critics even questions on the matter that whether Barack Obama's intentions are genuine or whether it will be remaining as mere concept. At this point of time there could be three perceivable reasons behind his policy:

- a) Total elimination cannot happen at one stroke as this will not be a consensual or sequential movement among the nuclear weapon states.
- b) Incremental steps towards elimination, involving test ban and fissile material cut-off, would mean a long haul;
- c) New nuclear armed states and security dynamics might emerge which could reverse the reduction process.

The main point, here to be examined could be that will Barack Obama work towards pursuing a non proliferation structure in his entire lifetime or will there be any sorts of credible steps towards total Elimination of nuclear weapons? As an alternative way he could have adopted the Nuclear Weapons Convention (NWC) that has more potential to work towards his goal that could facilitate a standalone treaty for nuclear disarmament. (Josh Rogin:2009)

(g) Disarmament versus a robust nuclear deterrent

Barack Obama had tried to push through a completely new nuclear policy which was consistent with his nuclear disarmament vision. Barack Obama's security establishment is something which keep on insisting and maintaining a robust nuclear deterrent and also by modernizing the nuclear weapons complex before even achieving any reduction benchmarks. The modernization of nuclear weapons debate is a carryover from the George Bush's administration; it had conceptualized the RRW program to be something that has

replaced ageing nuclear warheads with brand new ones. The then Defence Secretary Robert Gates, who was in the same office in the George Bush's administration, is a person who vouched for nuclear weapons modernization. The amount of diversity in opinions in the political and military establishments is not without constant crises crossing. A bipartisan consensus was in favour of the reduction and a minimized role for nuclear warheads were highlighted in the Congressional Strategic Posture Commission, headed by William Perry, who, however, recommended that the sustenance of a strong deterrent with an effective advice that the use of modern age nuclear weapons should be only be in extreme conditions. The sentiments of the U S armed forces are reflected in a the department of defence (DoD) report of December 2008, which had called upon the incoming administration to define the new age role of nuclear weapons in deterring threats along with 'suitable modernization of the nuclear deterrent force.(DoD report:2008)

By agreeing to such sorts of budgetary and modernization pressures, Barack Obama signaled his willingness to step down from his already stated positions on the nuclear arsenal, opening up funding for nuclear complex modernization which eventually manifests in stockpile the modernization of these weapons. Though RRW plans have already been shelved, the most important fact is that the Barack Obama's administration began to endorse the shortcomings of the present life extension methods which already begun to increase the prospects for a later decision to construct new modern warheads. When faced with this amount of crisis over the declaratory policy on nuclear weapons use, a capable warhead modernization call could ultimately derail the whole process of reductions and disarmament of nuclear war heads. Though done with several sorts of nuclear modernization testing, a new warhead creation could project the U S intention to sustain its nuclear weapons arsenal forever while pushing other nations towards reductions. This would undermine its whole operations.(Elaine M Grossman:2009)

6.3 What Obama's nuclear policy augurs for India

President George W Bush's greatest contribution towards Indo U S foreign relations was his capability to bridge the gaps in the areas where there is divergence in the non nuclear proliferation issues. George W Bush had actually facilitated the Nuclear Suppliers Group (NSG) which is strong organization and amended several numbers of U S laws to in order enable nuclear commerce with India. As a senator Barack Obama supported the nuclear deal, but not before the pushing of 'killer amendments' in the Henry J. Hyde Act which eventually known as Hyde act which plays a key role in Indo U S nuclear relations. This act sanctioned the '123 Agreement' with India. This raised many concerns that Barack Obama might put more hindrances and interpretational loopholes as the acting president of U S. although the proposed controls over ENR technology transfers had already raised many eyebrows, and his consent for a reprocessing agreement put all of the rest concerns regarding hindrances to the nuclear deal. Washington D.C has time and again clarified that the nuclear deal will be sacrosanct. And all the real challenges, however, lies beneath the surface. Barack Obama's push for a non nuclear proliferation, by reviving the Non Proliferation Treaty and Operationalising the CTBT, could be a major source for a potential clash. At the core of all the current apprehensions is the feeling is that the traditional divergences on non nuclear proliferation will be regenerated during the Barack Obama era.

(a) Integrating India into the non-proliferation regime

The Indo - U S nuclear deal was already supposed to have brought India into the non nuclear proliferation Mainstream talks after the decades of technological and economical isolations. But still India's collaboration with the Non nuclear proliferation regime cannot be assumed to be complete since it still stays apart from its cornerstone the Non Proliferation Treaty. India does not rely on any of the incremental steps towards total elimination of nuclear capability, and it also seeks a new age non nuclear proliferation

bargain, which will allow transcending the Non Proliferation Treaty centric system. Even being one key initiator of the Non Proliferation Treaty, still India rejected the treaty, saying that it's a 'flawed bargain'. But India still have been claiming to adhere to the Non Proliferation Treaty's principles and it has been consistently touting its record as a responsible nuclear power. (Joe Biden:2009) Even at the event of ratification by the U S senate, and similar action done by China and others, India will be under pressure to sign the nuclear non proliferation treaty. But still, with India not likely to immediately get into their track, U S always will have to find different types of means to engage with India for a futuristic positive outcome. These outcomes also include the possibility of a renewed nuclear testing by India or even offering India access to any sophisticated design data and all the simulation capabilities. The problem is that both options are seems to be improbable. Barack Obama is not expected to offer India such sorts of capabilities since it will take away his disarmament objectives. Also, if there is another round of testing done by India then it could potentially result in the complete termination of the whole nuclear deal. On the FMCT, India had made a commitment to join any levels of negotiations in accordance with the July 18, 2005 joint statement. By agreeing so, India made a closed her options to resist the treaty despite the growing concerns over its implications for its strategic nuclear program. India was one among the main co-sponsors of the 1993 UNGA Resolution 48/75L in order to negotiate a non discriminatory and internationally verifiable non proliferation treaty banning all the production of all sorts of fissile materials and related enrichment devises. (Susan Burk:2010)

(b) Divergent perceptions on disarmament

President Barack Obama and India are two major actors who are solely committed to a nuclear Disarmament process, but due to the divergent perceptions there are real difficulties in realizing such an effort. Barack Obama swears by the traditional way of Non Nuclear Proliferation Treaty route, in which entails incremental steps along with continued and phased reduction of existing

nuclear arsenals, potentially leading to a total elimination of the nuclear arsenal. India which feels that this route is a cage without any scopes for total elimination but instead a probable reason why Barack Obama himself ruled out the immediate possibility. India totally discourages the Non Nuclear Proliferation Treaty and still believes it could only retain a non nuclear proliferation position which will not be favorable to disarmament. Further, India really feels a test ban without a proper disarmament roadmap will definitely end up as ineffective. Since India passionately pushes for a non Nuclear Weapons Convention that could initiate a standalone treaty for general and total disarmament, consistent with Article VI of the Non Nuclear Proliferation Treaty. But none of the Non Nuclear Proliferation Treaty signatories are enthusiastic about the NWC. India's answer to Barack Obama's blind play is of not achieving disarmament in his lifetime could be the Rajiv Gandhi Action Plan of June 1988, which had then called for total elimination by 2010, implying that such processes could be undertaken within period of 20 to 25 year period. (A Vonod Kumar :2010)

(c) Counter-proliferation

Even after being really supportive towards George W Bush's extensive nuclear policies, India had always been unconvinced about his counter proliferation initiatives. India has always resisted U S intentions which exerted pressure to participate in the PSI, despite being supportive of its principles. The main obstacle to India's participation was that the references which are made to International Atomic Energy Agency (IAEA) on the matter of comprehensive safeguards in the year 2005 Protocol to the SUA Convention (Suppression of Unlawful Activities at Sea), which India had felt that it could lead to the PSI being targeted at non Nuclear Proliferation Treaty states like itself. (Ashly Tellis:2009)

6.4 Obama's response to Indian Nuclear Programme

The Republican Administration's tenure under the president George W Bush should be regarded as a major golden era of Indo – U S relations by signing the major 123 Agreement (Agreement for Cooperation Concerning Peaceful Uses of Nuclear Energy) on October 10, 2008. When President Barack Obama assumed office, a large number of apprehensions have been arisen at that period. When President Barack Obama's focused on the Afghan Pak issues which coupled with India's sensitivity on the cross border terrorism and Kashmir, the global economic crisis with U S in heavy recession and issues relating to outsourcing are some of the major issues that made a real constrict over a fruitful engagement. On the other hand U S was interested to continue talks because of India's relative political and economic stability, a professional armed forces and also a force with high levels of counter insurgency experience has played a great role in creating a leverage with the U S Administration in the backdrop of a huge global financial crack down, industrial slow down, international security concerns particularly in Afghanistan, Pakistan and the Indian Ocean. (Melvin P.Leffler:2009) On the matter of Jammu and Kashmir issue, the Barack Obama's Administration has been convinced that it won't be fruitful to intervene into this matter particularly because of the presence of their valuable and strategic the Pakistan. The successful free and fair Assembly elections in 2008 indicate that the back of militancy has been broken through a comprehensive policy adopted by Indian government and hence the mediation in Kashmir has become totally irrelevant. According to India's economic leverage with the U S has been very important in lots of respects, due to the size and growth of Indian economy. However, Indian influence Can be constrained by the fact that several amounts of sovereign funds are based in the Middle East and China have large amount of shareholdings in most of the American corporations which works in several strategic sectors including the financial sector. The U S is likely to not to go

hardliner on the matter of outsourcing, international free trade and economic integration with the World. (Paul K Kerr:2013)

6.5 Obama's response to Pakistani Nuclear Programme

Since the hard core thrust of the Barack Obama Administration's nuclear weapons policy and also the threat assessment mechanism is mostly targeted on North Korea and Iran, Pakistan has always given significant challenges that will make the ongoing attention during Barack Obama's Second term. In its drive to increase the production of fissile material for nuclear weapons, augment its weapons production facilities, deploy for additional delivery vehicles, also to construct additional nuclear reactors, and expand its reprocessing capabilities, Pakistan has been undergoing serious changes and these are placed for the expansion and improvement of its nuclear weapons arsenal capacity at the core of its overall nuclear security strategy. When this trend of Pakistan is considered against Pakistan's volatile domestic path way and ongoing regional conflicts, it highlights that there is the need for the Barack Obama Administration to embolden its capacities in assessing and monitoring any threats to Pakistan's nuclear weapons. (Charles D.Blair:2011) The U S has always been in a constant and continued relation with Pakistan that has triggered between necessary coexistence due to the periods of strains in the post 9/11 period. Since the world's fastest nuclear proliferators, is Pakistan it will still continue to become a significant challenge to U S policy makers in the immediate future. Nuclear weapon expert Hans Kristensen estimates that Pakistan has already increased its nuclear weapons capability and increased its nuclear stockpile from an estimated seventy to ninety warheads in 2009 to approximately 90 to 110 nuclear warheads. This has been marked a steady increase from the U.S Defense Intelligence Agency's 1999 projection which placed the number of nuclear weapons with Pakistan is in between an amount of 60 to 80 by the year 2020. Since the Pakistani government had defined the number and type of nuclear weapons that is necessary for it to achieve its minimum deterrent,

the Pakistan remains to be in an ambiguous entity for both the U S government and also to the international community. The main motivation behind Pakistan's tendency to increase its nuclear stockpile is much deeper and complex than predicted. There should not be any doubt that its losses to India in three conventional wars over the past six decades were a major driving factor in its determination to develop and maintain its nuclear arsenal. Another such complicating issue is that it pertains to what has been an effective control of Pakistan's nuclear weapons by its military, the military's withdrawal to hand over the control of nuclear sector to the civilian government, and its tendency to each time project the threat from India as the core rationale for keeping such forms of weapons. In essence, for achieving the Barack Obama's "zero" goal, India had to be removed as a projected threat to Pakistan's security. This would also make the Pakistani military to play a small role in the Pakistani political system, and also their concede civilian control over the Pakistan's nuclear weapons. (Hans M Kristensen:2011)

The amplification of Pakistan's nuclear capable warhead designs and related research, development, and production infrastructure has translated into more of a provocative style. This can be clearly seen on the display in late November 2012 when it test launched a medium range ballistic missile which was capable of being armed with high powered nuclear warheads in a complete user trial. After the eighth missile was tested in the year 2012, the operational liquid fueled Ghauri Hatf 5 which is a nuclear capable missile has a range of more than 800 miles and has already engendered all the security concerns on a regional level basis. According to several experts, the Pakistani ambition to accelerate its nuclear arsenal has been motivated by the U S seeking to improve defense ties with India in order to counter act this co operation they are trying to improve their nuclear capabilities resulting in a nuclear threat to whole south Asian Region. (David E Sanger:2012)

6.6 Nuclear security summit

The Nuclear Security Summit (NSS) is a world summit that has international attentions, they are aimed at preventing any sorts of nuclear terrorism all around the globe. The very first summit of Nuclear Security Summit (NSS) was held in U S on the month of April 12, 2010. And similarly there was a second summit that was conducted in Seoul in the year 2012. The third summit of Nuclear Security Summit (NSS) will be held in The Hague on the month of March 24, 2014. In the year of 2009, President Barack Obama in a speech that he gave in Prague even termed nuclear terrorism as one of the greatest threats to international security and pace processes. With that attitude in mind, Barack Obama hosted the very first Nuclear Security Summit (NSS) in Washington DC in the year 2010, in order to draw attention, a global level of attention at the highest level, on the need to make sure that the secure nuclear material should be prevented from nuclear terrorism. Around Forty seven countries from all around the world and three major international organizations participated in the first summit of Nuclear Security Summit (NSS). In the year 2012, the second Nuclear Security Summit (NSS) and this was held in Seoul. In total around Fifty three countries and four international organizations were invited to take part in it. The very first summit of Nuclear Security Summit (NSS) was concerned with making several political agreements, while the follow up of this happened in Seoul which was focused on the progress that are made in implementing these agreements. The third Nuclear Security Summit (NSS), in the city of Hague in the year 2014, which was the centre on the results achieved and future course of action. Under the Nuclear Security Summit (NSS) process, all the countries should work to improve their nuclear weapons and civilian nuclear security on the basis of the Washington's Work Plan, which contains numerous measures and action points. In Seoul a number of additional action points were formulated and set down in the Seoul Communiqué. The Nuclear Security Summit (NSS) process is ongoing, and since 2009 it have required many world leaders and diplomats to devote

some of their extra attention to the Raising issue of nuclear security. Extensive consultations were held in the run up to every summit. For Nuclear Security Summit (NSS) 2014 this process had started in the year 2012. The negotiators for the various countries known as sherpas and sous sherpas, they discussed the progress made and even confer on key themes, work plans and measures that are to be adopted in the plan. Ultimately, these negotiations had lead to several effective decisions, which are later confirmed and agreed at the summit and they published it in a communiqué. Forty seven countries and the three international organizations participated in the First Nuclear Security Summit, held in Washington in 2010 at the initiative of President Obama. The aim of this summit was to constantly improve worldwide nuclear security, and find out concrete agreements for securing all the nuclear materials and related facilities. The results of this summit was enumerated in the U S Work Plan in the form of several numbers of concrete action points, and the Washington Communiqué, which contains different levels of commitments and declarations as an intent from the participating countries. The commitments made in Washington in 2010 are:

- the Leaders jointly made sure that the seriousness and urgency to counter the threat posed by nuclear terrorism.
- The participating countries agreed to work to secure all vulnerable nuclear material worldwide.
- The participating countries agreed to shoulder their responsibility for securing nuclear material within their own borders.
- The participating countries agreed to work together as an international community to improve nuclear security.(Inf. On Nuclear security summit:2014)

Following the summit that was carried out in Washington D C in the year 2010 another six new countries like Azerbaijan, Denmark, Gabon, Hungary, Lithuania and Romania, and one new international organization Interpol were invited by South Korea to

join the Nuclear Security Summit (NSS). 53 countries attended the second summit in Seoul in the year 2012, which was built on the goals that had been identified in Washington D C. (Bunn Mathew:2012)

6.7 U.S response under Obama

The U S President Barack Obama has already reviewed Homeland Security policy and then he concluded that those "attacks using improvised nuclear devices IED's pose a serious threat and they are increasing national security risk." In his presidential election period, President Bush and state Senator John Kerry had agreed that the most serious danger facing the U S is the possibility that terrorists could obtain any sort of nuclear bomb from any nuclear black market. (Robert M Gates:2010)

Conclusion

There is no point in Imagining a world without nuclear weapons because it is impossible likewise imagining a U S without any nuclear weapons is also impossible. This paraphrase shows the major hindrances that the President Barack Obama faces in pushing his vision of a nuclear weapons free world. Nuclear weapons are definitely an integral part to U S supremacy in a nearing unipolar world. Even in a transition period to a polycentric order, the nuclear weapons will definitely remain the most potent currency of power for U S. The challenge arose for Obama is whether to reconcile such a strategic realities while propelling his political visions which are merely impossible.

NOTES

1. Pakistan has increased its nuclear weapons stockpile from an estimated 70 to 90 warheads in 2009 to approximately 90-110 nuclear warheads (as of February 2013). This is a marked increase from the U.S Defense Intelligence Agency's 1999 projection which placed the number at 60-80 by 2020

2. Pakistani President, Pervez Musharraf, stated that if “Pakistan disintegrates it can be dangerous. Otherwise, if Pakistan’s integrity is there, and which I’m sure it will be there as long as the armed forces of Pakistan are there, there is no danger of the nuclear assets or strategic assets falling in any terrorist hands.
3. Donald Kerr, Principal Deputy Director of National Intelligence, told a Washington audience that the Pakistani military’s management of the nuclear weapons has been “a good thing because [the military is] an institution in Pakistan that has, in fact, withstood many of the political changes over the years.”
4. While the U.S relationship with Pakistan during the Obama Administration has been focused on thwarting the Taliban and al Qaeda, the Administration has also understood that it can no longer afford to reduce efforts to hinder Pakistan’s advancement and must persuade not only Pakistan itself, but India and China to implement some semblance of nuclear balance and restraint
5. Going back to 1998, the United States supported a UN Security Council resolution that denounced India’s and Pakistan’s nuclear explosions and called on both states to sign (and ratify) the CTBT and stop fissile production for weapons. Of course, the assertiveness in this regard has been somewhat tempered as other commercial and strategic priorities—including the 2008 civil nuclear trade exemption for India and the U.S-led offensive against the Taliban—have come to the fore and pushed non-proliferation opportunities to the sidelines.
6. The Nuclear Security Summit (NSS) is a world summit, aimed at preventing nuclear terrorism around the globe. The first summit was held in Washington, D.C. on April 12, 2010. The second summit was in Seoul in 2012. The third summit will be held in The Hague on March 24-15, 2014.

7. In a statement in December 2011, Pakistan's National Command Authority, which oversees the arsenal, said that it would reject "any effort to undermine its strategic deterrence," adding, "Pakistan will not be a party to any approach that is prejudicial to its legitimate national security interests." A spokesperson for the National Security Council, Tommy Victor, maintained the diplomatic line by stating that President Obama was still "confident" about the security of Pakistani weapons and would "continue to encourage all nations to support the commencement of negotiations on the Fissile Material Cut-off Treaty."
8. The Obama administration will focus on reducing the risk of high-consequence, non-traditional nuclear threats. Nuclear security is to be strengthened by enhancing "nuclear detection architecture and ensuring that our own nuclear materials are secure," and by "establishing well-planned, well-rehearsed, plans for coordinated response."

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Chapter VII

CONCLUSION

Although nuclear weapons may no longer be at the forefront of great power diplomacy with the familiar Cold War confrontation between the United States and the Soviet Union fading into history, nuclear weapons remain an important consideration for international policy makers. Even though Cold War-era deterrence strategies fall short when faced with non-state nuclear threats because of the underlying state-centric assumptions, the lack of rational motives exhibited by certain non-state groups and the problems of retaliating against an actor with no territorial base, the theoretical framework on which Cold War deterrence rests still offers much advice to policy makers today even when considering threats from non-state actors. The immediate task is to ensure nuclear safety, stability and security in South Asia. This can be achieved through improved bi-lateral relations and the avoidance of another crisis. India and Pakistan should sincerely review the existing nuclear confidence and security building measures and stabilize the existing CBMs. And without nuclear CBMs the dangerous political tensions between the two countries, fuelled by feelings of mutual vulnerability, cannot be mitigated. The time may have come to develop a new balance between the needs of war risk reduction and those of non-proliferation. It is the responsibility of the Indian and Pakistani leadership to come out of their negative nationalistic perspective to a broad national, region and global approach to fulfil the long cherished aspirations of the millions of the people in the sub-continent for peace, prosperity and development. As an influential global power in the South Asian region, the United States needs to play very proactive role in the emerging nuclear scenario in South Asia. Success of any efforts

towards curbing the nuclearisation of South Asia will largely depends on the genuine non- proliferation efforts from the part of the US and other global nuclear weapons states.

The United States nuclear non proliferation policy faces serious challenges from South Asian region, since both India and Pakistan continue to threaten to deploy their respective nuclear arsenals which leads to a crisis situation. Incoherent United States nuclear non proliferation policies and their inappropriate influence strategies have always made both countries India and Pakistan to go on with their nuclear weapons abilities. United States nuclear non proliferation policies will then influence Indian and Pakistani decisions to either to further develop or to curb the nuclear weapons. United States has totally failed in curbing South Asian regional nuclear weapon proliferation because of United States contradictory policies. Although as declared United States policy has began to be emphasized on nuclear non proliferation goals, there are other perceived political, commercial, and strategic interests often took place in the matter, sending a completely mixed signals to both India and Pakistan and United States encouraging them to go on with their respective nuclear weapons programs. More than that, the United States had failed to influence both Indian and Pakistani nuclear decision making because of their inappropriate and not so practical influence strategies. Nuclear Non proliferation sanctions were not at all substantial and rarely sustained inducements were unconditionally extended. In the past United States had tasted failure in pursuing general nuclear disarmament which also gave both countries India and Pakistan a pretext to reject the nuclear Non Proliferation Treaty (NPT) regime as a complete discriminatory and totally unjust. The Obama administration also failed to curb the nuclear proliferation in South Asia due to its continued incoherent nuclear nonproliferation policy at the global and regional level.

The study finds that the double standard adopted by nuclear weapon states, particularly the US, was the main reason for the failure of the non- proliferation efforts in South Asia. A US

sponsored carrot and stick strategy proved insufficient to achieve the desired non- proliferation goals in South Asia. The United States should strengthen the international nuclear non proliferation regimes and make them collaborate with very important external actors in order to contain and eventually put an end to the nuclear weapon proliferation in South Asian region. Even though United States must stick to the ultimate goal of eliminating all sorts of nuclear weapons in the South Asian sub continent, it is also the interim goal of United States policy that should be a hindrance on the nations, India and Pakistan's nuclear capacities which should be below the deployment threshold. United States can and should promote a nuclear cap in the South Asian region by employing the strategy of a sustained and highly targeted sanctions and conditional incentives, serving as coherent element for nuclear non proliferation policy and they should be consistent with nuclear non proliferation goals. Technological and financial constraints have always prevented both India and Pakistan from assigning highly operational and survivable nuclear weapons tactical systems in the near future. The Heavily indebted Pakistan economy cannot sustain the heavy financial burden of massive high scale weaponisation process and also the nuclear deployment on its own terms. Since India should have to take her threats, Pakistani and Chinese nuclear capabilities into account, the costs of a full scale weaponisation through several levels of indigenous sources would also strain India's national resources. And both nations are really in need for external technology and also the hardware to fully engage their nuclear and ballistic missile systems. India and Pakistan are therefore trying to seek the resumption of unrestricted United States economic and technological collaboration by hoping that it would get United States dual use technology, India as a strong nation is constantly pressurizing the Barack Obama administration to remove all sorts of remaining economic and technological sanctions against it. The Indian official spokespersons have repeatedly pointed out that by referring to the "mismatch between sanctions and the new direction of India United States relationships." But the United States is, deeply

interested in India. India expects United States to transfer high technology, conventional hardware, and a resumption of economic loans and grants, Pakistan is also trying to attempt and confront United States which is always living under the fear of Islamic extremism. With a broad international support, the United States should also make sure that the credits and loans from the International financial institutions are not diverted to military spending by Pakistan and eventually these weapons reaching in to the hands of non- state actors. The United States should use its influence in both the countries that their nuclear weapons existence will cost economic and social development objectives. But at the same time, the United States should also offer substantial economic and diplomatic assistance on the matter of nuclear non proliferation progress in South Asian region. The failing Pakistan economy and the state really pose challenges to regional security and global stability. The study finds that immediate and transparent efforts on the part of the nuclear weapons states to ensure safety, stability and security of nuclear weapons in Pakistan is a vital component in today's world.

While analyzing, we can see that domestically in both countries of India and Pakistan, the critical issue of a nuclear weapon is ranked far below when we put other societal concerns, including the major need for economic development and poverty alleviation in both countries. A carefully targeted economic incentives strategy which should be based on a "debt for disarmament" plan could definitely help to build a complete domestic pressure in both the cases of India and Pakistan against the possession of nuclear warheads. The major targeted economic incentives could include an incremental forgiveness on both India's and Pakistan's all forms of external debts from the part of the advanced industrialized states and the International Financial Institutions, which are really conditional on nuclear non proliferation progress and even stipulating that reduced debt service payments should be reallocated to address the basic human matters. From the United States perspective, her nuclear non proliferation policy is also made in context of other

foreign and security issues. Thus, United States objectives also should include countering the spread of terrorism from Pakistan, they should ensure that the safety of Pakistan's heavy nuclear weapons arsenal, and thus by forming a strong strategic partnership with India, which has importance in both conventional military and nuclear cooperation components. In total, the current state of affairs completely shows us that the perceptions of the so called national interest force consideration of other factors apart from the ideals of nuclear non proliferation. The biggest nuclear threat that is concerning is with proliferation of nuclear weapons to other states, though that creates a total danger. But the biggest concern is that the individual belief of policy makers from a small number of nations that they have every right to keep nuclear warheads indefinitely and that in their hands nuclear weapons will not constitute any threat either to their own citizens or to the humanity. This is totally a black out belief which discounts the core principle that if there is a chance for something to go wrong then it will definitely go wrong. It has also a hardened belief that it is likely to encourage nuclear weapon proliferation to other states and even its possible for any terrorist organization as well. But there can be no concrete reason to be given that the nuclear weapons with current nuclear weapons states will definitely not result in a tragedy by surpassing all sorts of imagination. For many years India has been made it clear to the world that it totally supports nuclear weapons disarmament, but that it is not at all willing to live in a world where "nuclear apartheid" exists. Indian leaders have several times even stated that if all other nations will give up nuclear weapons and agree to go to a zero level, India would definitely be happy to join those states. At the same time On the other hand, the Indian national leaders have already said that if the nuclear weapons powers keep on insisting on maintaining huge nuclear arsenals, India will also keep a huge nuclear arsenal. India even gave the world a sudden and swift wakeup call in May when it tested its own nuclear weapons, followed a few weeks later by Pakistan's nuclear tests. In the light of these testing there are five propositions to make. The very first proposition is that the nuclear weapon

testing done by both India and Pakistan does not allow any sort of nuclear proliferation. Both states had nuclear weapons at their disposal for a very long time before the tests. India first tested a nuclear weapon, after which it said the test was for completely peaceful purposes, in the year of 1974. The world completely ignored the possession of nuclear weapons by both India and Pakistan

The study also finds that the current global nuclear disarmament agenda sponsored by the US and other nuclear weapon states virtually resulted in the vertical and horizontal proliferation. As long as the nuclear power nations are to be maintained such nuclear arsenals are necessary for their own security, we can even expect that the other non nuclear power countries will also show a desire to have these weapons. Statements that often condemning the nuclear proliferation by the leaders of nuclear weapons states, should not be taken seriously as long as the United States continues its present policy of keeping its nuclear arsenal for the indefinite future. There is only one way in order to prevent the nuclear proliferation. And that is for the nuclear weapon states to make a strong commitment to the complete destruction of their nuclear weapons and in order to take steps, separating nuclear warheads from their respective delivery vehicles, to show that they are really serious about their commitment towards peace and security. Another major finding of the study is that the nuclear warheads do not even provide enough security. If you possess nuclear weapons, you will become the potential target of a threatened nuclear weapons attack. So if the citizens of a nuclear weapons states really wants to understand the jeopardy in which they are being placed by their own respective governments' policies. Of course, there are also the risk to the security and peace of the world. Nuclear Deterrence is just a simple theory and it is not at all a shield. One definitely cannot prove that a nuclear war will not occurred just because of the existence of nuclear deterrence. There will be no clear cause and effect linkage. In fact it will not be possible to prove a negative for this that because of just one thing, something

else could not happen. We might be just plainly lucky enough that a nuclear war has not yet happened since two or more countries have, been in possession of nuclear weapons. India and Pakistan, the major rivalries in the region, these are the countries that have gone for war three times in the past 50 years, will definitely put an additional strain on the theory of deterrence.

Another notable finding of the study is that the arms control agreements should have served largely as a “fig leaf” of respectability for maintaining a huge two tier structure of nuclear “haves” and “have-nots,” which have already begun to end up in a nuclear apartheid. The Nuclear Non-Proliferation Treaty that actually enshrines the proposition that there are two types of states those that are possessed with nuclear weapons before January 1, 1967 as one class, and the rest as another class. The only way to get out of this situation is for the nuclear weapons states to pursue a good faith in negotiations for a complete nuclear disarmament which are set forth in the treaty. Unfortunately, all the nuclear power countries do not have done this despite the very strong reinforcement of this treaty provision by the World Court in its 1996. The study also projects that terrorism has become an accepted and completely integrated part in the national security policies of the nuclear weapons states. One aspect that has received inadequate attention is the relationship between terrorism and the regional politics of nuclear weapons. The study reveals that this relationship is more relevant in the case of South Asia. The South Asian region is characterized by the active presence of terrorists who have the potential for indiscriminate mass violence, and by the growth of nuclear tensions, particularly after the nuclear tests in 1998 by India and Pakistan. The longstanding hostility between India and Pakistan has the potential to facilitate nuclear/radiological terrorism in a number of ways. The scope for terrorists to determine the course of events in the region parallels the nuclear stances of India and Pakistan. Each form of nuclear posture carries some risk of terrorist involvement. This growing danger encompasses much of the world. Lax or inadequate security over

nuclear materials and weapons in one country could be exploited to trigger atomic blackmail and terrorism elsewhere. Inadequate security at nuclear facilities also could provide extremists waging a campaign of terror within a nation an opportunity to create a situation of national terror by seizing or sabotaging a civilian nuclear power plant or a research reactor or a laboratory. The increasing level of technological sophistication among terrorist groups, coupled with a renewed determination to achieve political goals, has significantly raised the potential for nuclear terrorism in South Asia. The US should adopt genuine non- proliferation efforts to deal with new and emerging challenges in the sub continent. The most tragic thing is that even an opportunity to abolish nuclear weapons is being squandered in the nuclear weapons states by leaders with lack of futuristic vision.

The study further reveals that the sources of nuclear and other security threats towards India and Pakistan are different. An influential section of the Indian security establishment projects that the greatest threat that they are facing from China. Therefore India's nuclear and missile development program is geared, in contrast, towards countering the Beijing with a most secured deterrent. However, the Beijing's primary threat perception comes from the United States role in the Asia Pacific region. Consequently, one must consider that the possibility that China may conduct several nuclear tests in the coming years if United States goes ahead with the strategy to construct newer, and more reliable warheads. The security dilemma that is currently present in the South Asian region operates as a continued chain reaction which includes both regional and extra regional powers with high levels of competing interests. For countries like India and China, it is very important to note that while the goals of nuclear non proliferations are totally crucial; these are perceived with national interests which are a greater factor in shaping the ultimate policy direction. With this sort of motivational framework in mind, a policy analyzer should examine recent nuclear proliferation related developments in South Asian region, which are likely to have a far

reaching problems both in regional terms and in terms of the global nuclear non proliferation regime. These are included in the proposed India - United States nuclear cooperation, which shows the significance of the A.Q. Khan network, and their links between South Asian regional nations and Middle East proliferation potentials. These sorts of developments reflect, partly or in whole, the complete need for a weaker protagonist to the correct and expected security imbalance against a stronger threat. Nuclear Proliferation issues in the South Asian region must be understood in a different context where vertical and horizontal proliferation does exist. Vertical proliferation takes place since nuclear states try to modernize their nuclear warhead arsenals with more and more reliable and capable delivery systems and also the nuclear warheads. There are several countries including the United States, China, India, and Pakistan, are in the process of modernizing their nuclear arsenals through indefinite actions such as proposals for “a reliable replacement warhead”. In the context of South Asian regional security, nuclear modernization is becoming mainly a function of casting threat perceptions that are arising from several levels of security dilemmas. Modernization of nuclear arsenals also includes the development and testing of much longer range of missiles like the Agni 3 by India, and the Shaheen 2 by Pakistan in the beginning of 2007. Horizontal proliferation is one that accounts for the spread of nuclear weapons technology from nuclear states to other types of entities; this includes aspiring for nuclear weapon states, as well as several non-state actors such as hardcore terrorist elements. Horizontal proliferation normally involves an important role for Weapons of Mass Destruction supply networks that may or may not have any connection to official entities in a nuclear powered nation. In the South Asian regional context, this sort of variant nuclear proliferation is specifically pertinent, given the complete history of the A.Q. Khan’s network and its heavy assistance to states like North Korea and Iran. In addition to this horizontal proliferation includes a second tier proliferation, where the developing nations trade and barter nuclear technology with each other. From the sub continental perspective, the major

challenge is the lack of a comprehensive resolution of the disputes between India and Pakistan and India and China. South Asia is one of the most populated regions of the world, with India and Pakistan alone accounting for about 1.35 billion people. Both nations have been bitter rivals since the period of partition in the south Asian subcontinent in the year 1947 which had already led to the creation of an independent Pakistan and independence for India. Both nations have fought two wars over Kashmir (1947, 1965), one over East Pakistan/Bangladesh (1971), one limited war (Kargil, 1999) and also the ongoing insurgency in Kashmir (since 1989). The 2001 - 2002 crisis even further highlighted the heavy dangers of terrorist violence which acts as a provoking conventional conflict that could lead to a bigger nuclear crisis. The role played by China in South Asian regional security issues and also in future conflict scenarios are really crucial when considering two major realities- the historical animosity between India and China; and the long standing 'all-weather' political and military alliance between Pakistan and China.

Another notable observation in the study is that the Indo- US Nuclear Deal initiated in July 2005 was a major breakthrough in the global non- proliferation regime. It significantly altered the US nuclear strategy in South Asia. This agreement eventually allows India to get nuclear technology and fissile materials from the US and other Nuclear Suppliers Group members. In return, India will open up its civilian nuclear facilities for IAEA inspections. The basic feature of Indo –US Nuclear Deal is that by acquiring more uranium from foreign sources in order to ease up the domestic supplies and also by placing a set of nuclear facilities on the military list, India can increase its fissile material production for further weaponisation purposes. But there is, a different line of analysis which examines the total implications of increased uranium 235 supplies in the context of India's ongoing nuclear submarine project. With this perspective in mind, India rather than increasing the amount of nuclear warhead production, India would use its ability to support uranium supplies and its enrichment

capacity to fuel its ongoing nuclear submarine project. There are two separate lines of criticism of the deal; the first focuses on the nonproliferation objective, and the second on India's strategic needs. The first perspective is that the agreement will weaken the global nonproliferation regime by condoning India's nuclear weapons program. The argument is that by introducing India-specific changes to global as well as domestic U.S. nonproliferation laws, it will be more difficult to prevent nuclear transfers involving other countries such as China-Pakistan and Russia-Iran. A further objection is that even with 14 reactors under safeguards, 8 others will remain on the military list, free to manufacture plutonium for several nuclear weapons annually. Additionally, critics have stated that the agreement so far does not commit India to eschew nuclear testing formally, or to end fissile material production. The second criticism comes most notably, from members of the nuclear scientific community in India, who contend that elements of the agreement would in effect cap India's nuclear program and constrain its thorium-based three stage nuclear project. They argue that while New Delhi has maintained a unilateral moratorium on nuclear testing, it does not want such a clause legalized in a bilateral treaty. The argument here is that India might have to reconsider its moratorium in the event that China or Pakistan conducts a nuclear test. The Indo-U.S. nuclear agreement also demonstrates that changes in the nuclear supplier regimes will not be restricted only to bilateral nuclear trade between the United States and India. Nuclear energy firms from several countries other than the US have already signed agreements with Indian firms for nuclear energy trade. Thus, nuclear energy companies are important players in the future of this agreement as well as the broader nonproliferation regime. Besides deals in the nuclear energy sector, the Indo- US cooperation was further extended to defence and strategic partnerships. Therefore, the study shows that its implications go well beyond the nuclear energy sector.

The study further reveals that proliferation dynamics in the subcontinent are affected by numerous factors centered around

security issues, regional and global power politics, and domestic considerations. While both India and Pakistan realize the need to support nonproliferation efforts, agendas driven by national interests take priority. This is especially so considering that long-standing territorial disputes in South Asia have not yet been resolved despite sustained peace talks. Broadly speaking, proliferation dynamics in South Asia are driven by a need to establish some measure of relative parity against their principal adversaries-India against China and Pakistan against India. Such competing security agendas ensure that nuclear modernization, through production of fissile material and development of more effective delivery systems will continue for the time being. Though there have been significant confidence building measures between India and Pakistan, including an agreement on reducing nuclear risk as well as reestablishment of transport links, they have not yet brought about any significant progress on basic security disputes, such as Kashmir and terrorist violence. Similarly, Sino-Indian negotiations on resolving the border question, while reiterating the need for a long-term solution, have not made any headway. In general, concerns of negative shifts in the future balance of power persuade the protagonists to adopt a more cautious policy. Thus, the driving forces for nuclear modernization remain in place. At the same time, the threat of horizontal proliferation has not abated; even more so given the rising political instability in Pakistan and the growing strength of terrorist networks in the Waziristan area. The fact that there is still much to be uncovered about the A.Q. Khan network adds to the uncertainty.

Finally, the study reasonably surmised that US nonproliferation policy operates in the context of other foreign and security imperatives. Thus, Washington's objectives include countering the spread of terrorism from Pakistan, ensuring the safety of Islamabad's nuclear arsenal, and forming a strategic partnership with India, which would have important conventional military and nuclear cooperation components. In sum, the present state of affairs demonstrates that perceptions of national interest force

consideration of other factors apart from the ideals of nonproliferation. The study also finds that U.S. nonproliferation policy faces major challenges in South Asia, as India and Pakistan threaten to deploy deliverable nuclear arsenals. Incoherent U.S. nonproliferation policies and inappropriate influence strategies have encouraged India and Pakistan to advance their nuclear weapons capabilities. The double standard in U.S. nonproliferation policies failed to influence South Asian nuclear proliferation. Most of the non- proliferation strategies of the US were guided by political as well as economical interests. Due to this, US failed to influence both Indian and Pakistani nuclear decision making. The lack of commitment and transparency in US non- proliferation efforts again led to nuclear tests conducted by both Pakistan and India in 1998. This was interpreted as a failure of US non-proliferation policy in south Asia. After its initial rhetoric on the nuclear disarmament and nuclear security agenda, the Obama administration also failed to reverse global nuclear proliferation. The administration also failed to influence South Asian nuclear programme. The U.S. must strengthen international nonproliferation regimes and collaborate with important external actors to influence and eventually reverse nuclear proliferation in South Asia.

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ANNEXURE – I

Key Features and Full Text of the US-India 123 Agreement

KEY FEATURES:

- ▶ The actual **implementation of the agreement is years away**, even though U.S.-origin spent fuel has been accumulating in India for nearly 40 years at the U.S.-built Tarapur nuclear power station near Mumbai. India will not be able to reprocess that spent fuel until it has built at least one new dedicated reprocessing facility — a process that will take a number of years. *Article 1(3)* specifies that the U.S. consent relates to “two new national reprocessing facilities established by the Government of India.” Only in those new facilities, approved by the IAEA, can India reprocess the discharged fuel under international inspection. Any additional reprocessing facility can be added only with prior U.S. agreement.
- ▶ The United States has **retained the right to unilaterally suspend the grant of reprocessing consent to India**. This is an extension of its right, incorporated in the 123 bilateral agreement, to unilaterally suspend or terminate fuel supply or all civil nuclear cooperation with India. In fact, that is exactly what the United States did in the mid-1970s under its previous 123 agreement with India dating back to 1963. As a result of that action, the twin-reactor Tarapur plant was left high and dry. In the newest 123 agreement, the U.S. has retained the legal right to unilaterally terminate cooperation but has provided political assurances to India that such a right will be exercised only in extraordinary circumstances. A similar approach is mirrored in the reprocessing accord.

Under Article 7 of the reprocessing accord, the reprocessing consent can be suspended on grounds of “national security” or a “serious threat to the physical protection of the facility or of the nuclear material at the facility,” and if the party determines “that suspension is an unavoidable measure.” So the U.S. right to suspend reprocessing consent is unfettered. Still, the agreement’s Article 7 and the accompanying *Agreed Minute* record political assurances to India that such a right shall be exercised only in special circumstances and after careful thought. But such assurances can hold little value when the legal right to suspend reprocessing consent is explicitly recorded in the text.

It is noteworthy that the U.S. has retained the right to suspend all cooperation with India, including the withdrawal of reprocessing consent, if India were to carry out a nuclear test. The assurances that have been recorded relate only to “peaceful” nuclear activities and fuel choices by India. For example, the *Agreed Minute* states that the reference to “serious national security concerns” as a basis for suspension of reprocessing consent shall not mean or be the basis for “addressing differences between the parties on the nature of peaceful nuclear activities,” or “addressing differences with regard to fuel cycle choices,” or “the purpose of securing commercial advantage,” or “the purpose of delaying, hampering or hindering peaceful nuclear activities of the other party.” The United States thus can continue to hold India to a no-test obligation.

- Another feature of the agreement is that it amplifies India’s reprocessing obligations with the IAEA, including to provide facility-design information in advance and to allow unhindered international monitoring and verification (*Article 2*). But in addition, the accompanying *Agreed Minute* **obligates India to permit U.S. “consultations visits” to each dedicated reprocessing facility**. Every “visiting team of not more than 10 persons” will be permitted on-site access “at a time and duration mutually agreed by the parties.”

- ▶ The agreement **relates only to U.S. reprocessing consent, not to transfer of reprocessing technology and equipment.** Unlike America's arrangements with Japan and Euratom, the arrangements with India (as reflected in the 123 bilateral agreement and the domestic Hyde Act) exclude transfer of enrichment and reprocessing technology even under international safeguards.
- ▶ The agreement does not provide for an international arbitral tribunal to resolve any differences or disputes — a provision found in the U.S.-Japan arrangements. It **only provides for bilateral consultations** — a mechanism where the cards will be stacked in favor of the supplier state and against the recipient state. Any compensation payable to India for a unilateral U.S. suspension of reprocessing consent will depend entirely on American willingness to do so. The agreement states that, "In case the suspension extends beyond a period of six months, both parties shall enter into consultations on compensation for the adverse impact on the Indian economy due to disruption in electricity generation and loss on account of disruption of contractual obligations." So, the agreement is to "consult" over compensation, not to actually compensate India. If the U.S. eventually agrees to pay any compensation, the amount will be determined by it.
- ▶ **India's obligations remain in perpetuity.** U.S. suspension of reprocessing consent will not free India of any of its obligations under the 123 agreement. This is recorded in *Article 7(8)*. That, again, is an extension of what the 123 agreement states explicitly.
- ▶ The agreement employs the term, "**U.S.-obligated**," instead of "U.S.-origin," nuclear material to help broaden coverage. Because U.S.-built reactors and the dedicated reprocessing facilities would be both under IAEA safeguards, India could — in the event the U.S. cut off fuel supply and suspended reprocessing consent — use other foreign-origin

fuel to run those plants and then reprocess their discharged fuel. To preclude that possibility, the term, "U.S.-obligated," has been used in the reprocessing agreement to include the use of both U.S.-origin reactors and U.S.-origin fuel. So, if the U.S. were to suspend its fuel shipments and reprocessing consent, India would not be able to reprocess spent fuel of other foreign origin. That helps increase the costs for India of any suspension.

In sum, India has a deal under which it got no legally binding fuel-supply guarantee to avert a Tarapur-style fuel cut-off; no irrevocable reprocessing consent; and no right to withdraw from its obligations under any circumstance, although the U.S. has reserved the right for itself to suspend or terminate the arrangements if it holds India not to be in compliance with the stipulated terms. Moreover, the continuation of the deal will hinge on India not conducting a nuclear test ever again. These are the four "no"s embedded in the deal.

In fact, **this is the first case in world history where one nuclear-weapons state has used a civilian cooperation deal to impose a weapons-related prohibition on another nuclear-weapons state**, which has only a rudimentary nuclear military capability. It is apparent that chances are virtually zero of India ever becoming a nuclear-weapons power in the same league as China, the U.S., Britain, France and Russia, in terms of having an intercontinental-range thermonuclear capability. India, at best, can be a second-tier nuclear-weapons state that in due course would, hopefully, develop sufficient but regionally-confined nuclear capability to deter its main security challenge, China.

As far as the reprocessing accord is concerned, the U.S. has got what it wanted. For example, the State Department had earlier notified Congress in writing that "the proposed arrangements and procedures with India will provide for withdrawal of reprocessing consent" by the U.S. That is exactly what the text of the accord

provides. Also by providing for U.S. “consultations visits,” the accord effectively permits IAEA-plus inspections.

That means the U.S. Congress is unlikely to exercise the right to reject the reprocessing accord through a joint resolution of disapproval passed by both chambers — a high bar in any case. Section 201 (titled "Procedures Regarding a Subsequent Arrangement on Reprocessing") of the U.S. legislation ratifying the nuclear deal with India, the 2008 United States-India Nuclear Cooperation Approval and Nonproliferation Enhancement Act, reads as follows:

- (a) In General- Notwithstanding section 131 of the Atomic Energy Act of 1954 (42 U.S.C. 2160), no proposed subsequent arrangement concerning arrangements and procedures regarding reprocessing or other alteration in form or content, as provided for in Article 6 of the Agreement, shall take effect until the requirements specified in subsection (b) are met.
- (b) Requirements- The requirements referred to in subsection (a) are the following:
 - (1) The President transmits to the appropriate congressional committees a report containing—
 - (A) the reasons for entering into such proposed subsequent arrangement;
 - (B) a detailed description, including the text, of such proposed subsequent arrangement; and
 - (C) a certification that the United States will pursue efforts to ensure that any other nation that permits India to reprocess or otherwise alter in form or content nuclear material that the nation has transferred to India or nuclear material and by-product material used in or produced through the use of nuclear material, non-nuclear material, or

equipment that it has transferred to India requires India to do so under similar arrangements and procedures.

- (2) A period of 30 days of continuous session (as defined by section 130 g.(2) of the Atomic Energy Act of 1954 (42 U.S.C. 2159 (g)(2)) has elapsed after transmittal of the report required under paragraph (1).
- (c) Resolution of Disapproval- Notwithstanding the requirements in subsection (b) having been met, a subsequent arrangement referred to in subsection (a) shall not become effective if during the time specified in subsection (b)(2), Congress adopts, and there is enacted, a joint resolution stating in substance that Congress does not favor such subsequent arrangement. Any such resolution shall be considered pursuant to the procedures set forth in section 130 i. of the Atomic Energy Act of 1954 (42 U.S.C. 2159 (i)), as amended by section 205 of this Act.

Full Official Text:

The following is the text of the Agreement for Cooperation between the Government of the United States of America and the Government of India concerning peaceful uses of nuclear energy (123 Agreement):

**AGREEMENT FOR COOPERATION BETWEEN
THE GOVERNMENT OF THE UNITED STATES OF
AMERICA AND THE GOVERNMENT OF
INDIA CONCERNING PEACEFUL USES OF NUCLEAR
ENERGY (123 AGREEMENT)**

The Government of India and the Government of the United States of America, hereinafter referred to as the Parties,

RECOGNIZING the significance of civilian nuclear energy for meeting growing global energy demands in a cleaner and more efficient manner;

DESIRING to cooperate extensively in the full development and use of nuclear energy for peaceful purposes as a means of achieving energy security, on a stable, reliable and predictable basis;

WISHING to develop such cooperation on the basis of mutual respect for sovereignty, non-interference in each other's internal affairs, equality, mutual benefit, reciprocity and with due respect for each other's nuclear programmes;

DESIRING to establish the necessary legal framework and basis for cooperation concerning peaceful uses of nuclear energy;

AFFIRMING that cooperation under this Agreement is between two States possessing advanced nuclear technology, both Parties having the same benefits and advantages, both committed to preventing WMD proliferation;

NOTING the understandings expressed in the India - U.S. Joint Statement of July 18, 2005 to enable full civil nuclear energy cooperation with India covering aspects of the associated nuclear fuel cycle;

AFFIRMING their support for the objectives of the International Atomic Energy Agency (IAEA) and its safeguards system, as applicable to India and the United States of America, and its importance in ensuring that international cooperation in

development and use of nuclear energy for peaceful purposes is carried out under arrangements that will not contribute to the proliferation of nuclear weapons or other nuclear explosive devices;

NOTING their respective commitments to safety and security of peaceful uses of nuclear energy, to adequate physical protection of nuclear material and effective national export controls;

MINDFUL that peaceful nuclear activities must be undertaken with a view to protecting the environment;

MINDFUL of their shared commitment to preventing the proliferation of weapons of mass destruction; and

DESIROUS of strengthening the strategic partnership between them;

Have agreed on the following:

ARTICLE 1 - DEFINITIONS

For the purposes of this Agreement:

- (A) "By-product material" means any radioactive material (except special fissionable material) yielded in or made radioactive by exposure to the radiation incident to the process of producing or utilizing special fissionable material. By-product material shall not be subject to safeguards or any other form of verification under this Agreement, unless it has been decided otherwise by prior mutual agreement in writing between the two Parties.
- (B) "Component" means a component part of equipment, or other item so designated by agreement of the Parties.
- (C) "Conversion" means any of the normal operations in the nuclear fuel cycle, preceding fuel fabrication and excluding enrichment, by which uranium is transformed from one chemical form to another - for example, from uranium

hexafluoride (UF₆) to uranium dioxide (UO₂) or from uranium oxide to metal.

- (D) "Decommissioning" means the actions taken at the end of a facility's useful life to retire the facility from service in the manner that provides adequate protection for the health and safety of the decommissioning workers and the general public, and for the environment. These actions can range from closing down the facility and a minimal removal of nuclear material coupled with continuing maintenance and surveillance, to a complete removal of residual radioactivity in excess of levels acceptable for unrestricted use of the facility and its site.
- (E) "Dual-Use Item" means a nuclear related item which has a technical use in both nuclear and non-nuclear applications.
- (F) "Equipment" means any equipment in nuclear operation including reactor, reactor pressure vessel, reactor fuel charging and discharging equipment, reactor control rods, reactor pressure tubes, reactor primary coolant pumps, zirconium tubing, equipment for fuel fabrication and any other item so designated by the Parties.
- (G) "High enriched uranium" means uranium enriched to twenty percent or greater in the isotope 235.
- (H) "Information" means any information that is not in the public domain and is transferred in any form pursuant to this Agreement and so designated and documented in hard copy or digital form by mutual agreement by the Parties that it shall be subject to this Agreement, but will cease to be information whenever the Party transferring the information or any third party legitimately releases it into the public domain.
- (I) "Low enriched uranium" means uranium enriched to less than twenty percent in the isotope 235.

- (J) "Major critical component" means any part or group of parts essential to the operation of a sensitive nuclear facility or heavy water production facility.
- (K) "Non-nuclear material" means heavy water, or any other material suitable for use in a reactor to slow down high velocity neutrons and increase the likelihood of further fission, as may be jointly designated by the appropriate authorities of the Parties.
- (L) "Nuclear material" means (1) source material and (2) special fissionable material. "Source material" means uranium containing the mixture of isotopes occurring in nature; uranium depleted in the isotope 235; thorium; any of the foregoing in the form of metal, alloy, chemical compound, or concentrate; any other material containing one or more of the foregoing in such concentration as the Board of Governors of the IAEA shall from time to time determine; and such other materials as the Board of Governors of the IAEA may determine or as may be agreed by the appropriate authorities of both Parties. "Special fissionable material" means plutonium, uranium-233, uranium enriched in the isotope 233 or 235, any substance containing one or more of the foregoing, and such other substances as the Board of Governors of the IAEA may determine or as may be agreed by the appropriate authorities of both Parties. "Special fissionable material" does not include "source material". Any determination by the Board of Governors of the IAEA under Article XX of that Agency's Statute or otherwise that amends the list of materials considered to be "source material" or "special fissionable material" shall only have effect under this Agreement when both Parties to this Agreement have informed each other in writing that they accept such amendment.
- (M) "Peaceful purposes" include the use of information, nuclear material, equipment or components in such fields as research, power generation, medicine, agriculture and industry, but do not

include use in, research on, or development of any nuclear explosive device or any other military purpose. Provision of power for a military base drawn from any power network, production of radioisotopes to be used for medical purposes in military environment for diagnostics, therapy and sterility assurance, and other similar purposes as may be mutually agreed by the Parties shall not be regarded as military purpose.

- (N) "Person" means any individual or any entity subject to the territorial jurisdiction of either Party but does not include the Parties.
- (O) "Reactor" means any apparatus, other than a nuclear weapon or other nuclear explosive device, in which a self-sustaining fission chain reaction is maintained by utilizing uranium, plutonium, or thorium or any combination thereof.
- (P) "Sensitive nuclear facility" means any facility designed or used primarily for uranium enrichment, reprocessing of nuclear fuel, or fabrication of nuclear fuel containing plutonium.
- (Q) "Sensitive nuclear technology" means any information that is not in the public domain and that is important to the design, construction, fabrication, operation, or maintenance of any sensitive nuclear facility, or other such information that may be so designated by agreement of the Parties.

ARTICLE 2 - SCOPE OF COOPERATION

1. The Parties shall cooperate in the use of nuclear energy for peaceful purposes in accordance with the provisions of this Agreement. Each Party shall implement this Agreement in accordance with its respective applicable treaties, national laws, regulations, and license requirements concerning the use of nuclear energy for peaceful purposes.
2. The purpose of the Agreement being to enable full civil nuclear energy cooperation between the Parties, the Parties may pursue cooperation in all relevant areas to include, but not

limited to, the following:

- a. Advanced nuclear energy research and development in such areas as may be agreed between the Parties;
 - b. Nuclear safety matters of mutual interest and competence, as set out in Article 3;
 - c. Facilitation of exchange of scientists for visits, meetings, symposia and collaborative research;
 - d. Full civil nuclear cooperation activities covering nuclear reactors and aspects of the associated nuclear fuel cycle including technology transfer on an industrial or commercial scale between the Parties or authorized persons;
 - e. Development of a strategic reserve of nuclear fuel to guard against any disruption of supply over the lifetime of India's reactors;
 - f. Advanced research and development in nuclear sciences including but not limited to biological research, medicine, agriculture and industry, environment and climate change;
 - g. Supply between the Parties, whether for use by or for the benefit of the Parties or third countries, of nuclear material;
 - h. Alteration in form or content of nuclear material as provided for in Article 6;
 - i. Supply between the Parties of equipment, whether for use by or for the benefit of the Parties or third countries;
 - j. Controlled thermonuclear fusion including in multilateral projects; and
 - k. Other areas of mutual interest as may be agreed by the Parties.
3. Transfer of nuclear material, non-nuclear material, equipment, components and information under this Agreement may be undertaken directly between the Parties or through authorized persons. Such transfers shall be subject to this Agreement and

to such additional terms and conditions as may be agreed by the Parties. Nuclear material, non-nuclear material, equipment, components and information transferred from the territory of one Party to the territory of the other Party, whether directly or through a third country, will be regarded as having been transferred pursuant to this Agreement only upon confirmation, by the appropriate authority of the recipient Party to the appropriate authority of the supplier Party that such items both will be subject to the Agreement and have been received by the recipient Party.

4. The Parties affirm that the purpose of this Agreement is to provide for peaceful nuclear cooperation and not to affect the unsafeguarded nuclear activities of either Party. Accordingly, nothing in this Agreement shall be interpreted as affecting the rights of the Parties to use for their own purposes nuclear material, non-nuclear material, equipment, components, information or technology produced, acquired or developed by them independent of any nuclear material, non-nuclear material, equipment, components, information or technology transferred to them pursuant to this Agreement. This Agreement shall be implemented in a manner so as not to hinder or otherwise interfere with any other activities involving the use of nuclear material, non-nuclear material, equipment, components, information or technology and military nuclear facilities produced, acquired or developed by them independent of this Agreement for their own purposes.

ARTICLE 3 - TRANSFER OF INFORMATION

1. Information concerning the use of nuclear energy for peaceful purposes may be transferred between the Parties. Transfers of information may be accomplished through reports, data banks and computer programs and any other means mutually agreed to by the Parties. Fields that may be covered include, but shall not be limited to, the following:

- a. Research, development, design, construction, operation, maintenance and use of reactors, reactor experiments, and decommissioning;
 - b. The use of nuclear material in physical, chemical, radiological and biological research, medicine, agriculture and industry;
 - c. Fuel cycle activities to meet future world-wide civil nuclear energy needs, including multilateral approaches to which they are parties for ensuring nuclear fuel supply and appropriate techniques for management of nuclear wastes;
 - d. Advanced research and development in nuclear science and technology;
 - e. Health, safety, and environmental considerations related to the foregoing;
 - f. Assessments of the role nuclear power may play in national energy plans;
 - g. Codes, regulations and standards for the nuclear industry;
 - h. Research on controlled thermonuclear fusion including bilateral activities and contributions toward multilateral projects such as the International Thermonuclear Experimental Reactor (ITER); and
 - i. Any other field mutually agreed to by the Parties.
2. Cooperation pursuant to this Article may include, but is not limited to, training, exchange of personnel, meetings, exchange of samples, materials and instruments for experimental purposes and a balanced participation in joint studies and projects.
 3. This Agreement does not require the transfer of any information regarding matters outside the scope of this Agreement, or information that the Parties are not permitted under their respective treaties, national laws, or regulations to transfer.

4. Restricted Data, as defined by each Party, shall not be transferred under this Agreement.

ARTICLE 4 - NUCLEAR TRADE

1. The Parties shall facilitate nuclear trade between themselves in the mutual interests of their respective industry, utilities and consumers and also, where appropriate, trade between third countries and either Party of items obligated to the other Party. The Parties recognize that reliability of supplies is essential to ensure smooth and uninterrupted operation of nuclear facilities and that industry in both the Parties needs continuing reassurance that deliveries can be made on time in order to plan for the efficient operation of nuclear installations.
2. Authorizations, including export and import licenses as well as authorizations or consents to third parties, relating to trade, industrial operations or nuclear material movement should be consistent with the sound and efficient administration of this Agreement and should not be used to restrict trade. It is further agreed that if the relevant authority of the concerned Party considers that an application cannot be processed within a twomonth period it shall immediately, upon request, provide reasoned information to the submitting Party. In the event of a refusal to authorize an application or a delay exceeding four months from the date of the first application the Party of the submitting persons or undertakings may call for urgent consultations under Article 13 of this Agreement, which shall take place at the earliest opportunity and in any case not later than 30 days after such a request.

ARTICLE 5

TRANSFER OF NUCLEAR MATERIAL, NON-NUCLEAR MATERIAL, EQUIPMENT, COMPONENTS AND RELATED TECHNOLOGY

1. Nuclear material, non-nuclear material, equipment and

components may be transferred for applications consistent with this Agreement. Any special fissionable material transferred under this Agreement shall be low enriched uranium, except as provided in paragraph 5.

2. Sensitive nuclear technology, heavy water production technology, sensitive nuclear facilities, heavy water production facilities and major critical components of such facilities may be transferred under this Agreement pursuant to an amendment to this Agreement. Transfers of dual-use items that could be used in enrichment, reprocessing or heavy water production facilities will be subject to the Parties' respective applicable laws, regulations and license policies.
3. Natural or low enriched uranium may be transferred for use as fuel in reactor experiments and in reactors, for conversion or fabrication, or for such other purposes as may be agreed to by the Parties.
4. The quantity of nuclear material transferred under this Agreement shall be consistent with any of the following purposes: use in reactor experiments or the loading of reactors, the efficient and continuous conduct of such reactor experiments or operation of reactors for their lifetime, use as samples, standards, detectors, and targets, and the accomplishment of other purposes as may be agreed by the Parties.
5. Small quantities of special fissionable material may be transferred for use as samples, standards, detectors, and targets, and for such other purposes as the Parties may agree.
6. (a) The United States has conveyed its commitment to the reliable supply of fuel to India. Consistent with the July 18, 2005, Joint Statement, the United States has also reaffirmed its assurance to create the necessary conditions for India to have assured and full access to fuel for its reactors. As part of its implementation of the July 18, 2005, Joint Statement the

United States is committed to seeking agreement from the U.S. Congress to amend its domestic laws and to work with friends and allies to adjust the practices of the Nuclear Suppliers Group to create the necessary conditions for India to obtain full access to the international fuel market, including reliable, uninterrupted and continual access to fuel supplies from firms in several nations.

(b) To further guard against any disruption of fuel supplies, the United States is prepared to take the following additional steps:

- i) The United States is willing to incorporate assurances regarding fuel supply in the bilateral U.S.-India agreement on peaceful uses of nuclear energy under Section 123 of the U.S. Atomic Energy Act, which would be submitted to the U.S. Congress.
- ii) The United States will join India in seeking to negotiate with the IAEA an India-specific fuel supply agreement.
- iii) The United States will support an Indian effort to develop a strategic reserve of nuclear fuel to guard against any disruption of supply over the lifetime of India's reactors.
- iv) If despite these arrangements, a disruption of fuel supplies to India occurs, the United States and India would jointly convene a group of friendly supplier countries to include countries such as Russia, France and the United Kingdom to pursue such measures as would restore fuel supply to India.

(c) In light of the above understandings with the United States, an India-specific safeguards agreement will be negotiated between India and the IAEA providing for safeguards to guard against withdrawal of safeguarded nuclear material from civilian use at any time as well as providing for corrective measures that India may take to ensure uninterrupted operation of its civilian nuclear reactors in the event of disruption of foreign fuel supplies. Taking this into account, India will place its civilian nuclear facilities

under India-specific safeguards in perpetuity and negotiate an appropriate safeguards agreement to this end with the IAEA.

ARTICLE 6 - NUCLEAR FUEL CYCLE ACTIVITIES

In keeping with their commitment to full civil nuclear cooperation, both Parties, as they do with other states with advanced nuclear technology, may carry out the following nuclear fuel cycle activities:

- i) Within the territorial jurisdiction of either Party, enrichment up to twenty percent in the isotope 235 of uranium transferred pursuant to this Agreement, as well as of uranium used in or produced through the use of equipment so transferred, may be carried out.
- ii) Irradiation within the territorial jurisdiction of either Party of plutonium, uranium-233, high enriched uranium and irradiated nuclear material transferred pursuant to this Agreement or used in or produced through the use of non-nuclear material, nuclear material or equipment so transferred may be carried out.
- iii) With a view to implementing full civil nuclear cooperation as envisioned in the Joint Statement of the Parties of July 18, 2005, the Parties grant each other consent to reprocess or otherwise alter in form or content nuclear material transferred pursuant to this Agreement and nuclear material and by-product material used in or produced through the use of nuclear material, non-nuclear material, or equipment so transferred. To bring these rights into effect, India will establish a new national reprocessing facility dedicated to reprocessing safeguarded nuclear material under IAEA safeguards and the Parties will agree on arrangements and procedures under which such reprocessing or other alteration in form or content will take place in this new facility. Consultations on arrangements and procedures will begin within six months of a request by either Party and will be concluded within one year. The Parties agree on the application of IAEA safeguards to all

facilities concerned with the above activities. These arrangements and procedures shall include provisions with respect to physical protection standards set out in Article 8, storage standards set out in Article 7, and environmental protections set forth in Article 11 of this Agreement, and such other provisions as may be agreed by the Parties. Any special fissionable material that may be separated may only be utilized in national facilities under IAEA safeguards.

- iv) Post-irradiation examination involving chemical dissolution or separation of irradiated nuclear material transferred pursuant to this Agreement or irradiated nuclear material used in or produced through the use of non-nuclear material, nuclear material or equipment so transferred may be carried out.

ARTICLE 7 - STORAGE AND RETRANSFERS

1. Plutonium and uranium 233 (except as either may be contained in irradiated fuel elements), and high enriched uranium, transferred pursuant to this Agreement or used in or produced through the use of material or equipment so transferred, may be stored in facilities that are at all times subject, as a minimum, to the levels of physical protection that are set out in IAEA document INFCIRC 225/REV 4 as it may be revised and accepted by the Parties. Each Party shall record such facilities on a list, made available to the other Party. A Party's list shall be held confidential if that Party so requests. Either Party may make changes to its list by notifying the other Party in writing and receiving a written acknowledgement. Such acknowledgement shall be given no later than thirty days after the receipt of the notification and shall be limited to a statement that the notification has been received. If there are grounds to believe that the provisions of this sub-Article are not being fully complied with, immediate consultations may be called for. Following upon such consultations, each Party shall ensure by means of such consultations that necessary remedial measures are taken immediately. Such measures

shall be sufficient to restore the levels of physical protection referred to above at the facility in question. However, if the Party on whose territory the nuclear material in question is stored determines that such measures are not feasible, it will shift the nuclear material to another appropriate, listed facility it identifies.

2. Nuclear material, non-nuclear material, equipment, components, and information transferred pursuant to this Agreement and any special fissionable material produced through the use of nuclear material, non-nuclear material or equipment so transferred shall not be transferred or re-transferred to unauthorized persons or, unless the Parties agree, beyond the recipient Party's territorial jurisdiction.

ARTICLE 8 - PHYSICAL PROTECTION

1. Adequate physical protection shall be maintained with respect to nuclear material and equipment transferred pursuant to this Agreement and nuclear material used in or produced through the use of nuclear material, non-nuclear material or equipment so transferred.
2. To fulfill the requirement in paragraph 1, each Party shall apply measures in accordance with (i) levels of physical protection at least equivalent to the recommendations published in IAEA document INFCIRC/225/Rev.4 entitled "The Physical Protection of Nuclear Material and Nuclear Facilities," and in any subsequent revisions of that document agreed to by the Parties, and (ii) the provisions of the 1980 Convention on the Physical Protection of Nuclear Material and any amendments to the Convention that enter into force for both Parties.
3. The Parties will keep each other informed through diplomatic channels of those agencies or authorities having responsibility for ensuring that levels of physical protection for nuclear material in their territory or under their jurisdiction or control

are adequately met and having responsibility for coordinating response and recovery operations in the event of unauthorized use or handling of material subject to this Article. The Parties will also keep each other informed through diplomatic channels of the designated points of contact within their national authorities to cooperate on matters of out-of-country transportation and other matters of mutual concern.

4. The provisions of this Article shall be implemented in such a manner as to avoid undue interference in the Parties' peaceful nuclear activities and so as to be consistent with prudent management practices required for the safe and economic conduct of their peaceful nuclear programs.

ARTICLE 9 - PEACEFUL USE

Nuclear material, equipment and components transferred pursuant to this Agreement and nuclear material and by-product material used in or produced through the use of any nuclear material, equipment, and components so transferred shall not be used by the recipient Party for any nuclear explosive device, for research on or development of any nuclear explosive device or for any military purpose.

ARTICLE 10 - IAEA SAFEGUARDS

1. Safeguards will be maintained with respect to all nuclear materials and equipment transferred pursuant to this Agreement, and with respect to all special fissionable material used in or produced through the use of such nuclear materials and equipment, so long as the material or equipment remains under the jurisdiction or control of the cooperating Party.
2. Taking into account Article 5.6 of this Agreement, India agrees that nuclear material and equipment transferred to India by the United States of America pursuant to this Agreement and any nuclear material used in or produced through the use of nuclear material, non-nuclear material, equipment or components so

transferred shall be subject to safeguards in perpetuity in accordance with the India-specific Safeguards Agreement between India and the IAEA [*identifying data*] and an Additional Protocol, when in force.

3. Nuclear material and equipment transferred to the United States of America pursuant to this Agreement and any nuclear material used in or produced through the use of any nuclear material, non-nuclear material, equipment, or components so transferred shall be subject to the Agreement between the United States of America and the IAEA for the application of safeguards in the United States of America, done at Vienna November 18, 1977, which entered into force on December 9, 1980, and an Additional Protocol, when in force.
4. If the IAEA decides that the application of IAEA safeguards is no longer possible, the supplier and recipient should consult and agree on appropriate verification measures.
5. Each Party shall take such measures as are necessary to maintain and facilitate the application of IAEA safeguards in its respective territory provided for under this Article.
6. Each Party shall establish and maintain a system of accounting for and control of nuclear material transferred pursuant to this Agreement and nuclear material used in or produced through the use of any material, equipment, or components so transferred. The procedures applicable to India shall be those set forth in the India-specific Safeguards Agreement referred to in Paragraph 2 of this Article.
7. Upon the request of either Party, the other Party shall report or permit the IAEA to report to the requesting Party on the status of all inventories of material subject to this Agreement.
8. The provisions of this Article shall be implemented in such a manner as to avoid hampering, delay, or undue interference in the Parties' peaceful nuclear activities and so as to be

consistent with prudent management practices required for the safe and economic conduct of their peaceful nuclear programs.

ARTICLE 11 - ENVIRONMENTAL PROTECTION

The Parties shall cooperate in following the best practices for minimizing the impact on the environment from any radioactive, chemical or thermal contamination arising from peaceful nuclear activities under this Agreement and in related matters of health and safety.

ARTICLE 12 - IMPLEMENTATION OF THE AGREEMENT

1. This Agreement shall be implemented in a manner designed:

- a) to avoid hampering or delaying the nuclear activities in the territory of either Party;
- b) to avoid interference in such activities;
- c) to be consistent with prudent management practices required for the safe conduct of such activities; and
- d) to take full account of the long term requirements of the nuclear energy programs of the Parties.

2. The provisions of this Agreement shall not be used to:

- a) secure unfair commercial or industrial advantages or to restrict trade to the disadvantage of persons and undertakings of either Party or hamper their commercial or industrial interests, whether international or domestic;
- b) interfere with the nuclear policy or programs for the promotion of the peaceful uses of nuclear energy including research and development; or
- c) impede the free movement of nuclear material, non nuclear material and equipment supplied under this Agreement within the territory of the Parties.

3. When execution of an agreement or contract pursuant to this Agreement between Indian and United States organizations requires exchanges of experts, the Parties shall facilitate entry of the experts to their territories and their stay therein consistent with national laws, regulations and practices. When other cooperation pursuant to this Agreement requires visits of experts, the Parties shall facilitate entry of the experts to their territory and their stay therein consistent with national laws, regulations and practices.

ARTICLE 13 - CONSULTATIONS

1. The Parties undertake to consult at the request of either Party regarding the implementation of this Agreement and the development of further cooperation in the field of peaceful uses of nuclear energy on a stable, reliable and predictable basis. The Parties recognize that such consultations are between two States with advanced nuclear technology, which have agreed to assume the same responsibilities and practices and acquire the same benefits and advantages as other leading countries with advanced nuclear technology.
2. Each Party shall endeavor to avoid taking any action that adversely affects cooperation envisaged under Article 2 of this Agreement. If either Party at any time following the entry into force of this Agreement does not comply with the provisions of this Agreement, the Parties shall promptly hold consultations with a view to resolving the matter in a way that protects the legitimate interests of both Parties, it being understood that rights of either Party under Article 16.2 remain unaffected.
3. Consultations under this Article may be carried out by a Joint Committee specifically established for this purpose. A Joint Technical Working Group reporting to the Joint Committee will be set up to ensure the fulfillment of the requirements of the Administrative Arrangements referred to in Article 17.

ARTICLE 14 - TERMINATION AND CESSATION OF COOPERATION

1. Either Party shall have the right to terminate this Agreement prior to its expiration on one year's written notice to the other Party. A Party giving notice of termination shall provide the reasons for seeking such termination. The Agreement shall terminate one year from the date of the written notice, unless the notice has been withdrawn by the providing Party in writing prior to the date of termination.
2. Before this Agreement is terminated pursuant to paragraph 1 of this Article, the Parties shall consider the relevant circumstances and promptly hold consultations, as provided in Article 13, to address the reasons cited by the Party seeking termination. The Party seeking termination has the right to cease further cooperation under this Agreement if it determines that a mutually acceptable resolution of outstanding issues has not been possible or cannot be achieved through consultations. The Parties agree to consider carefully the circumstances that may lead to termination or cessation of cooperation. They further agree to take into account whether the circumstances that may lead to termination or cessation resulted from a Party's serious concern about a changed security environment or as a response to similar actions by other States which could impact national security.
3. If a Party seeking termination cites a violation of this Agreement as the reason for notice for seeking termination, the Parties shall consider whether the action was caused inadvertently or otherwise and whether the violation could be considered as material. No violation may be considered as being material unless corresponding to the definition of material violation or breach in the Vienna Convention on the Law of Treaties. If a Party seeking termination cites a violation of an IAEA safeguards agreement as the reason for notice for seeking termination, a crucial factor will be whether the IAEA

Board of Governors has made a finding of non-compliance.

4. Following the cessation of cooperation under this Agreement, either Party shall have the right to require the return by the other Party of any nuclear material, equipment, non-nuclear material or components transferred under this Agreement and any special fissionable material produced through their use. A notice by a Party that is invoking the right of return shall be delivered to the other Party on or before the date of termination of this Agreement. The notice shall contain a statement of the items subject to this Agreement as to which the Party is requesting return. Except as provided in provisions of Article 16.3, all other legal obligations pertaining to this Agreement shall cease to apply with respect to the nuclear items remaining on the territory of the Party concerned upon termination of this Agreement.
5. The two Parties recognize that exercising the right of return would have profound implications for their relations. If either Party seeks to exercise its right pursuant to paragraph 4 of this Article, it shall, prior to the removal from the territory or from the control of the other Party of any nuclear items mentioned in paragraph 4, undertake consultations with the other Party. Such consultations shall give special consideration to the importance of uninterrupted operation of nuclear reactors of the Party concerned with respect to the availability of nuclear energy for peaceful purposes as a means of achieving energy security. Both Parties shall take into account the potential negative consequences of such termination on the on-going contracts and projects initiated under this Agreement of significance for the respective nuclear programmes of either Party.
6. If either Party exercises its right of return pursuant to paragraph 4 of this Article, it shall, prior to the removal from the territory or from the control of the other Party, compensate promptly that Party for the fair market value thereof and for

the costs incurred as a consequence of such removal. If the return of nuclear items is required, the Parties shall agree on methods and arrangements for the return of the items, the relevant quantity of the items to be returned, and the amount of compensation that would have to be paid by the Party exercising the right to the other Party.

7. Prior to return of nuclear items, the Parties shall satisfy themselves that full safety, radiological and physical protection measures have been ensured in accordance with their existing national regulations and that the transfers pose no unreasonable risk to either Party, countries through which the nuclear items may transit and to the global environment and are in accordance with existing international regulations.
8. The Party seeking the return of nuclear items shall ensure that the timing, methods and arrangements for return of nuclear items are in accordance with paragraphs 5, 6 and 7. Accordingly, the consultations between the Parties shall address mutual commitments as contained in Article 5.6. It is not the purpose of the provisions of this Article regarding cessation of cooperation and right of return to derogate from the rights of the Parties under Article 5.6.
9. The arrangements and procedures concluded pursuant to Article 6(iii) shall be subject to suspension by either Party in exceptional circumstances, as defined by the Parties, after consultations have been held between the Parties aimed at reaching mutually acceptable resolution of outstanding issues, while taking into account the effects of such suspension on other aspects of cooperation under this Agreement.

ARTICLE 15 - SETTLEMENT OF DISPUTES

Any dispute concerning the interpretation or implementation of the provisions of this Agreement shall be promptly negotiated by the Parties with a view to resolving that dispute.

ARTICLE 16 - ENTRY INTO FORCE AND DURATION

1. This Agreement shall enter into force on the date on which the Parties exchange diplomatic notes informing each other that they have completed all applicable requirements for its entry into force.
2. This Agreement shall remain in force for a period of 40 years. It shall continue in force thereafter for additional periods of 10 years each. Each Party may, by giving 6 months written notice to the other Party, terminate this Agreement at the end of the initial 40 year period or at the end of any subsequent 10 year period.
3. Notwithstanding the termination or expiration of this Agreement or withdrawal of a Party from this Agreement, Articles 5.6(c), 6, 7, 8, 9, 10 and 15 shall continue in effect so long as any nuclear material, non-nuclear material, by-product material, equipment or components subject to these articles remains in the territory of the Party concerned or under its jurisdiction or control anywhere, or until such time as the Parties agree that such nuclear material is no longer usable for any nuclear activity relevant from the point of view of safeguards.
4. This Agreement shall be implemented in good faith and in accordance with the principles of international law.
5. The Parties may consult, at the request of either Party, on possible amendments to this Agreement. This Agreement may be amended if the Parties so agree. Any amendment shall enter into force on the date on which the Parties exchange diplomatic notes informing each other that their respective internal legal procedures necessary for the entry into force have been completed.

ARTICLE 17 - ADMINISTRATIVE ARRANGEMENT

1. The appropriate authorities of the Parties shall establish an

Administrative Arrangement in order to provide for the effective implementation of the provisions of this Agreement.

2. The principles of fungibility and equivalence shall apply to nuclear material and non-nuclear material subject to this Agreement. Detailed provisions for applying these principles shall be set forth in the Administrative Arrangement.
3. The Administrative Arrangement established pursuant to this Article may be amended by agreement of the appropriate authorities of the Parties.

IN WITNESS WHEREOF the undersigned, being duly authorized, have signed this Agreement.

DONE at , this day of , 200 , in duplicate.

FOR THE GOVERNMENT OF THE UNITED STATES OF AMERICA:

FOR THE GOVERNMENT OF INDIA:

AGREED MINUTE

During the negotiation of the Agreement for Cooperation between the Government of the United States of America and the Government of India Concerning Peaceful Uses of Nuclear Energy ("the Agreement") signed today, the following understandings, which shall be an integral part of the Agreement, were reached.

Proportionality

For the purposes of implementing the rights specified in Articles 6 and 7 of the Agreement with respect to special fissionable material and by-product material produced through the use of nuclear material and non-nuclear material, respectively, transferred pursuant to the Agreement and not used in or produced through the use of equipment transferred pursuant to the Agreement, such rights shall in practice be applied to that proportion of special fissionable material and by-product material produced that

represents the ratio of transferred nuclear material and non-nuclear material, respectively, used in the production of the special fissionable material and by-product material to the total amount of nuclear material and non-nuclear material so used, and similarly for subsequent generations.

By-product material

The Parties agree that reporting and exchanges of information on by-product material subject to the Agreement will be limited to the following:

- (1) Both Parties would comply with the provisions as contained in the IAEA document GOV/1999/19/Rev.2, with regard to by-product material subject to the Agreement.
- (2) With regard to tritium subject to the Agreement, the Parties will exchange annually information pertaining to its disposition for peaceful purposes consistent with Article 9 of this Agreement.

FOR THE GOVERNMENT OF THE UNITED STATES OF AMERICA:

FOR THE GOVERNMENT OF INDIA:

2007/658

(Source: US Department of State Archive)