

INDIA AND THE NUCLEAR NON- PROLIFERATION REGIMES

*Dissertation submitted to the Jawaharlal Nehru University
in partial fulfilment of the requirements for
the award of the Degree of*

MASTER OF PHILOSOPHY

BALBINDER KUMAR

**INTERNATIONAL ORGANISATION DIVISION,
CENTRE FOR INTERNATIONAL POLITICS,
ORGANISATION AND DISARMAMENT STUDIES,
SCHOOL OF INTERNATIONAL STUDIES
JAWAHARLAL NEHRU UNIVERSITY
NEW DELHI - 110067
INDIA**

1996



जवाहरलाल नेहरू विश्वविद्यालय
JAWAHARLAL NEHRU UNIVERSITY
NEW DELHI - 110067

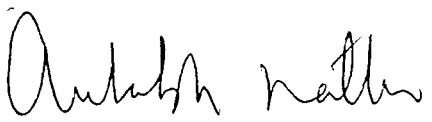
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CENTRE FOR INTERNATIONAL POLITICS,
ORGANISATION AND DISARMAMENT STUDIES
SCHOOL OF INTERNATIONAL STUDIES

July, 1996

CERTIFICATE

This is to certify that the dissertation entitled "**INDIA AND THE NUCLEAR NON-PROLIFERATION REGIMES**", which is being submitted by **BALBINDER KUMAR**, in partial fulfilment of the requirements for the award of the degree of **MASTER OF PHILOSOPHY (M.Phil.)** of this University, is her original work and has not been submitted for the award of degree of this or any other University.

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PROF. AMITABH MATTOO
(SUPERVISOR)


PROF. SURJIT MAN SINGH
(CHAIRPERSON)

Chairperson
Centre for International Politics,
Organisation and Disarmament
School of International Studies,
Jawaharlal Nehru University
New Delhi - 110 067

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ACKNOWLEDGEMENT

^{Sharma} Words can never describe my profound indebtedness ^{A.K.} to Dr. Amitabh Mattoo, my supervisor, for his invaluable/comprehensive supervision, perceptual inspiration and infinitive encouragement throughout the course of my present research. Were it not for him, my dissertation would not have seen the light of the day. ^{Messin's}

I extend my sincere thanks to Prof. S. Mansingh, Chairperson (CIPOD), School of International Studies and Dr. Kanti Bajpai of Disarmament Division, CIPOD, Jawaharlal Nehru University for their critical help in course of my dissertation writing.

I express my deep gratitude to Mr. Rajiv Nayan and Mr. Manish, Research Scholars in Disarmament Division (CIPOD), School of International Studies, JNU for their immense help in one way or the other.

I owe my profound thanks to Mr. Jaideep Tigga, Anil Rana, Rama Nayak and Dhruba Sharma of JNU who took pains to go through my draft and cooperated me by sitting for long hours.

My sincere thanks to the library staff of Jawaharlal Nehru University, Institute for Defence Studies and Analysis, Indian Council for World Affairs and Nehru Memorial Library, New Delhi who cooperated me in the collection of materials for writing dissertation.

I am by no means less thankful to Mr. Pawan Kumar and Ashok Kumar for typing my dissertation.

Finally, I must confess the affection ^{of} my family members ^{who} showered and the confidence they reposed on me impelled me to pursue my research with convincing zeal and enthusiasm.

(BALBINDER KUMAR)

CHAPTER - I

INTRODUCTION

Concern about nuclear weapons, their development, proliferation and possible use is rooted in the bombing of Hiroshima and Nagasaki on 6 and 9 August 1945. While the bombing may have brought an early end to World War II, more than a quarter of a million people died. Thousands of others and their progeny continue to suffer because of radioactive exposure during these two days.

"No more Hiroshimas!", became a rallying cry across continents. However, while nuclear weapons have proliferated, vertically and horizontally several attempts have been made to control them. On paper, the Nuclear Proliferation regime too is working towards the elimination of nuclear weapons, but is ridden with loopholes.

Although sanity has so far prevailed and no nuclear weapon state has used the nuclear weapon since the end of world war II, there is no guarantee that the future is totally safe. The threat of nuclear war continues to menace humanity. At present there are five declared nuclear weapon states (The United States, Great Britain, Russia, France and China) and three threshold nuclear weapons states (India, Israel and Pakistan). Few years back, South Africa denounced its nuclear weapons.

The term "regime" refers to collection of multi-lateral, bilateral and unilateral actions relating to the establishment, recognition and reinforcement of international norms of behaviour. The nuclear non-proliferation regime is comprised of several major treaties, extensive multi-lateral and bilateral diplomatic agreements, its own international organisation (the IAEA) and is supported by an international consensus against the further spread of nuclear weapons.¹

The principal objective of this study is to analyse the credentials and identify loopholes in the nuclear non-proliferation regime (NPT, MTCR, CTBT) along with India's nuclear policy.

Development of the Nuclear Non-Proliferation Regimes:

After the bombing of Hiroshima and Nagasaki, President Truman tried to control the proliferation of nuclear weapons in other countries. The United States had come to regard bomb as exclusively its monopoly, with their misplaced idealism Americans regarded it as the ultimate weapon that, in their responsible hands, would preserve the peace, and

1. Zachary S.Davis, "Non-Prodliferation Regimes", CRS Report for Congress, p.p 5-6.

defend freedom and democracy in the face of militant communism.²

In this way, Americans wanted to maintain their hegemony over the entire international system. But practically this was not possible. As we know, in the Manhattan Project, a large number of scientists were from Europe. Hence, the American policy of denial of nuclear technology to other countries like Britain, Canada, France and Soviet Union motivated these countries to join the nuclear race.

After the end of World War II, the United States sought an international agreement on placing of materials and activities relevant to nuclear weaponry under United Nations Custodianship. For the purpose, the Acheson-Lilienthal Plan, otherwise known as the Baruch Plan after its presenter to the United Nations in 1946, was designed. Under it, individual sovereign nations were to be denied new technology. No doubt, from its very inception, the United Nations was concerned with nuclear proliferation. The apparent fear that uncontrolled proliferation could lead to

2. William Walker and Mans Lonnroth, "Nuclear Power Struggles", (George Allen & Unwin, London 1983), p.5.

nuclear war focussed attention on the need for remedial action.³

In the Baruch Plan, the United States proposed an International Atomic Development Authority, under which all supervisions for the development and use of an atomic energy for peaceful purpose will be made. In the history of nuclear non-proliferation, this was the first step made by the United States for a nuclear non-proliferation regime.

The Baruch Plan failed due to the strained relations with the Soviet Union. As in Baruch Plan, the United States wanted to maintain its nuclear monopoly because at that time no other country in the world had nuclear weapons.

After the end of World War II, the returning of the scientists and technicians to Europe led to the spread of nuclear technology to USSR, Great Britain and France. Nuclear spies like Klaus Fuchs and other scientists gave vital information to USSR to make an Atomic Bomb.

In 1949, the American monopoly over the Atom Bomb ended. The Soviet Union exploded her first Atom Bomb simi-

3. T.T. Poulouse, "The United Nations and Arms Control", in "The United Nation and the Maintenance of International Peace and Security", (Martinus Nijhalf Pub, Dordrecht, 1987), p.387.

lar to the design of the American Plutonium Bomb at Semiplatinsk on September 23, 1949.⁴

Naturally, to maintain the hegemony of the United States, President Truman gave his consent for the development of Thermonuclear or Hydrogen Bomb on January, 31, 1950. President Truman's consent for H-bomb missed the opportunity for the United States to stop the nuclear race at its beginning either through the United Nations or through any multilateral agreement.

The President's momentous decision met with "Overwhelming approval" in the United States. Almost all the top atomic scientists, however they approved of the President's decision or not, agreed that the development of the Super-Bomb (H-Bomb) would raise new threats to civilisation and human survival.⁵

The first American Hydrogen-Bomb was tested at Eniwetok in the western Pacific on November 1, 1952, but within a year on August 8, 1953, Premier Malenkov disclosed that the Soviet Union also had acquired the thermo nuclear capability. Now the vertical nuclear proliferation between the two super powers accelerated with a very high momentum.

4. Norman. D. Palmer and Howard. C. Perkins, "International Relations", (CBS Publ., Delhi, 1985), p.722.

5. *ibid.*, pp.722-723.

The other countries which also joined nuclear club in the first two decades of an Atomic Age were "the United Kingdom (October 3, 1952), France (February, 13, 1960) and China (October, 16, 1964)."⁶ Therefore, the question regarding the 'nth nation problem' and nuclear proliferation became a hot discussion in the international conferences. Thus, at this crucial time for nuclear non-proliferation and disarmament, the United States and the Soviet Union started thinking seriously. As the Cold War was going, even though these two countries started negotiating with each other to form a nuclear non-proliferation regime under the banner of the United Nations.

No doubt, the first positive step in this direction was taken long back in 1946, in the first session of the United Nations General Assembly, when the resolution 1(i) was unanimously passed on January 24, to establish an Atomic Energy commission,⁷ to deal with the problem of nuclear arms control and to exchange basic nuclear scientific information among all nations for peaceful purposes. The commission was to report to the security council and to make specific proposals -

6. *ibid.*, p.722.

7. General Assembly official Record, First Session, Resolution 1(1), 1946.

- (a) for extending between all nations the exchange of basic scientific information for peaceful ends.
- (b) for control of atomic energy to the extent necessary to ensure its use only for peaceful purposes.
- (c) for the elimination from national armament of atomic weapons and of all other major weapons adaptable to mass destruction.
- (d) for effective safeguards by way of inspection and other means to protect states against the hazards of violations and evasions.⁸

This initiative was taken by the United States under the banner of the United Nations to prevent other countries to develop nuclear weapons. Again, on June 14, 1946, in the United Nations General Assembly, the United States presented its Baruch Plan, to establish an Authority independent of the United Nations Security Council's veto power to deal with the use of nuclear energy for peaceful and military purpose. In this plan, the U.S. wanted to retain its nuclear monopoly until it was not fully satisfied that the authority had become fully efficient to stop the nuclear arm manufacturing in the world. At that time, the Soviet Union

8. Julie. Dahlitz, "Nuclear Arms Control", (George Allen and Unwin, London, 1983), p.11.

was a non-nuclear weapon state therefore it proposed Gromyko Plan to oppose Baruch Plan. In this plan, Soviet Union proposed that firstly, the United States destroy its existing nuclear weapons and stockpiles and then make commitment not to make and use nuclear weapons. Secondly, an Authority will work under the banner of the United Nations and subjected to the security council's veto power. As both these countries had no faith in each other; both plans failed. The adamant nature of both countries not to cooperate with each other to achieve elimination of nuclear arsenal resulted in the failure of earliest United Nations efforts to constitute a nuclear non-proliferation regime at the very beginning of nuclear arms race.

Although America proposed to form an Atomic Energy Commission, as mentioned in the Baruch Plan, the real objective of the U.S. seemed to follow its policy of nuclear denial to other countries, especially the Soviet Union. The U.S. wanted to prevent Soviet Union from gaining nuclear advantage. On the other hand Soviet Union wanted to destroy the American monopoly on nuclear weapons as early as possible. The main reason for this struggle was their ideological incompatibilities.

In 1949, when Soviet Union tested its first nuclear weapon capability, it withdrew itself from the United

Nations Atomic Energy Commission. The U.S. proceeded for thermonuclear test. The step gave rise to future vertical proliferation of nuclear weapons. Again, in 1950, the Korean war, made the relations between these two superpowers from bad to worse. In this period of great international tension Great Britain acquired its nuclear weapon capability. As Atomic Energy Commission failed to achieve any of its objectives, it was dissolved and in its place Disarmament Commission came into existence on 11 January 1952. The mandate of the Disarmament Commission was to work towards effective control of nuclear proliferation and the peaceful use of atomic energy. For this, the recommendations put forward by Western States emphasised the need for disclosure, verification, inspection and international control of both nuclear and conventional arms. The Soviet Union, on the other hand, stressed the preliminary requirement to eliminate and prohibit all atomic weapons, justifying its stance by drawing attention to the alleged great preponderance of combined Western military might in relation to that of the Soviet Union and its allies.⁹

In the year 1953, on December 8, President Eisenhower offered the 'Atoms for Peace', proposal in the United

9. *ibid.*, p.12.

Nations General Assembly, recommended the establishment of the International Atomic Energy Agency (IAEA). By this proposal America reversed its policy of denial of nuclear technology. Internationally, "Atoms for Peace" involved the transfer of some knowledge, materials and technology to industrial and industrialising nations, backed by the U.S aid, on the condition that the U.S safeguards be applied.¹⁰ Actually, "Atoms for Peace" proposal was aimed to attract developing countries to counter act Soviet Unions efforts to give nuclear assistance to other countries.

Therefore, "Atoms for Peace" proposal was not only a nuclear non-proliferation tool but also a gift to explore nuclear energy for peaceful purposes. For the use of nuclear energy for peaceful purposes an international conference was held in Geneva in 1955. Also, by this time the nuclear weapon states (NWSs) recognised their cooperation to stop horizontal and vertical proliferation of nuclear weapons. As a result, even during the unrest in Eastern Europe and during the Suez crisis, the negotiations were carried out for the establishment of the IAEA. The statute of the

10. William Walker and Mans. Lonroth, "Nuclear Power Struggles", (George Allen and Unwin, London, 1983), p.10.

International Atomic Energy Agency (IAEA) came into force on 29 July, 1957.¹¹

The IAEA, which began its operations in 1957, now has 122 member States.¹² It is an autonomous inter-government organisation having close links with the United Nations and its specialised agencies. The IAEA gives the report of its annual working in the United Nations General Assembly. According to the Agency's Statute, the IAEA is committed to promote and develop the contributions that the nuclear energy can make towards world peace, health and prosperity.

To carry out its mandate, the IAEA has developed safeguards to ensure that material is not diverted from peaceful uses to build nuclear weapons or nuclear explosive devices. All IAEA safeguards procedures require that relevant state to submit to IAEA review : (1) Design information about its nuclear facilities, existing or planned, (2) Full and accurate accounting reports relating to nuclear materials subject to safeguards, (3) Special reports in the unusual or unexpected circumstances specified in the safeguards agree-

11. Zachary S. Davis, "Non-Proliferation Regimes", CRS Report for Congress, April 1, 1991, p.8.

12. The United Nations and Nuclear non-Proliferation, (UN Publication, New York, 1995), Blue Books Series, vol. - III, p.14.

ment. There are in total 199 IAEA safeguards agreements in force with 118 states, covering some 800 facilities.¹³

The IAEA inspectors regularly inspect the nuclear facilities of member states to verify the disposition of nuclear materials and to assure that safeguarded materials have not been diverted for making nuclear weapons. Thus, "the IAEA was the first concrete step in building a nuclear non-proliferation regime."¹⁴

Also, in 1957, the European Atomic Energy Community (Euratom) came into existence. It was an agreement between European countries. One of the important objectives of Euratom was to control nuclear arms. It was under the Euratom treaty that the concept of full scope safeguards which was later to become a general goal of non-proliferation policy was first put into practice.¹⁵

The further step to develop a nuclear non-proliferation regime under the banner of the United Nations came as a result of famous historic Irish Resolutions in General

13. *ibid.*, pp.14-15.

14. T.T. Poulouse, "The United Nation and Arms Control : Nuclear Proliferation", in, The United Nations and the Maintenance of International Peace and Security, (Martinus Nijhoff Pub, Dordrecht, Boston, Lancaster, 1987). p.388.

15. William Walker and Mans Lonroth, "Nuclear Power Struggles", p.13.

Assembly in the years, 1958-61. The Antarctica Treaty, 1959, the Space treaty, 1967, and the Sea-bed Treaty, 1972 were also important treaties to strengthen nuclear non-proliferation.

But, it was the first nuclear explosion by France on 13 February 1960, that compelled the United States, Soviet Union and the U.K to sign the Partial Test Ban Treaty (PTBT) on 5 August 1963. Although, PTBT gained wide membership but was considered an insufficient control over nuclear weapons development. It was limited to explosions in the atmosphere and under water and did not cover nuclear trade and safeguarding.¹⁶ No doubt, PTBT was insufficient as it did not banned underground nuclear tests, even then it is regarded as a good step towards controlling nuclear Proliferation.

Again, in 1964, the first explosion by China forced all the nuclear weapon states to come closer for negotiations to stop further horizontal nuclear proliferation. Negotiations carried out in the Eighteen Nation Disarmament Committee (ENDC) were basically concentrated on the nuclear proliferation.

On November 23, 1965, the General Assembly adopted Resolution 2028 (xx), on the non-proliferation question.

16. *ibid.*, p.16.

This was the document which expresses the point of view of non-nuclear weapon states as it encenciated the five principles central to non-proliferation treaty.

- (i) The treaty should be void of any loopholes which might permit nuclear or non-nuclear powers to proliferate directly or indirectly, nuclear weapons in any form,
- (ii) The treaty should embody an acceptable balance of mutual responsibilities and obligations of the nuclear and non-nuclear powers,
- (iii) The treaty should be a step towards the achievement of general and complete disarmament and, more particularly nuclear disarmament,
- (iv) There should be acceptable and workable provisions to ensure the effectiveness of the treaty,
- (v) Nothing in the treaty should adversely affect the right of any group of states to conclude regional treaties in order to ensure the total absence of nuclear weapons in their respective territories.¹⁷

On 5 March 1970, Treaty on the Non-Proliferation of Nuclear Weapons entered into force. On the basis of the Treaty, a global non-proliferation regime has been estab-

17. G.A.O.R, Twentieth Session, 1965, Plenary Meeting, 1382nd Meeting.

lished, supported by the safeguard systems of the International Atomic Energy Agency (IAEA), which operates to prevent the diversion of nuclear material to military or other prohibited activities.¹⁸

The roots of the Nuclear Non-Proliferation Treaty can be traced to the 1958 Irish proposal in the U.N. General Assembly on preventing the spread of nuclear weapons.¹⁹

Article VII of the NPT, merely confirms the rights of parties to set up nuclear weapon free zones. The Treaty of Tlatelolco which entered into force on 22 April 1968 prohibit Nuclear weapons in Latin America. Also, on 11 December 1986, the Treaty of Rarotonga was entered into force to make South Pacific nuclear free zone. The draft of the NPT, split the world into Nuclear weapon States (NWSs) and Non-Nuclear Weapon States (NNWSs). It permits NWSs (those which has manufactured and exploded a nuclear weapon/device before January 1, 1967) could continue with their manufacture, stockpiling and improving of nuclear devices. Although, NPT have many loopholes, but the NPT, which seeks to freeze the number of nuclear weapon states at five. On May 11, 1995, the NPT was extended for an indefinite period. In all 178

18. The UN. Disarmament Year Book, Vol. 18, 1993, p.11.

19. G.A.O.R. Tenth Session, 751st Plenary meeting Agenda item 64, 70 and 72, 1958.

states are now signatories to the treaty. So, it is regarded as one of the main component of nuclear non-proliferation regimes. Also, Zangger Committee, 1971 and Nuclear Supplies Group (London Club), 1977 works to reinforce and helps in the implementation of nuclear non-proliferation regimes by strict guidelines regarding nuclear trade.

On April 16, 1987, the United States with Canada, France, West Germany, Italy, Japan and the United Kingdom formed the Missile Technology Control Regime (MTCR) to prevent the proliferation of nuclear weapons and other weapons of mass destruction by limiting the proliferation of vehicle capable of delivering them. Since, its formation, twenty eight countries are party to this regime.

Under the regime, member states agree to crease exporting technologies and equipment that could be used to produce missile with a range beyond 300 kilometers and a payload in excess of 500 kilograms.

Similarly, like NPT, MTCR is regarded as a second main component of nuclear non-proliferation regimes.

The third component of the nuclear non-proliferation regime, yet to be concluded under the banner of the United Nations is Comprehensive Test Ban Treaty (CTBT).

The CTBT is envisaged in the preamble of both the Partial Test Ban Treaty and the nuclear non-proliferation Treaty. For the last four years negotiations are going in the conference on Disarmament (CD) at Geneva to adopt CTBT. In January 1996, an Adhoc Committee was set up by the CD to make a proposed draft to sign CTBT. A Ban on nuclear testing is the only measure to prevent further nuclear proliferation. If CTBT is to be signed without loopholes, it will have a significant impact on nuclear disarmament. Thus, CTBT is regarded as the third main component of nuclear non-proliferation regimes.

India's Nuclear Policy

At the time of independence, the importance of harnessing the power of the atom for the country's growing energy requirements was realized by Indian policy makers. Homi Bhabha, the architect of India's nuclear programme, visualized the possibility of nuclear energy being used for civilian industrial use at a time when scientists in the west were working solely on its military application.²⁰ In 1948, Atomic Energy Commission (AEC) was set up to lay down policies on use of atomic energy for peaceful applications. The AEC was restructured in 1958 and made an autonomous

20. Brahma Chellancy, "Nuclear proliferation, The US-Indian Conflict", (Orient Longman, New Delhi, 1993), p.1.

organisation empowered to frame policy and execute policy actions without seeking the concurrence-as other agencies need to do of the Union Cabinet.²¹

Nuclear diplomacy is the domain of the external affairs ministry, but national nuclear policy is virtually the exclusive prerogative of the prime Minister, who relies heavily on the country's top nuclear scientists for guidance. Contribution of other executive departments and agencies, like the intelligence organisation, to nuclear policy-making is limited.²² Jawahar Lal Nehru, India's first PM was a pioneer in propagating the idea for nuclear disarmament world-wide, which include the nuclear test ban. As early as 1954, in a message transmitted to the Secretary General of the United Nations, Nehru suggested a 'Standstill Agreement' to suspend the testing of nuclear weapons.²³

The moral theme of India's official nuclear policy has remained fixed on the following principles:

21. *ibid.*, p.3.

22. Brahma Chellancy, "India", in Nuclear Proliferation after the Cold War, ed. Mitchell Reiss and Robert S. Litwak, (The Woodrow willson Center Press, Washington, 1994) p. 168.

23. David Cortright and Amitabh Mattoo, "India and the Bomb", (Univ. of Notre Dame Press, Nortre Dame, 1996), p.7.

- A strong commitment to the peaceful uses of nuclear energy, and the development of a broad-based indigenous nuclear program;
 - Rejection of the military uses of nuclear energy;
 - Active support for the Liberal pacifist critique of nuclear weapons and their attendant dangers;
- Emphasis on equity, fairness, and justice in the negotiation of international agreements on nuclear non-proliferation.²⁴

India has been under tremendous pressure for a long time to become a party to nuclear non-proliferation regime and sign Nuclear non-proliferation Treaty (NPT) mainly by the United States and its allies. This pressure increased when it carried out its first under ground nuclear experiment for peaceful purposes in the Pokharan range of Rajasthan desert on 18 May 1974.

Nationalism, threat perceptions, and long-term strategic vision have been important elements in India's pursuit of advanced technology. The South Asian subcontinent is one of the most volatile regions of the world because of numerous interstate and intrastate conflicts, most of them rooted in its history and in the artificial borders created

24. *ibid.*, p.8.

by the British in 1947. The colonially demarcated boundaries took little account of history, natural geography, or national security considerations of the states being given independence.²⁵ India shares borders with China a declared nuclear state and Pakistan, a threshold nuclear state. With these countries India has fought four major wars in the past forty-five years.

According to India, nuclear non-proliferation regimes (NPT, MTCR, CTBT) legitimise the nuclear weapons and sophisticated missiles in the hands of the five nuclear weapon states. India has been consistently taking the principled stand that the correct way to deal with nuclear proliferation is to start with the elimination nuclear arsenals of the top five powers.²⁶ It has been maintaining the regimes as discriminatory, so it has refused to become party to it.

The five nuclear weapon powers were estimated to hold a stock of over 65,000 nuclear warheads in 1991. The arms control agreements signed since then required 20,000

25. Brahma Chellaney, "India", in Nuclear Proliferation after the Cold War, Mitchell Reiss and Robert S. Litwak., (ed), (The Woodrow Press, Washington, 1994), p. 165.

26. John Cherian, "Nuclear questions," Forntline, March 10, 1995, Vol. 12, No. 5, p-48.

warheads to be destroyed by the year 2003. However, the UNDP Report on Human Development 1994 expressed concern that not a single warhead had been destroyed so far.²⁷

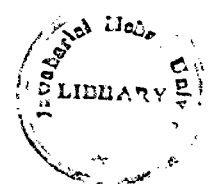
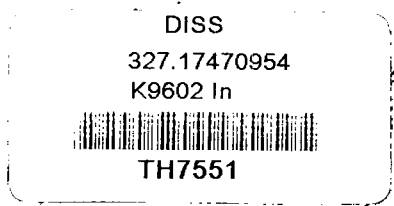
Hence, for India, it is very important to examine various issues and aspects related to non-proliferation regimes so that we can come to substantive conclusion.

In the following chapters, again, we will discuss India's nuclear policy.

ISSUE-751

For this study, primary sources used are UN documents reports such as UN year books, G.A.O.Rs, Disarmament Year books and so on reports of different news-papers, SIPRI's Year Books, variegated reports of different governments, interviews so forth. The secondary sources of my study include books, journal and news-papers. The books, which I consulted include "Nuclear proliferation after the Cold War", Edited by Mitchell Reiss and Robert S. Litwak, P. R. Chari's book, "Indo-Pak Nuclear Stand off", "India and the Bomb-Public Opinion and Nuclear Options" edited by David Cortright and Amitabh Mattoo, SIPRI's, "Nuclear Non-Proliferation and Global Order", by Harald Muller, David Fischer and Wolfgang Kotter, "Weapons of Mass Destruction", edited by Kathleen C. Bailey, "Nuclear Myths and Realities:

27. Jasjit Singh, "Introduction", cited in, Savita Pande, "The Future of NPT", (Lancer Pub., NEW Delhi, 1995). p.x.



India's Dilemma" by K. Subrahmanyam, "How Nuclear Weapons spread" by Frank Barnaby and many others. The journals I referred are survival, Mainstream, IDSA's Strategic Analysis, strategic Digest, Indian Journal of political Science, Adelphi Papers, World Focus, Foreign Affairs, Bulletin of Peace Proposals, Bulletin of the Atomic Scientist, international time and many others. The method of study used by me is analytical and historical.

The chapters of this study are:

Chapter I - Introduction.

Chapter II - Nuclear Non-Proliferation Treaty and India.

Chapter III - Comprehensive Test Ban Treaty and India.

Chapter IV - Missile Technology Control Regime and India.

Finally, the conclusion summarises the main arguments of this study about the nuclear non-proliferation Regimes and India's opinion.

CHAPTER - II

NUCLEAR NON-PROLIFERATION TREATY AND INDIA

A Historical Overview of NPT in the United Nations:

The Nuclear Non-Proliferation Treaty (NPT), which entered into force on March 5, 1970, was extended for an indefinite period on May 11, 1995, at the United Nations, New York. The decision was taken in accordance with the NPT, Article X-2, which states that "Twenty-five years after the entry into force of the treaty, a conference shall be convened to decide whether the treaty should continue in force or shall be extended for an additional fixed period or periods. This decision shall be taken by a majority of parties to the treaty".

The treaty for Non-Proliferation of Nuclear Weapons has been on the agenda of the Super Powers to deal with horizontal proliferation. This was the reason why both super powers spoke the same language and shared similar views before the NPT was signed. The United States and the Soviet Union were largely responsible for the draft treaty on non-proliferation and made the treaty a success.

The Nuclear Non-Proliferation Treaty (NPT) is the backbone of the United States sponsored nuclear non-

proliferation regime. President Bush in March 1990 stated that the "NPT represents the primary legal barrier to nuclear proliferation and thus constitute a principal foundation of international security. The NPT seeks to freeze the number of Nuclear Weapon states (NWSs) at five - the United States, Russia, the United Kingdom, France and China".¹

The indefinite extension of the NPT by 178 signatories legitimizes the possession of nuclear weapons in the hands of five Nuclear Weapon States and barred Non-Nuclear Weapons States (NNWSs) from acquiring them. Big power diplomacy mainly by the United States motivated India not to sign the NPT.

India, since independence, has been a consistent opponent of nuclear weapons. Even, before India's independence from the colonial rule the Indian leaders like Mahatma Gandhi, Jawaharlal Nehru expressed their shock over the atomic bombing of Hiroshima and Nagasaki. India's first Prime Minister Jawaharlal Nehru, in his speech on April 3, 1948, spoke, "we live in an age of crisis. One crisis follows another, and even when there is peace, it is a

1. Zachary S. Davis, "Non-Proliferation Regimes", CRS Report for Congress, 1 April 1991, p.7.

troubled peace with fear of war and preparation for war.² No doubt, in the opinion of Nehru, "whatever might happen, whatever the circumstances, Government of India shall never use atomic energy for evil purposes".³

Hence, in 1953, at the last session of the General Assembly of the United Nations, as a result of the amendment moved by the Indian delegation to the Resolution on Disarmament, there were incorporated in the resolution, the following:

- (1) An "Affirmation" by the General Assembly of its "earnest desire for the elimination and prohibition of atomic, hydrogen, bacterial, chemical and other weapons of war and mass destruction and for the attainment of these ends through effective means",
- (2) "A provision for setting up a sub-committee of the powers principally involved, to sit in private, and at places of its choosing to implement the purposes of the Disarmament Commission."⁴

2. Jawaharlal Nehru, "India's Foreign Policy", (The Publication Division, Government of India, New Delhi, 1983), p.182.

3. David Cortright & Amitabh Mattoo, (ed.) "India and the Bomb", (University of Notre Dame Press, Notre Dame, 1996), p.7.

4. Jawaharlal Nehru, "India's Foreign Policy", op.cit., p.189.

It was in response to the Irish endeavours in the United Nations, in the year 1958-61, that a concept of non-proliferation of nuclear weapons was laid down in the United Nations General Assembly resolution. This concept served as a guide to successive steps within and outside the United Nations with the intention of arresting the proliferation of nuclear weapons.⁵ The diplomatic efforts by the nuclear weapon states and the Non-Nuclear Weapons states for one decade in the United Nations and through multilateral and bilateral agreements outside the UN resulted in the Agreement over NPT in 1968.

In 1962 President Kennedy warned of the possibility that by the 1970's the United States could face a world in which about twenty-five nations may possess these weapons. Today there are five NWSs and much of the credit is given to the NPT. The United states has played an important role in the development of this regime.

In 1958, The Irish proposals, in the thirteenth session of the United Nations General Assembly, proposed to establish an adhoc committee to study the dangers inherent in the further dissemination of nuclear weapons and

5. Mohamed I. Shaker, "The Nuclear Non-Proliferation Treaty, Origin and Implementation (1959-1979)", Vol.I, (1980, Oceana Publications, London), p.3.

recommended to the General Assembly at its fourteenth session, appropriate measures for averting these dangers.⁶

To prevent further dissemination, the Minister for External Affairs of Ireland, Mr. Frank Aiken suggested that it was essential that the 'nuclear powers' should undertake not to transfer nuclear weapons to other states if manufacture of those weapons by the 'non-nuclear power' was to be avoided.⁷ In order to reach the widest possible agreement, he recommended to separate the question of the restriction of dissemination of nuclear weapons from that of the discontinuance of tests.

Before this historic Irish proposal, the Soviet Union had signed an agreement with China for the transfer of nuclear technology and sample materials on October 15, 1957. But, in the aftermath of the Taiwan straits crisis, when People's Republic of China tried to wrest the offshore island of Quemoy from Taiwan in 1958, the Soviet Union thought that if China possessed an Atom Bomb, there was a probability that nuclear confrontation might occur between the United States and China. This confrontation might drag them into nuclear clash. Thus, the Soviet Union refused to

6. *ibid.*, p.4.

7. G.A.O.R., 13th Session, 970 mtg., 31 Oct. 1958, para 52.

give nuclear sample materials and nuclear technology to China. The Taiwan-Strait crisis marked a significant change in the Sino-Soviet relationship and the evolution of the non-proliferation policy on part of the Soviet Union.

Though the 1958 Irish proposal did not press resolution to vote but contented itself with having brought the question to the attention of the members of the United Nations as a problem distinct from other questions of arms control and disarmament.⁸

Again in 1959, at the fourteenth United Nations General Assembly, Ireland introduced the question of prevention of the wider dissemination of nuclear weapons as a separate item in the Assembly's agenda.⁹ It also stressed that even a universal test ban would not check the actual dissemination of nuclear weapons, and that the nuclear powers should, in their own enlightened self-interest, see to it that these weapons did not spread throughout the world.

This Irish draft resolution was adopted by the General Assembly on November 20, 1959, by 68 votes to none with 26

8. Savita Pande, "The Future of NPT", (Lancer Pub., New Delhi, 1995), p.3.

9. G.A.O.R., Sixteenth Session, Agenda item 67, Document A/4 125.

abstentions. The United States and the United Kingdom supported the proposal but the Soviet Union and France did not. According to France, the only way for nuclear arms control was to stop the production of fissionable material and nuclear weapons, and the existing stockpiles were to be used for peaceful uses. The Soviet Union did not support, as in its opinion, the proposal did not deal with cases in which nuclear weapons were transferred by a nuclear power outside their country to the territory of an ally.

This opinion of the Soviet Union was due to the emergence of the United States sponsored South-East Asia Treaty Organisation (SEATO) and the Middle East Defence Organisation (MEDO). The United States succeeded in establishing a number of military bases around the Soviet Union and concluded defence treaties with forty three countries. To counteract North Atlantic Treaty Organization (NATO), the Soviet Union concluded the WARSAW TREATY with twelve East European states. It is obvious that the Soviet Union was unhappy that nuclear weapons were being placed on the European soil under the United States control. However, in 1960, after the first explosion by the France, Ireland sponsored a proposal to stop the proliferation of nuclear weapons. This time the proposal (co-sponsored by Ghana, Japan, Mexico and Morocco) went further. It called on all

governments to make every effort to achieve a permanent agreement on the prevention of wider dissemination of nuclear weapons and pending such an agreement to temporarily refrain from relinquishing control of such weapons to any nation not possessing them.¹⁰ This resolution was adopted as Resolution 1976(XVI) on December 20, 1960, by 68 votes to none with 26 abstentions. The Soviet Union supported the resolution, on the other hand the United States opposed.

Ireland again raised the question of non-dissemination in 1961, the proposal was adopted unanimously. It called for an agreement prohibiting transfer of nuclear weapons and information about manufacturing them to states not possessing them, while the latter would agree not to manufacture or otherwise acquire them.¹¹ Hence, the foundation for the NPT was laid down through Irish proposals.

It is somewhat surprising that in the late 1950s and early 1960s, the initiative for preventing the spread of nuclear weapons came from Third World countries and not from the nuclear powers.

10. G.A.O.R. Fifteenth Session Plenary Meetings, 960th meeting Dec.1960.

11. Savita Pande, op.cit., p.4.

The Soviet Union's main concern was to get the American nuclear weapons out of Central Europe, in general, and West Germany, in particular. The main concern of the U.S. and its allies was to be able to station nuclear weapons in Western Europe to offset and deter the superior Soviet conventional forces.¹²

On March 14, 1962, at Geneva Eighteen Nations Disarmament Conference (ENDC) was opened. Actually, only seventeen nations participated. France being a member abstained from all ENDC meetings. The ENDC members comprised Brazil, Bulgaria, Burma, Canada, Czechoslovakia, Ethiopia, India, Italy, Mexico, Nigeria, Poland, Romania, Sweden, the USSR, UAR, the UK, USA and France. At this conference, the draft treaties introduced by the United States and the Soviet Union was to prevent the dissemination or acquisition of nuclear weapons for the General and Complete Disarmament.

India, Sweden and Ireland were in the forefront of the non-nuclear countries urging the non-dissemination and non-acquisition of nuclear weapons. But after the Chinese nuclear explosion, the Indian position underwent a change.¹³

In 1964, at the nineteenth session of the General Assembly, India proposed an agenda item entitled "Non-

12. *ibid.*, p.5.

13. *ibid.*, p.6.

Proliferation of Nuclear Weapons". But due to conflict over payment of expenses, the Indian proposal was not adopted.

It was in 1965, during the twentieth session of the General Assembly, a resolution on the non-proliferation of nuclear weapons was adopted for the first time. It was a combined proposal by the eight non-aligned members of the ENDC. The eight nations were Brazil, Burma, Ethiopia, India, Mexico, Nigeria, Sweden and UAR. This resolution was passed by the General Assembly as Resolution 2028(XX).

The resolution proposed an international treaty to prevent the proliferation of nuclear weapons on the basis of the following five main principles:

- (a) The treaty should be void of any loopholes which might permit nuclear or non-nuclear powers to proliferate directly or indirectly, nuclear weapons in any form.
- (b) The treaty should embody an acceptable balance of mutual responsibilities and obligations of the nuclear and non-nuclear powers.
- (c) The treaty should be a step towards the achievement of general and complete disarmament and more particularly, nuclear disarmament.
- (d) There should be acceptable and workable provisions to ensure the effectiveness of the treaty.

- (e) Nothing in the treaty should adversely affect the right of any group of states to conclude regional treaties in order to ensure the total absence of nuclear weapons in their territories.¹⁴

If we examine the discussion especially in the United Nations General Assembly and in the ENDC meetings from 1958 to 1965, the following points came to light which subsequently helped the United States, Soviet Union and other non-nuclear weapon states to come forward to start negotiations for an international agreement to stop nuclear proliferation:

- (i) The danger is increasing as more states are trying to possess nuclear weapons which will aggravate international tension.
- (ii) It will be very difficult to maintain world peace if further dissemination of nuclear weapons took place. It will motivate other non-nuclear weapon states to go for nuclear weapon to able to acquire nuclear deterrence.

14. G.A.O.R., Twentieth Session, Plenary meetings, 1382 meeting, 19 November, 1965.

- (iii) Local wars, different ideologies, supremacy, trade had involved great power rivalry which might result in major war.
- (iv) The use of nuclear weapons by a nuclear state or by a revolutionary group could easily lead to nuclear war.
- (v) The danger of nuclear weapons dissemination has increased as China also joined the nuclear club in 1964.
- (vi) The transfer of nuclear weapons to other ally states was to be avoided to restrain other non-nuclear weapon states from developing nuclear weapons.
- (vii) Prevention of nuclear anarchy is very important to achieve permanent peace.
- (viii) General and complete nuclear disarmament (GCD) as proposed by the Soviet, which was included for the first time in the fourteenth session of General Assembly in 1961.
- (ix) Control of nuclear arms race through a test ban.
- (x) Creation of nuclear free zones.

As a result of these discussions, in 1964, after the Partial Test Ban Treaty (PTBT) had been achieved, negotiations on the GCD became fruitless. The USA and the

USSR each proposed an agenda on collateral measure for subsequent negotiations, which included:¹⁵

- (a) Reducing the danger of surprise attack,
- (b) Freezing, reducing and eliminating strategic delivery vehicles,
- (c) A comprehensive test ban, and
- (d) The non-proliferation of nuclear weapons.

In 1965, the Disarmament commission discussed the question of nuclear proliferation and advised the ENDC to give top priority to nuclear proliferation. In the ENDC meetings, both the US and the Soviet Union submitted their drafts on nuclear non-proliferation. These two drafts centered around the military alliances by both countries to oppose each others alliances. The Soviet Union opposed the non-proliferation treaty, as according to it, treaty would not ban all direct and indirect forms of acquisition of nuclear weapons. The Soviet Union was against the establishment of NATO's, Multilateral Nuclear Force (MNF).

But in 1966, the United States discarded the idea of MNF. According to T.T. Poulouse, this was done by the United

15. *ibid.*, p.6.

States partly due to the pressure from within the alliance partners and also to accommodate the Soviet point of view.¹⁶

On the wider scale of multilateral diplomacy, the UN General Assembly in 1966 adopted, after a laborious session on questions of disarmament and arms control, a whole set of resolutions most of which were either on non-proliferation or closely related to it. The first two resolutions were adopted under the item "Non Proliferation of Nuclear Weapons: Report of the Conference of the Eighteen Nation Committee on Disarmament".¹⁷ For discussion on the resolutions on 20 December, 1966, a preparatory committee was set up. The General Assembly adopted the resolution mentioning the non-use of nuclear weapons against states located in denuclearized zone and against states without nuclear weapons on their territories as General Assembly resolution 2153 A(XXI), 17 November, 1966.

Another resolution, basically a Pakistani view, brought before 1968 was to discuss security of the non-nuclear states and use of nuclear devices for exclusively peaceful purposes. The resolution did not gain wide support as only 48 voted for it, while 59 abstained. India was the only

16. T.T. Poulouse, "United Nations and Nuclear Proliferation", (B.R. Pub., New Delhi, 1988), p.56.

17. Mohammed, I. Shaker, "The Nuclear Non-Proliferation Treaty", p.103-104.

country to vote against it . The dominant feeling of those who abstained was that the proposed conference might prejudice the efforts of the ENDC in reaching a non-proliferation treaty.¹⁸ On the other hand, India suggested that its timing is inappropriate.

In 1966, India proposed that cut-off in production of nuclear weapons and their delivery vehicles processes could be incorporated in the NPT but the reduction in the stockpiles and fissile material could be discussed later after conclusion of the NPT treaty.

Even the two drafts advanced by the US and the USSR in draft treaties did not incorporate any arms limitation and disarmament measures other than the non-dissemination of nuclear weapons by Nuclear Weapon States (NWS) and the non-acquisition of nuclear weapons by non-nuclear weapon states. India criticised both the draft treaties. In the ENDC meetings, India called for a non-discriminatory treaty which resist all states from producing nuclear weapons and which must put legal obligations on nuclear weapon states to undertake reduction in nuclear weapons, stockpiles and delivery vehicles. India also criticised the US-Soviet draft treaty due to inadequate security guarantees, and

18. *ibid.*, p.105.

discrimination in the development of peaceful nuclear explosions.

Although India was one of the sponsors of the UN resolution in 1965 for a treaty to stop the proliferation of weapons, it did not sign the treaty. The Indian representative put forward following points for the NPT:

- (1) It should lead to genuine nuclear disarmament,
- (2) It should be fool proof and contain no loopholes,
- (3) There must be a reciprocity of obligations between nuclear weapon states and non-nuclear weapon states.
- (4) A Comprehensive Test Ban should be an integral part of the Treaty.
- (5) Nuclear fissile material cut-off must be achieved.

Nuclear Non-Proliferation Treaty (NPT)

On June 12, the United Nations General Assembly adopted resolution 2373 (XXII) by which it commended the Nuclear Non-Proliferation Treaty.¹⁹ The treaty was opened for signature on July 1, 1968 and it came into force on March 5, 1970 when, according to Article IX, the three Depositary Governments (The United States, The United Kingdom,

19. U.N. G.A. Resolution 2373 (XXII).

U.S.S.R.) and forty other states signatory to the Treaty had ratified it and deposited their instrument of ratification.²⁰

The Nuclear Non-Proliferation Treaty (NPT) is the centre piece of the non-proliferation regime.²¹ Starting from Ireland's historic resolution on the dissemination of nuclear weapons in 1958, the United Nations General Assembly after a decade concluded NPT.

The NPT consists of a preamble and eleven Articles. Let us deal with the idea envisaged in each Article.

Article I obliges each nuclear weapon state to the treaty not to transfer or assist non-nuclear weapon states to acquire nuclear weapons.

Article II obliges non-nuclear weapon states to refrain from the transfer of nuclear weapons.

Article III deals with International Safeguards. (IAEA safeguard on all peaceful nuclear activities as the verification system). It also obliges all nuclear exporters to require safeguards on nuclear materials, equipment and technology sold abroad.

20. Mohamed I. Shaker, *op.cit.* p.118.

21. T.T.Poulose, "The United Nations and Arms Control: Nuclear Proliferation", in The United Nations and the Maintenance of International Peace and Security, (Martinus Nijhoff Pub., Dordrecht, 1989, p.393.

Article IV of the NPT proclaims, "the inalienable right of all parties to the Treaty to develop research, production of nuclear energy with peaceful collaboration.

Article V deals with Peaceful Nuclear Explosions.

Article VI says about the cessation of Arm Race.

Article VII provides for the establishment of nuclear weapon free zones.

Article VIII deals with Amendment procedures and provision of Review Conferences.

Article IX deals with accession of any state to the treaty. It also defines a nuclear weapon state as one which has manufactured and exploded a nuclear device before January 1, 1967.

Article X deals with withdrawn and duration, it says any party may withdrew from the Treaty in its national interests, after a three-month notice. Reason for such withdrawn must be explained to the parties and the United Nations Security Council.

Para (2) of Article X says about the extension of treaty for a additional period or periods or come into force indefinite after completing twenty five years.

Extension of the NPT

The NPT extension on May 11, 1995, without a vote in the 1995 Review and Extension Conference held at the UN, New

York, succeeded in cementing the divisions of the world between nuclear 'haves' and 'have-nots'. Before the NPT Extension and Review Conference, four preparatory committee meetings (PrepComms) were held to decide rules, procedures and organisation of the main conference. The first preparatory committee for the conference met in New York from May 10-14, 1993. It was limited only to the signatories of NPT and the International Atomic Energy Agency (IAEA). In this New York the venue of the Conference was chosen as all the members of the UNs had their mission in this city. In this PrepComm, "the U.S. and Britain led the call for indefinite extension. France gave a call for a CTB, apparently to the annoyance of the UK and USA. Switzerland and other nordic countries talked of linking indefinite extension with the NPT. The non-aligned countries led by Mexico and Nigeria called for linkage between the NPT and disarmament measure."²²

The second Prepcomm which was also held in New York between January 17-21, 1994 the decision for the participation of non-NPT signatories and NGOs in PrepCom was taken. Also, in this PrepCom, Jayant Dhanapala of Sri Lanka

22. Savita Pande, "NPT Extension and Review Conference", Asian Strategic Review, 1994-95, IDSA, p.106.

was elected Chairman of the conference. In the discussion China criticised partial measures towards disarmament and called for pursuing complete nuclear disarmament. It said conditions were ripe for Nuclear Weapon States (NWS) to give negative security assurances and to commit to a no first use of nuclear weapons policy.²³

The third Prepcomm was held in Geneva from September 12-16, 1994. Discussions on a CTB, fissile material cut-off and security assurances were held to be included on the list of topics for agenda, but failed. Here in this Prepcomm, it was decided that after review of NPT and detailed reports from the main committee the extension decision would be taken.

The fourth Prepcomm met in New York from January 23-27, 1995. It was attended by 142 parties and 72 NGOs. The fourth Prepcomm saw extensive debate on rules of procedure.²⁴ Finally, in this committee structure for reviewing the conference was planned, which was divided in three main committees.

In the main committee I of Review Conference, Article I and II of NPT and first to third preambular paragraphs were reviewed which cover cessation of nuclear arms race, nuclear

23. *ibid.*, p.106.

24. *ibid.*, p.107.

disarmament, comprehensive test ban treaty, ban on the production of fissile material, general and complete disarmament.²⁵ The committee observed that there has been some progress towards the achievement of the purposes and objectives of Treaty but called for further disarmament negotiations in which all nuclear states take part.

In the Main Committee II, review of Article III was discussed to further strengthen IAEA was taken along with review of Article VII, which affirms the right of any group of states to conclude regional treaties in order to ensure the total absence of nuclear weapons in their respective territories.²⁶

Again in the Main Committee III, issues on nuclear safety, technical cooperation for peaceful use of nuclear energy, conversion of nuclear materials to peaceful uses and review of Article V, Article IX was discussed.²⁷

As, the final resolution (NPT/CONF. 1995/L8) on the NPT call on all non-signatories. Particularly those with unsafeguarded facilities - a reference to India, Pakistan and Israel - to join the NPT without delay.

25. NPT/CONF. 1995/MC 1/1.

26. NPT/CONF. 1995/MC.11/1.

27. NPT/CONF. 1995/MC.111/1.

According to India's Ambassador to the UN Prakash Shah, the NPT may have won indefinite extension but the cause of disarmament has been lost. India would continue to stick to its position that there should be comprehensive global disarmament.²⁸

As, the US and Britain have consistently voted in the UN General Assembly resolutions urging adoption of a convention prohibiting the use of nuclear weapons in "any circumstances". In 1960s, India's two Prime Ministers Lal Bahadur Shastri and Indira Gandhi made futile attempts in between 1964 to 1967 to secure effective guarantees in case of a nuclear attack. But neither the US nor the Soviet Union responded optimistically. Under these circumstances, it was not possible for India to sign the unequal and discriminatory NPT.

India even did not send observer to the 1990 fourth review conference of NPT nor to 1995 NPT Review and Extension conference. This is a right stand by India, as the nuclear weapon states do not want to denounce their nuclear weapons. Also, for the last twenty five years NWSs had concluded no agreement for fissile material cut-off.

28. V. Siddharth, Playing monopoly, Frontline, Vol.12, No.1, June 2, 1995, p.123.

Even upto this time all NWSs are spending huge expenditure for R&D to advance their sophisticated nuclear technology.

Hence, India's former Prime Minister Rajiv Gandhi, while addressing to the Third Special session for Disarmament of the UN General Assembly on June 9, 1988, proposed for a new treaty in place of NPT after its expiring in 1995. Universal disarmament of nuclear weapons is not possible if discriminatory NPT exists.

India's Stand

According to western view, "India's opposition to the NPT is steadfast, partly because of the residual Chinese menace, and partly because India aspires for world power status and does not accept the discrimination inbuilt in the NPT (or conversely does not wish the prestige nuclear capability purportedly gives).²⁹

No doubt, India's interest in the military application of nuclear energy gained currency after China's first nuclear test in October 1964. The event caused great alarm in India, which requires appreciation in light of the

29. Harald Muller, David Fisher and Wolfgang, "Nuclear Non-Proliferation and Global Order", (Oxford Univ. Press, SIPRI, New York, 1994), p.45.

humiliating defeat it has suffered in the Sino-India border conflict of 1962.³⁰

Homi Bhabha and Meghnad Saha visualized the possibilities about the peaceful application of atomic power. In 1942 both wrote about this in a combined paper. More than a year before Hiroshima was flattened by the destructive force of atomic energy, Bhabha declared that, "When nuclear energy has been successfully applied for power production in, say, a couple of decades from now, India will not have to look abroad for its experts, but will find them ready at home".³¹

According to Frank Barnaby, Indian nuclear scientists have been pressing for a nuclear test for years. The first proposal was apparently made to the government, and agreed to in January 1965.³² Prime Minister Lal Bahadur Shastri gave his consent to militarise India's nuclear programme by authorising subterranean Nuclear Explosion Project and research sanctioned "upto a point where, once the go ahead

30. P.R. Chari, "Indo-Pak Nuclear Stand Off: The Role of the United States", (Manohar, New Delhi, 1995), p.11.

31. Brahma Chellaney, "Nuclear Proliferation: The US-Indian Conflict", (Orient Longman, New Delhi, 1993), p.1.

32. Frank Barnaby, "How Nuclear Weapons Spread", (Routledge, London, 1993), p.73.

signal was given it would take three months to have an explosion".³³

The United States and its allies have been trying their best since 1968 to sign NPT. On the other hand the United States, as far back as 1975, turned a blind eye to Islamabad's nuclear ambitions. According to documents obtained by the Japanese news agency Kyodo in Mid September 1995, the US CIA had considerable information about the Pakistani nuclear weapons programme and the Chinese involvement in the Project. The earliest report is dated May 14, 1975 issued by the US Department of Defence Intelligence and reads:

Some time before October 1974, the PRC (China) assigned 12 scientists to assist Pakistan in developing its nuclear science.³⁴

By 1983, the United States knew that Pakistan possessed 'several' atomic bombs with Chinese help. Therefore, the USA, on one side speaks for nuclear non-proliferation regimes on the other hand silently helping Pakistan through its military aid and now through Hank Brown Amendment even though it knows Pakistan has acquired nuclear capabilities. Thus, it is very important for India to integrate Non-

33. P.R. Chari, op.cit., p.12.

34. C. Uday Bhaskar, "American Nuclear Double Speak", Mainstream, Vol.32, No.47, October, 1995, p.5.

Nuclear Weapon States (NNWSs) to fight against the hegemony of nuclear weapon states and make NPT, a non-discriminatory treaty.

Also, India has to keep in mind, the recent evolution of the nuclear doctrine of the Western powers - US, UK and France who are determined to use their nuclear capabilities to maintain their hegemony over the South. In the opinion of the UK, after the disintegration of USSR, nuclear weapons could protect its vital interests from threshold nuclear states. France also has the same view.

In the United States, targeting Third World states already appears to have become policy. According to a Greenpeace study, the US has developed a new military doctrine which explicitly sees a role for American nuclear weapons in deterring and countering weapons of mass destruction in regional contingencies around the globe.³⁵

Interestingly, India was one of the co-sponsors of the resolutions which led to coming into existence of the NPT. In 1965, it put forward the following criteria for a non-proliferation treaty.

35. C. Raja Mohan, "Nuclear Weapons Against Third World", World Focus, Vol.16, Nos.10-11-12, Oct.-Nov.-Dec. 1995, p.25.

1. An undertaking by the nuclear powers not to transfer nuclear weapons or nuclear weapon technology to others.
2. An undertaking not to use nuclear weapons against countries who do not possess them.
3. An understanding through the United Nations to safeguard the security of countries which may be threatened by powers having a nuclear weapons capability.
4. Tangible progress towards disarmament, including a comprehensive test ban treaty, a complete freeze on production of nuclear weapons and means of delivery as well as substantial reduction in the existing stocks.
5. An undertaking by the non-nuclear powers not to acquire or manufacture nuclear weapons.³⁶

India also supported the principles of non-proliferation laid down by the United Nations General Assembly in November 1965.

- (a) The treaty should be void of any loopholes which might permit nuclear or non-nuclear powers to proliferate, directly, or indirectly, nuclear weapons in any form.
- (b) The treaty should embody an acceptable balance of mutual responsibilities and obligations of the nuclear or non-nuclear powers.

36. Statement by the Indian representative to the UN Disarmament Commission, May 4, 1965, UN Document/PV 75 (ACDA Documents on Disarmament, 1965), p.142.

- (c) The treaty should be towards the achievement of general and complete disarmament, and more particularly, nuclear disarmament.
- (d) There should be acceptable and workable provisions to ensure the effectiveness of the treaty.
- (e) Nothing in the treaty should adversely affect the right of any group of states to conclude regional treaties in order to ensure the total absence of nuclear weapons in their respective territories.³⁷

From about 1966 the Indian attitude to the non-proliferation issue appreciably hardened, and India since then consistently criticised the US-Soviet draft treaty on three grounds: imbalance of obligations between the nuclear weapon powers and the non-nuclear weapon countries; inadequate security guarantees; and discrimination in the development of peaceful nuclear explosives.³⁸

India demanded a halt to vertical proliferation as quid pro quo for a stop to horizontal proliferation. India advocated a comprehensive test ban, a cut-off fissile mate-

37. ACDA, International Negotiations on the Treaty on the Non-Proliferation of Nuclear Weapons, (Washington DC, 1969) p.1.

38. Statement by Indian representative to the First Committee of the UN General Assembly, May 14, 1968, UN Document A/C PV 1567 (ACDA Documents on Disarmament, 1968) p.325.

rial for weapon purposes. Besides it opposed the discriminatory safeguards system which it thought "would hinder technological development and increase the gap between advanced and developing countries".³⁹ India, it was stated would only accept the controls applied on a universal basis. India also opposed the discrimination in the peaceful nuclear explosions-"Privilege of a few countries and denied to others".⁴⁰

Carrying these arguments further, the Indian representative to the First Committee of the General Assembly said in May 1965 that the NPT did not ensure non-proliferation of nuclear weapons but only stopped "dissemination of nuclear weapons" to non-nuclear countries without imposing any curbs on the continued manufacture, stockpiles and sophistication of nuclear weapons by the existing nuclear weapon states. He said it did not do away with the special of superiority attached to the possession of nuclear weapons. It did not provide for balance of obligations and responsibilities between the haves and the have-nots. It did not prevent one

39. ACDA, Document on Disarmament 1965, (Washington DC, 1965) pp.339-40.

40. Memorandum received from the Indian Ambassador, Stockholm, June 7, 1991, cited in SIPRI Yearbook 1972: World Armament and Disarmament (Alquist and Wiksell, 1972) p.303.

nuclear weapons state from assisting another and did cessation of the arms race. "The NPT further institutionalised discrimination by imposing safeguards on nuclear weapon states but not on non-nuclear states and prohibiting autonomous use of nuclear explosions for peaceful purposes by the former and not the latter".⁴¹

The Indian position on the joint USA-UK-USSR security assurances was that these do not go further than the existing obligations of the permanent members of the Security Council, according to the Charter, and that it (India) resented the implicit discrimination in the draft Security Council resolution between non-nuclear weapons states who were and who were not parties to the NPT. The question of security guarantees and acceptance of the NPT were unrelated and, therefore, signing the treaty could not be made *quid pro quo* for signing the NPT.⁴² The Indian delegates-who spoke at the Security Council in June 1968-sought security for all non-nuclear weapon states "regardless of whether or not they sign the non-proliferation treaty."⁴³

41. ACDA, Document on Disarmament 1968, pp.325-26.

42. Statement by the then Prime Minister Mrs.Indira Gandhi, in Parliament on March 14, 1968, cited in SIPRI Yearbook 1972s, n.14, p.303.

43. Statement by Indian representative to the UN Security Council, June 19, 1968, UN Document S/PV 1433.

The policy was summed up by the Indian Defence Minister in a parliamentary answer in 1970.

"I continue to hold the view that we can never agree to sign a non-proliferation treaty which is essentially discriminatory in nature, which does not take note of vertical proliferation and which does not take us a step further towards stopping the mad race of nuclear arsenals of the super powers and of those who belong to the nuclear club. In the development of nuclear energy for peaceful purposes, it puts constraints and restraints which are totally unacceptable to us. For all these reasons we have taken the attitude that we will not sign it. The minimum number of ratifying has been reached, it will become operative (but) this has not altered either the nature of threat to us or the overall that we face in the matter of defence."⁴⁴

While much happened in the nuclear arena in the world in general, and in the non-proliferation regime in particular, the treaty continued to be adhered to by more and more members—even by countries like Iraq who, side by side, were violating it. The Indian stance towards the NPT, however, remained unchanged, Interestingly, despite change in govern-

44. Statement by Indian Defence Minister in Parliament cited in SIPRI Yearbook 1971, p.304.

ments of diverse ideologies, the policy towards the NPT has remained consistent.

Speaking at the special session of the General Assembly in June 1978, Morarji Desai, then Prime Minister of India, said, "Our objection to the treaty is because it is so patently discriminatory. It makes an invidious distinction between countries having nuclear weaponry and those devoted to the pursuit of nuclear research and technology entirely for peaceful purposes."⁴⁵ Narasimha Rao as an External Affairs Minister in Mrs. Indira Gandhi's Cabinet stated in the second special Session on Disarmament of the UN General Assembly, "History has demonstrated that efforts on restraining the emergence of the largest number of nuclear weapons will succeed only if the existing nuclear weapon powers themselves accept the same discipline as they demand of others. To us this is a matter of principal. Under Article VI of Treaty there was an obligation upon the nuclear weapon states to reduce their nuclear arsenals. In actual fact their arsenals have more than doubled. This has been the reason why the NPT has proved to be such a fragile

45. Text of speech on India and Disarmament, An Anthology (External Publicity Division, Government of India, 1988) p.200.

instrument."⁴⁶ In 1988, explaining his three-stage disarmament plan, the first stage of which envisaged binding commitment by all nations to eliminate nuclear weapons by the year 2010 latest, he stated. "We propose negotiations must commence in the first stage itself for a new treaty to replace the NPT."⁴⁷ In March 1992, Prime Minister Narasimha Rao said,. "Our position on the NPT is well known: we have not signed it and we do not propose to sign it."⁴⁸ In November 1993, the Indian delegate to the UN General Assembly repeated that India delegate to the UN General Assembly repeated that India would not subscribe to a "treaty or an attitude that divides the world into nuclear-haves and have-nots."⁴⁹ More recently, India rejected the suggestion made in the wake of the Moscow Declaration seeking, among other things, elimination of nuclear weapons from Ukraine and that it should accede to the NPT. The official response said that the treaty in its present form was discriminatory. There was a "need to alter the NPT on non-discriminatory lines, taking into account international developments over

46. Text of speech at the UN Second Session of Disarmament on June 11, 1980, in *Ibid.*, pp.220-221.

47. Text of Speech at the UN General Assembly on June 9, 1988, cited in *Ibid.*, p.290.

48. *The Times of India*, March 13, 1992.

49. *Economic Times*, November 3, 1993.

the last three decades and the imperative necessity for general and complete disarmament."⁵⁰

While there has been no change in the Indian response to the NPT, the policy so far as the weapon option is concerned has seen a slight shift, if one may use the words. The Nehruvian "never a bomb" policy was contained in his famous speech where he said, "No man can prophecy the future but I can say on behalf of my government and I think I can say with some assurance on behalf of any future government of India, whatever might happen whatever the circumstances, we shall never use this atomic energy for evil purposes."⁵¹ The Shastri policy was not so "static". He said, "I cannot say the present policy is deep rooted, that it cannot be set aside and that it would not be changed. An individual may have a static policy but in the political field we cannot do so."⁵² Even though Shastri had said so and even though the Congress Parliamentary Party had urged preparedness to produce a bomb, if required vis-a-vis China, in essence the policy remained the same. The programme remained peaceful

50. Hindu, January 16, 1994.

51. G.G.Mirchandani, India's Nuclear Dilemma, (Popular Book Service, New Delhi, 1968) p.3.

52. Lok Sabha Debates, November 24, 1964 and no.1510.

for all declared purposes.⁵³ The peaceful nuclear explosion of 1974 during Mrs. Gandhi's tenure gave India's policy an ambiguous posture. In any case nuclear capability is not a matter of intentions. The fuel problem at Tarapur, as a consequence of the explosion, demonstrates what an ill-conceived policy can do. Conducted a little earlier, the explosion would have given India's stance on the NPT a practical credibility or conducted a little later, after having achieved fuel-sufficiency, the explosion would have boosted India's self-reliance claims. Even in 1974, the explosion should have been followed by a declared nuclear weapon status for India.

Morarji Desai compounded confusion by expressing displeasure with the Pokharan explosion and at the same time "accepted the broad parameters of Indian posture of refusing to foreclose the nuclear weapon option."⁵⁴ The policy continued to be so. No Indian government has ever acknowledged the initiation or existence of a nuclear weapon programme. The reports of Shastri having sanctioned a subterranean nuclear project have been produced in the Western

53. G.G. Mirchandani, op. cit., p.34.

54. Rodney Jones, "India" in Jozef Goldblat ed., *Non-Proliferation; The Why and Wherefore* (SIPRI, Taylor and Francis, London, 1985) p.115; also see Rama Rao, "A Nuclear Munich" in T.T. Poulse ed., *Perspectives in India's Nuclear Policy* (Young Asia, New Delhi, 1989).

sources.⁵⁵ The capability may have grown but there is no evidence of any organised militarised nuclear programme. The ambiguity has been interpreted by Pakistan's observers as: "Nuclear ambiguity allows time for enlarging its exiting capability."⁵⁶

While discussing the options before India, nowhere is it implied that India has any locus standi. The country has not acceded to the NPT and, therefore, it has no role to play within the extension conference, its views on the treaty notwithstanding. A viable option, therefore, has to be outside the conference. A pragmatic approach should be to campaign for a new treaty. The treaty structurally as well as functionally suffers from so many lacunae that it is a self-defeating proposition. Accession to it by 154 member states, if one wants to indulge in bean counting, potential proliferators are outside it. Even among those inside it, some have shown that it is possible to bypass the treaty and attain the capability or even stage a walkout (by three months notice). It is true that the Indian argument of the

55. Robert Wohlstatter, Buddha Snuter, "Absent minded peaceful aid and Indian bomb", US Energy Research and Development Administration Monograph 3 (49-1) April 10, 1977 cited in Prukz Iqbal Cheema's "Nuclear arms control in South Asia", USI Journal, July-September 1993, p.358.

56. Cheema, Ibid., p.368.

treaty being "discriminatory" does not sell any more.⁵⁷ But the treaty being ineffective on its own can.

Secondly, the West in general and US in particular have come to accept the Indian position on the NPT. Therefore, one does not come across any direct pressures on India to sign the NPT. The strategy now is to insist on confidence building and bilateralism, the plea at the recent Moscow Declaration being a test in case.

In fact, a Carnegie Endowment task force report made the following observation. While recognising India's sovereign right to retain its nuclear option and its belief that the NPT is discriminatory, the study group urges New Delhi to show sensitivity to this concern by making two important policy changes.

Without signing the NPT, India should unilaterally make a formal pledge to abide by the NPT provisions barring the export of nuclear weapons or of military-related nuclear technology. Specifically, this would mean (a) requiring that any nuclear exports would be subject to International Atomic Energy Agency (IAEA) inspections in the recipient country to verify that military-related technology is not involved; and (b) withholding from other states any techno-

57. K.Subramanyam in Economic Times, July 4, 1993.

logical or other assistance related to the development of nuclear weapons.⁵⁸

The study cites similar pledges by Argentina in 1985 and South Africa 1984. It, however, does not explain how these pledges benefit India or what incentives can be given to India in case it does so except have a "favourable impact on India's image as a responsible international state' in the United States.

The latest Indian proposal to Pakistan on no first-use of nuclear capability against each other should lay to rest such campaigns which extend to the "five powers" also. Pakistan's refusal to agree to such a proposal would obviously put it on the defensive, since, right from the time the NPT debate was on, it has been talking about "concerns about the nuclear capabilities of a neighbour" it has not been on the best of terms with. The proposal is particularly significant since it amounts to India's officially admitting a nuclear capability even though indirectly.

Listing India's options, Jasjit Singh says: "We have to remind the international system that 1995 offers a unique historical opportunity for negotiating an improved, truly

58. Selig Harrison, Geoffrey Kemp, "India and America: After the Cold War" Report of Carnegie Endowment on US-Indian relations in a Changing Environment (Washington DC, 1993) p.44.

international regime. At the same time, retaining an open ended option by itself may not serve our larger interests either. We must, therefore, actively work for restructuring nuclear weapons/non-proliferation regime. It should be possible for us to sign the protocol to the NPT".

Elaborating further on this protocol, he says it should incorporate the following:

- (a) Define non-proliferation norms/incentives clearly so that proliferators can be dealt with effectively.
- (b) Classify threshold status in terms of capabilities.
- (c) Unambiguous commitment to negotiate an international treaty, governing nuclear non-proliferation on the model of the chemical weapons convention. Residual nuclear force (after gross reduction in the nuclear weapons) to be placed under multilateral control.
- (d) Global elimination of non-strategic nuclear weapons by 2000 AD.
- (e) Global elimination of ballistic missiles (with 50-5,500 km ranges) by 2000 AD.
- (f) No first use of nuclear weapons capabilities.⁵⁹

59. Jasjit Singh, "Future of NPT-1" and "Future of NPT-II", The Hindustan Times, January 20, 1993 and January 21, 1993.

While there is no doubt that such a protocol would bring about a universal non-discriminatory regime, it is difficult to say if such a protocol would be accepted by a majority of members, particularly the nuclear-haves who enjoy special privileges in the NPT. Even if they are ready to discuss, would procedural matters not require amendment moves to incorporate such a protocol even if only as an appendage?

Jasjit Singh's argument is that India could deposit a written assurance to the Security Council that "dormant deterrence" would be maintained and threshold to weaponisation not crossed unless a critical contingency arises which adversely affects national security and sovereignty. But he doesn't define why the international community would accept such a conditional assurance: after all, "contingency" is a subjective term. So are concepts like national security. It is a harsh reality that any move to rally public opinion (internationally) by India around improving the NPT will obviously be viewed with scepticism, particularly after the 1974 explosion and the damage it did to India's reputation. The best option would be, as stated earlier, to pinpoint the structural and functional, weaknesses of the NPT and that it needs to be dumped, rather than beating the discriminatory drum. Secondly, India should only talk about a new treaty

which takes into account the difference in levels of the nuclear capability of different countries. The new treaty should recognise the stratified structure of the nuclear regime and the safeguards, etc. can be tailored according to the capabilities of the country. The differentiation should be based on declared capabilities of the countries rather than any arbitrary or obsolete criteria like March 1, 1967, as a cut off date. Since the problem is stratified, the solution can only be seen in a stratified structure. It is in this framework of stratified structure that solutions can be suggested, say no-first use pledge, reduction of nuclear armaments, fissile materials cut off, etc. Denuclearisation, like nuclearisation, does not come overnight. Therefore, the nations should get down on rung of the ladder at a time for eventually reaching the bottom. On the way, it can bring other members positioned on different rungs of the ladder, depending on their capability, down. This is the only viable option.

CHAPTER - III

COMPREHENSIVE TEST BAN TREATY AND INDIA

Early efforts in the United Nations for Comprehensive Test Ban

The prohibition of nuclear test is one of the most important measure to prevent nuclear proliferation. The history of nuclear test ban is rooted in the 15 megaton American thermonuclear test in the Pacific in March 1954. On April 2, 1954,¹ India's first Prime Minister Jawaharlal Nehru became the first Statesman, who called for a "Standstill Agreement" on nuclear testing.²

As a response to anti-nuclear activism the United Nations Disarmament commission made a positive step by proposing the nuclear test ban for the first time on July 29, 1954. Subsequently, the Pugwash Movement and the Campaign for Nuclear Disarmament (CND) in the United Kingdom played an important role to mobilize support for a CTBT as a necessary step towards nuclear disarmament. From 1955, the

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1. William Epstein, "The Failure to control the Nuclear Arms Race", Ed, William Epstein and Toshiyuki Toyoda, "A New Design for Nuclear Disarmament, Pugwash Symposium, Kyoto, Japan, (Spokeman, Nottingham, 1977), p.11.
 2. Ed. David Cortright and Amitabh Mattoo, "India and the Bomb - Public Opinion and Nuclear Options", (University of Notre Dame Press, Notre Dame, 1996). p.7.

United Nations become the main venue for discussions on a CTBT.

The desirability of concluding a CTBT, was first raised in the General Assembly in 1957.³ At this juncture the Afro-Asian bloc took a lead as a part of non-aligned countries to support CTBT. These attempts to reach CTBT, had an effect on the three Nuclear Weapon States - the United States, Soviet Union and the United Kingdom. As a result in 1957, the US and the USSR started discussions for a possibility to stop nuclear tests at the London Disarmament conference.

Again in 1958, the discussions on CTBT was carried out at a Conference of Experts who met in Geneva to establish possible verification procedures. Then in October 1958, the Conference on the Discontinuance of Nuclear Weapons Tests with representatives from the US, USSR and UK met. All three also agreed to a moratorium on testing. But this moratorium was broken first by the USSR and then by others in September 1961.⁴ Even though, a test ban treaty was receiving high priority in the U.N. General Assembly at the

3. Julie Dahlitz, "Nuclear Arms Control-with effective international agreement", (George Allen & Unwin, London, 1983), p.41.

4. Praful Bidwai and Achin Vanaik, "Testing Times", (Pag Mammarkhold Foundation, Uppsala, 1996), p.34.

time of adoption of the 1961 Irish resolution and even President Kennedy stressed the importance of nuclear arms control through a test ban. But, Cold War politics, which was symbolised by the erection of the Berlin wall and the U-2 incident (when an American spy plane over Soviet Territory was shot down) lashed the CTBT talks between the two super powers in January 1962.

In March 1962, the Eighteen Nation Disarmament Committee (ENDC), which included eight non-aligned countries Brazil, Burma, Ethiopia, India, Mexico, Sweden and Egypt-set up a subcommittee to discuss the ban, a move endorsed by the three Nuclear Weapon States (NWSs). The ENDC was the forerunner of the conference of the committee on Disarmament, later became the conference on Disarmament (CD).⁵ The test ban issue after the first French Nuclear explosion in 1960 became a necessary tool for nuclear non-proliferation regime for the nuclear weapon states. Nikita Khrushchev made an effort to improve relations with the United States by stopping the Soviet assistance in the nuclear field to China and advocating the test ban. However, the Cuban Missile Crisis of 1962 strained their relations very much.

5. *ibid*, p.34.

Partial Test Ban Treaty (PTBT)

On 5 August 1963, the Partial Test Ban Treaty (PTBT) was signed by the United States, USSR and the United Kingdom at Moscow. By this treaty, the above mentioned states put an end to nuclear weapon test explosions as well as "any other" nuclear explosions in the atmosphere, outer space, and under water. The original parties to the treaty the USSR, the UK and the US proclaimed in the preamble of that treaty that they sought to achieve the discontinuance of all test explosions of nuclear weapons for all time and would continue negotiations to that end.⁶

Although India signed the PTBT but France and China never signed the PTBT. According to China, PTBT is "a big proud to fool the people of the World", and vehemently charged this treaty completely divorces the cessation of nuclear weapons, legacies the continued manufacture, stocking and use of nuclear weapons by the three nuclear powers and runs counter to disarmament.⁷

6. The United Nations, Disarmament Year Book 1994, vol.19, pp. 42-43.

7. Matin Zuberi, "CTBT-Testing Times", World Focus, Vol. 17, No.7, February, 1996 p.5.

Even, since the conclusion of the PTBT, the three major nuclear powers have confined their nuclear testing to underground detonations.

PTBT is of unlimited period. After several years of debate in 1990 according to Article II of the treaty it was decided to convene a conference of the States parties to consider a proposed amendment: the conversion of the treaty into a comprehensive legal instrument.⁸ The conference held at the United Nations head-quarters from 7 to 18 January 1991, in this it was added that the parties to the treaty, in addition to their obligation under PTBT, to prohibit, to prevent and not to carry out any nuclear weapon test explosion or any other nuclear explosion under ground or in any other environment, and verification of compliance with a comprehensive ban.⁹ At present there are 123 states parties to the PTBT.¹⁰

Though the PTBT was positive anti-pollution and public health measure, and a symbol of advance in arms control , it was in a real sense also a betrayal of hopes for a CTBT

8. The UN, Disarmament Year Book, vol.18, 1993, p.45.

9. Savita Pande, "The Future of NPT, (Lancer, New Delhi, 1995), p.p.87-88.

10. The UNs and Nuclear Non-Proliferation, (UN Pub., New York, 1995). p. 24.

though it was deliberately and misleadingly touted at the time as a first step towards it.¹¹

Both France and China refused to sign the PTBT, as in their opinion, it did not insist on the destruction of existing nuclear stockpiles of the other three nuclear weapon states. France opposed the treaty on the ground that it did not in any way contribute to the process of nuclear disarmament. China not only refused to sign the PTBT, but also exploded its first atomic bomb in 1964. China described PTBT as an attempt by the United States and the Soviet Union to consolidate their nuclear hegemony as it legalised the continued manufacture, stockpiling and use of nuclear weapons. China also condemned the treaty because it did not cover the underground nuclear tests.

Even then, the PTBT stimulated the efforts to conclude the nuclear non-proliferation Treaty.

The Threshold Test Ban Treaty (TTBT)

The Threshold Test Ban Treaty was a bilateral treaty signed by the United States and the Soviet Union on 3 July 1974. This treaty placed restrictions on underground tests. As we know the Partial Test Ban Treaty did not place restrictions on underground nuclear explosions. The TTBT

11. Bidwai Praful & Vanaik, "Testing Times", op.cit., p.36.

established a limit of 150 kilotons on the amount of energy that might be released by an underground explosion".¹² The United Kingdom, though not signed the treaty, but pledged to abide by its provisions. This treaty entered into force on 11 December 1990'.

Developments and Trends for CTBT after PTBT

As, the negotiations for signing the NPT was going in the General Assembly and in ENDC, Sweden took an important initiative in 1965, when it proposed verification of a CTBT by an international exchange of seismic data, to be supplemented by on-site inspections in order to resolve the occasional uncertainties that may arise.¹³ But, the superpowers failed to agree on a CTB verification formula. There was a big failure on the part of the nuclear weapon states not to reach CTB. It was only due to the non-proliferation treaty expressed disappointment that a CTB had not been concluded, inferring that such a treaty was expected to be concluded in the near future, in fulfilment of the obligation of the nuclear powers vis-a-vis the renunciation of nuclear weapons by the non-nuclear weapon states.¹⁴ Therefore, with the conclusion of PTBT many countries including China, France

12. *ibid.*, pp. 25.

13. Dahlitz Julie, *op. cit.*, p. 43.

14. *ibid*, p.41.

consider PTBT as an insufficient to control over nuclear weapons development. For France the acquisition of a nuclear armament was a paramount objective and same was the case with China. Both wanted to retain their nuclear capability. Thus, after the NPT, CTBT on November 8, 1973 in the General Assembly discussion, the Indian delegate said that the delegation of India would like to reiterate the view that, in order to achieve a comprehensive test ban, it is essential that four main considerations be kept in mind. In the first instance, the provisions of the Treaty Banning Nuclear Weapon Tests in the Atmosphere, in outer space and under water should be fully observed and those nuclear weapon states which have not get adhered to that treaty should do so without any further excuse or delay. Secondly, whatever be the difference on the issue of verification of a ban on underground nuclear Weapon tests, and not withstanding any other considerations, all testing of Nuclear Weapon in all environments must be immediately suspended. Thirdly, a Comprehensive Test Ban has two aspects: one, that all nuclear weapon tests in all environments should be prohibited; and the other that all nuclear weapon state should be parties to it. Fourthly, negotiations should be undertaken for a separate treaty to prohibit all nuclear weapon tests in the underground

environment and attention should be focussed simultaneously on the need to conclude an agreement on underground nuclear explosions for peaceful purpose.¹⁵ The results of these discussions motivated the United States and Soviet Union to sign the Threshold Test-Ban Treaty in 1974 and the Treaty on underground nuclear explosions for peaceful proposes in 1976. Though they did not agree on the conclusion of a CTBT.

It was in 1977, US, UK, USSR agreed for tripartite discussions on CTBT. After series of discussions in 1978, President Carter due to internal pressure changed a permanent CTBT to a period of three years. The problem in reaching a CTBT was disagreement over PNEs verification problems in addition to suspicions on both sides, as well as doubts about the reliability of the stockpiles of nuclear weapon powers if a complete ban was imposed. Finally, in 1980 trilateral negotiations concluded and a report submitted to Committee on Disarmament indicating agreements on many fields, but negotiation resumed further. This multilateral negotiating body has been trying to conclude a test ban treaty at Geneva. In 1976, its Ad-hoc Group of

15. G.A.O.R., 'Twenty Eighth Session Ist Com~~tt~~ 1995' meeting, No. 8, 1973. p.356.

Scientific Experts to Consider International Cooperative Measures to Detect and Identify Seismic Events was established to address the seismic aspect of verification on the basis of a global network. It continues to meet.¹⁶

In 1980, the shift of Reagan administration towards strategic defence initiative (STAR WARS) nullified all possible efforts for CTBT as Trilateral discussions stopped. The Reagan administration viewed a CTBT as contrary to American national interest. The US nuclear strategy required continued testing, moreover, the Strategic Defence Institute necessitated a massive bout of testing.¹⁷ On the other hand, Soviet Union also backed down in its support for CTBT negotiation in early 1980's after a change of leadership. Kathleen Bailey, then an official of the US Arms Control and Disarmament Agency, bluntly said: "If the US is forced to choose between its own national security and its nuclear testing programme versus the survival of the NPT - which we would clearly like to see - the US would choose maintenance of its own national security and therefore, its own nuclear testing programme."¹⁸

16. The United Nations Disarmament Year Book, Vol. 18, 1993, p. 45.

17. Zuberi. Martin, op. cit., p. 5.

18. *ibid.*, p.5.

However, in the 1980s the CTBT still remained a goal to be achieved. Acrimonious exchanges on the test ban issue in the Conference of Disarmament, but paid no to any concrete result emerging as the P-3 (the United States, Soviet Union and the United Kingdom) opposed the negotiating mandate.

In 1985, India took keen interest in nuclear disarmament and test ban. It actively worked with leaders from Sweden, Greece, Argentina, Mexico and Tanzania. All these countries formed the Six Nation-Five Continental Peace Initiative to ban testing. The 'six' proposed third party verification and the implementation of world wide on-site-inspection. Before this, the Cold War consequences such as invasion of Afghanistan by Soviet Union in 1979, NATO's decision to deploy American made Cruise missiles and the advanced medium range Pershing II missile in West Europe in 1983, non-participation of the US and Soviet Union in the Olympic Games held at Moscow and Los Angeles respectively in 1980 and 1984, made it impossible for the super powers to resume discussions regarding CTBT.

In 1985, after the accession of Gorbachev to power in the Soviet Union, it tried to revive negotiations on a test ban. But the CTBT issue became a global priority only in 1992 after the end of the Cold War and the collapse of the USSR. The end of the Cold War has fundamentally transformed

the calculus of nuclear threat. The world no longer lives in the fear of a super power confrontation leading to nuclear holocaust.¹⁹ Even then the disintegration of the Soviet Union into fifteen newly independent states created a great danger of nuclear proliferation. As, the USSR left behind a legacy of some thirty thousand nuclear weapons and an extensive and far-flung nuclear infrastructure for the production and maintenance of these weapons.²⁰ However, before the disintegration of Soviet Union in 1990, the Ad hoc Committee on Nuclear Test Ban reached an agreement on a compromise mandate. From 1990 to 1992, the Ad hoc Committee discussed major issues regarding nuclear test ban. Also, between 1988 and 1992, there was tremendous decrease in the total number of nuclear explosions by nuclear weapon states.

It was only in 1992 that the first breakthrough came when the US, following Russia and France, suspended testing for nine months. The US Congress also resolved that testing be terminated by September 1996. In 1993, the moratorium was extended and the US administration declared that henceforth safety and reliability of its nuclear arsenal would be ensured by means other than nuclear test

19. Reiss, Mitchell and Fitwak, S. Robert (ed.), "Nuclear Proliferation After the Cold War" (Woodrow Wilson, 1994, Washington), p.1.

20. *ibid.*, p. 89.

explosions.²¹ Therefore, the declarations of unilateral moratoriums by the US, France, Russia, the UK motivated these nuclear weapon states to come close to negotiate a comprehensive test ban treaty.

The Conference on Disarmament, on 10 August 1993, took a landmark decision, namely, to give its Ad hoc Committee on a Nuclear Test Ban a mandate to negotiate a Comprehensive Test Ban Treaty. The mandate, which was negotiated in 1993 and adopted on 25 January 1994 reads:

"The Conference directs the Ad hoc Committee to negotiate for a universally accepted multilateral agreement with and effectively verifiable Comprehensive Nuclear Test Ban treaty, which would contribute effectively to the prevention of the proliferation of nuclear weapons in all its aspects, to the process of nuclear disarmament and therefore to the enhancement of international peace and security."²²

Though, negotiations for a CTBT were a positive step but to a great extent it was the diplomacy of the NWSs to avoid criticism at the impending NPT Review and Extension Conference. While the Extension Conference was in session, Yeltsin and Clinton agreed to further strengthen the non-

21. Bidwai, Praful and Vanaik Achin, Testing Times, op.cit., p. 37.

22. The United Nations Disarmament Year Book, Vol.19, 1994, p. 44-45.

proliferation regime, but surprisngly, their joint statement made no reference to a CTB. However, five nuclear weapon states succeeded in the indefinite extension of NPT but they could not succeed in making India, Pakistan and Israel sign the NPT. As these states are threshold nuclear weapon states, to counter them in August 1995, America made its commitment to a 'zero-yield CTBT'. On the other hand, it is committed to keeping an "enduring stockpile" and continued research at the three weapon design laboratories. So this is a dual policy on the part of the United States.

Also, shortly after the indefinite and unconditional extension of NPT France and China resumed their nuclear tests. The problem with the US is over the acceptable threshold level for testing. These points made a negative impact on the CTBT negotiations which resumed in January 1996 in Geneva. Amidst differences over the text and scope of the new treaty, the 37 nation conference on disarmament was adjourned on March 29, 1996 until May 1996.

Again in June 1996, negotiations started for the CTBT at the Conference on Disarmament (CD) at Geneva. The 61-nation conference on disarmament failed to adopt a Comprehensive Test Ban Treaty. India who had co-sponsored the CTBT issue along with the US in 1973 and again in 1993 decided not to sign the Comprehensive Test Ban Treaty. The

Indian opinion about the CTBT was made clear by the Indian Ambassador to the United Nations in Geneva, Arundhati Ghose. She said that India cannot sign the CTBT in its present form. So, it is very important to critically analyse why India rejected the draft in its present form and what are the possible way for negotiations to conclude CTBT.

The Comprehensive Test Ban Treaty (CTBT) and a future Fissile Material Cut Off Treaty (FMCT) represent the only real chance that anyone has of extracting a commitment to disarm from the nuclear powers.²³ Truly speaking, all the five nuclear weapon states have no intention of giving up their reliance on nuclear weapons. As it becomes true if we rely on the publications of the Los Alamos Study Group, an anti-nuclear watchdog that America wants to continue its research to upgrade its nuclear forces even after signing CTBT and FMCT.

India's Present Stand on CTBT

To understand Indian government's stand on CTBT it is important to highlight the important points of contentions between India and Nuclear Weapon States as indicated in the speech by Indian Ambassador Ms. Arundati Ghose to CD at

23. Matto, Amitabh, "India Did The Right Thing At Geneva", The Times of India (New Delhi), June 25, 1996.

Geneva on June 20, 1996. It is crucial to highlight India's objections since it has always been in the forefront of nations demanding the complete cessation of all nuclear testing since fifties.

The first argument states that in the present draft of CTBT there is no commitment to a time bound nuclear disarmament plan by all NWSs to achieve complete elimination of all nuclear weapons.

The second point highlighted is the weak and woefully inadequate preambular references to nuclear disarmament. Third, NWSs, are determined to keep their stockpiles of nuclear weapons for their security and want to use the CTBT as a tool against horizontal proliferation.

Four, according to NWSs subcritical and hydrodynamic nuclear testing which has been carried out even during the negotiation is regarded as essential for national security.

Fifth, transfer of nuclear weapon technology between China and Pakistan, for instance defeats the purpose of a CTBT. Sixth, India opposes the legitimisation of nuclear weapons to some countries while denying to others.

India stated that the treaty in its present form as discriminatory and that does not address India's concerns about its supreme national security. Even then there are

many other points which will be considered seriously before signing a ratified CTBT draft.

India's interests in the military applications of nuclear technology gained momentum after China's first nuclear test in October 1964. No doubt India made negotiations with both the US and the Soviet Union to obtain nuclear guarantees in case of a nuclear attack by China since 1962 she having border dispute. But both super powers gave no nuclear guarantees. The main reason for denying guarantees is that they do not want to involve themselves in any dispute in which they could risk their own territory to provide security to other countries. In this context, C. Raja Mohan's opinion looks justifiable that having a few warheads is a very powerful deterrent.

Hence, India would need to keep China's past policies in mind whilst working towards a complete cessation of nuclear testings. As China is continuing with its nuclear tests, both in the kiloton and megaton ranges to improve its nuclear warhead design.²⁴ Resuming its nuclear tests, China wanted to improve its nuclear weapon technology, as it did not want to lag behind the United States and the Soviet Union.

24. P.R. Chari, Indo-Pak Nuclear Stand Off (Manohar, New Delhi, 1995), p. 179.

Also, the Indian stand for reducing the importance of mutual assured destruction and marginalising the role of nuclear weapons as a currency of power in international relations is always neglected by the NWSs. Even today, the US opposes the Indian proposals of delegitimisation of use and threat of use of nuclear weapons. Therefore, it looks that to maintain their hegemony the United States and Soviet Union are doing the same thing, which they have done in 1963 by signing PTBT in place of CTBT. As PTBT only pushed testing below the ground. Similarly, under a weak CTBT testing thrives in laboratories with the help of super computers which are not open to universal inspection.

Again by entering a CTBT the rationale for the Agni programme that requires extensive testing with a nuclear warhead to establish a meaningful deterrent pattern against China would become questionable.²⁵ Also China is continuing the production of fissile material for military purposes. Above all there is substantial evidence that China is giving technical assistance to Pakistan to develop its nuclear weapons.

25. *ibid.*, p. 178.

CHAPTER - IV

MISSILE TECHNOLOGY CONTROL REGIME AND INDIA

Missile Technology Control Regime

The Missile Technology Control Regime is a system of an informal, non-treaty, multilateral and unilateral voluntary export controls. The MTCR's origin dates back to the 1970s, when the U.S government became aware of dangers posed by the missile programs of developing nations. Several events, including South Korea's 1978 ballistic missile test, Iraq's attempt in 1979 to purchase retired rocket stages from Italy, India's July 1980 SLV-3 test, and the former German firm OTRAC's 1981 testing of a rocket in Libya contributed particularly to the U.S apprehensions.¹

Even though, the MTCR is neither supported by any major treaty nor legitimized by the United Nations, still it is believed by some (the United States and their allies) as the only international pillar of the Missile non-proliferation regime.

During the Cold War era, the United States under Reagan administration took initiative to limit the spread of mis-

1. Deborah A. Ozga, A Chornology of the Missile Technology Control Regime", The Nonproliferation, Winter 1994, p.66.

sile and missile technology. To work in this direction, on April 16, 1987, the United States with Canada, France, West Germany, Italy, Japan and the United Kingdom formed the Missile Technology Control Regime (to stop the proliferation of missile capable of delivering nuclear weapon in the Third World countries). At present, it has 28 Countries.

Guidelines and Annex of MTCR

According to the guidelines released by the seven founding members of MTCR, the MTCR's original purpose was to reduce the risks of nuclear proliferation by placing controls on equipment and technology transfer which contribute to the development of unmanned, nuclear weapon delivery systems.² The MTCR depends on national legislation for its legal validity and on national means for its implementation. The MTCR Guidelines are very explicit in this regard, stating "It is understood that the decision to transfer remains the sole and sovereign judgement of the (exporting) government."³ In January 1993, the scope of the MTCR was expanded not only to control vehicles to deliver nuclear weapon but also to control the proliferation of

2. *ibid*, p.68.

3. Gurdip Singh, "MTCR as an Impediment to SLV Development: Legal Aspects", Strategic Analysis, Vol. XVI, No. 5, August 1993.

weapons of mass destruction. It is stated that the guidelines of the MTCR are not designed to impede international cooperation in peaceful use of space-related and other non-military modern technology. These guidelines are stated not to be directed at any particular country nor towards a set of countries. The member partners in the initiative invite all countries to adhere to the guidelines in the interest of international peace and security.⁴

Again to achieve the objectives of the MTCR, guidelines and an annex mentioning certain technologies to be controlled and various items not to be exported were released by the MTCR members. The guidelines outlined the basic criteria to assess missile-related export applications, such as nuclear proliferation concerns, the nature of the recipient state's missile and space programmes, the items significance in the development of a nuclear weapons delivery system, end-use assessment of the items, and any relevant multilateral agreements.⁵

In the technical annex, there are twenty items which have been divided into two categories. Category I consists

4. Frederick J. Hollinger, "The Missile Technology Control Regime : A major New Arms Control Achievement", in Daniel Gallik (ed), World Military Expenditures And Arms Transfer 1987, (U.S. Government printing office, Washington, DC, 1988) p. 25. Ed. Daniel Gallik.

5. Deborha A. Ozga, op-cit., p. 66.

of complete missile systems, subsystems and the designing of important equipments along with the technology for whole missile system. The Category II consists of items of less sensitive components and technologies which have dual-use application. The items in category I are mentioned in the guidelines to deny such transfer or to be exported on a very rare occasions, only on the assurance of the recipient state as end user and commitment not to transfer to some other state. The items in the category II may be exported by MTCR members, only if the importing state gives sufficient guarantee as end-user.

Again, two critical control measures established by the annex are the 300 km range limit and the 500 kg pay load limit. As it was decided by the MTCR members to control cruise missiles and ballistic missiles, with a pay load capability of 500 kilograms or greater and a range of 300 kilometers or greater.

Objectives of the MTCR

The objective of the MTCR is to prevent proliferation concerns emanating from the developing countries from becoming threats like Russia and China. Besides, the rising regional powers are perceived to possess

different value structures from those of the United States, Europe and for that matter Russia.⁶

"The adherence to the MTCR is being assiduously advocated for the rest of the world. The fact remains that the MTCR is not equitable. And, the US amendment of 1993 which removes the 300 km/500 kg limits and applies it to all weapons of mass destruction, the so-called "zero-zero decisions".⁷

As, CIA Director William Webster has testified before the Senate Government Affairs Committee, May 18, 1989, that by the end of the century at least fifteen developing countries will be producing their own ballistic missiles.⁸ It is visualised that the East-West technology export controls had a coherent geo-political frame, simpler formulations and straight forward objectives. Managing military technology trade in the North-South context is impeded by geo-political complexity and by the absence of common understanding

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6. Tom Mahnken, "An overview of the politico-military implications of missile proliferation", paper for the advancement of Science on Proliferation of ballistic Missiles: Policy options for the Future, New Orleans, USA), February 1990, p.32.
 7. Wolfgang H. Reinicke, "From Denial to Disclosure : The Political Economy of Export Controls and Technology Transfer", in Bridging The non-Proliferation Divide : The United States and India, Ed. Francine R. Frankel. (Konark Publication, Delhi, 1995), p.320.
 8. Zachary S. Davis, "Non-Proliferation Regimes", CR Report for Congress, p.26.

amongst the suppliers about the objectives to technology controls.⁹ Hence, it is safer to control a broader band of technologies which go into systems for which counter-measures have not been developed so far. This consideration is substantiated by the absence of comparable controls on transferring super sonic aircraft technology which can also be used for an effective nuclear delivery system.

Implementation of the MTCR

In the implementation of this regime, the U.S plays the leading role, although, considering the differing laws and customs of the countries involved. It was decided that in implementing these controls, each of the partners would make its decisions independently. No formal coordinating apparatus has been established. In the U.S all of the items in the annex are controlled either by the state Department's office of Munitions control or by the Department of commerce.¹⁰ Also, through legislation, diplomatic initiatives, Presidential action the U.S is consolidating international support for multilateral export control on missile technology.

9. J. Nolan, "Trapping of Sovereignty: Ballistic Missiles in the Third World" (The Brooking Institution, Washington D.C., 1991), P. 50.

10. Frederick J. Hollinger, op. cit., p.26.

Organisational Meetings of MTCR

The organisational operations of MTCR are conducted by three types of meeting-plenary, technical and special. The plenary meeting of MTCR held at least once in a year to discuss various issues regarding non-proliferation and strategies to implement and improve the regime's performance. In the technical meetings, member countries evaluate the regime's specific control parameters to refine and to add new items in the annex. The special meetings have been called for recruitment of the states to the MTCR. Two such instances were meeting for the non-MTCR Western European States and for the newly-democratized nations of the Eastern bloc.¹¹

Although in several cases, the MTCR has proved itself an effective instrument in controlling missile proliferation still due to its number of important shortcomings, the hegemonic nature of the United States, Cold War tension, MTCR has failed to achieve its goal. To a great extent MTCR has been credited with countering missile proliferation in the third world countries i.e. dismantling of Argentina's Condor II project, the cancellation of two Brazilian systems (Abibras's SS series and Orbita's MB series). Even MTCR is

11. Deborah A. Ozga., op. cit., p.67.

credited for delaying India's missile programme. But MTCR failed to stop missile proliferation in Iran, Iraq, Egypt, Syria, Libya, North Korea, South Korea and Pakistan. Recently, MTCR also failed to stop China from selling its M-11 missiles to Pakistan. M-11 missiles of China exceed the limit put by the MTCR. The selling of M-11 missiles to Pakistan by China is expected to increase Missile race in South Asia. Also, Saudi Arabia's thirty Chinese-supplied DF-3s (CSS-2s), capable of travelling 2700 kilometers with a 1500 kilogram warhead, can strike many Indian cities including, New Delhi. India, a threshold nuclear power capable of making a wide variety of missiles indigenously, is being pressurized to sign MTCR. The United State's in policy of MTCR is an assumption which corresponds to a concept of world order where countries in the North have to defend their way of life against emerging threats from the South which is assumed to be irresponsible and unable to control nuclear weapon or long-range missiles.¹² Since weapons of mass destruction are in some ways equalisers of the technological advantages that have been accruing to the

12. Jurgen Schaffer and Aaron Karp, "The National Implementation of the Missile Technology Control Regime", in Hans Gunter Branch, ed., AFES-PRESS conference on controlling Military R & D and Exporting of Dual-Use Technologies as a problem of Disarmament and Arms Control Policy in the 1990s (Mosbach, Germany), October 1992, p. 129.

North.¹³ So, it is very important to analyse India's perception about MTCR and its Integrated Guided Missile Development Programme (IGMDP).

India's Missile Programme and its View for MTCR

Let us now briefly examine, India's missile programme policy. Indian motivations for initiating and maintaining its missile programme may be grouped into two general categories. The first category involves national security and military - strategic considerations, i.e., the relatively straight forward notion that Surface-to-Surface Missile (SSM) capabilities enhance Indian military power which, in turn, serves either to deter aggression or allow for the more successful prosecution of war should deterrence fail.¹⁴ As it is well known that since India's independence disputes over frontiers have resulted in three major wars with Pakistan and one war with China. Even today disputes over frontiers are not solved. Also, China is a nuclear weapon state with advanced missile technology on the other hand

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13. A definition of Weapons of Mass Destruction (WMD) Includes nuclear explosives; Chemical and Biological Weapons and the Nuclear-Capable Missiles. See National Academy of Sciences, "Finding Common ground: US export controls in a changed global environment", (National Academy Press, Washington D.C. 1991, p. 54.
 14. Timothy V. McCarthy, "India Emerging Missile Power", in William C.Patter & H.W.Jads, (ed), The Internatioanl Missile Bazar - The New Suppliers Network. (Boulder, San Francisco, Oxford, 1994, Westview Press), p.212.

Pakistan is a threshold nuclear weapon state with missile that can carry nuclear warheads upto a distance of 300 km. Therefore, the first priority seems to be logical for India to go for missile proliferation.

The second category views the missile programme in terms of New Delhi's push for economic, scientific, and technical "self-reliance", a broad-based national strategy that seeks to Prevent excessive foreign influence over its political, economic and social well-being.¹⁵ Of course, India as a non-aligned country wants to maintain its identity. Thus, with its increasing capabilities to design, build and test missiles and nuclear weapons, it is viewed, India has emerged as a possible 21st century world power, whose strategic policies must be taken into account by other, more mature, nuclear and missile states. It is also seen as a potential supplier of sophisticated missile technologies whose export behaviour could affect the maintenance and viability of existing non-proliferation regimes.¹⁶ Precisely, this is the reason why the United States with the help of MTCR wants India not to further develop its space research programme.

15. *ibid*, p.212.

16. *ibid*, p.201.

Even on the cryogenic deal with India, the U.S. warned Russia a viable Indian missile capability could one day pose security threat to Russia itself.¹⁷ And Simultaneously threatened to stop U.S. aid to her. Consequently, the Prime Minister of India P.V. Narasimha Rao, gave a statement in the Indian Parliament that Moscow's decision in July 1993 to break a seventy five million dollar contract with India climaxed two years of sustained U.S. pressure that included trade sanctions against the Russian Glaukosmos agency and Indian space Research Organisation. Punitive sanctions were imposed despite both parties pointing out repeatedly that the "agreement does not come under the purview of the MTCR since the intended use..... is only for launching geosynchronous Satellites for peaceful uses toward national development.¹⁸ Surely, this move by the U.S. delayed the India's programme of launching the Geostationary Satellite Launch Vehicle. As America thinks that India's space programme is basically intended for developing Inter Continental Ballistic Missiles (ICBM) capable of delivering heavy nuclear warheads. It is supremely ironic that the United States is afraid of India's growing nuclear and missile

17. The Washington Post, Washington D.C, July 14, 1993.

18. P.V. Narasimha Rao, "Cryogenic Rocket Engine Deal with Russia - Prime Minister Statement", August 18, 1993, (Indian Parliament, New Delhi, 1993).

programme, Whereas America and its allies are responsible for spreading nuclear weapons and missiles because of their greed and political expediency.

Today, India is ready to deploy its first short-range ballistic missile (SRBM), is capable of fielding a 2500 km - range medium range ballistic missile (MRBM), and has the technological infrastructure to undertake development of intercontinental ballistic missiles (ICBMs) and cruise missiles.¹⁹

India's missile developed programme started in the early 1960s under the direction of the Defence Research and Development Organisation (DRDO), which was established on January 1, 1958.

In 1965, an adhoc Electronics committee, headed by Dr. Vikram Sarabhai, the Chairman of the Atomic Energy commission and later the first head of the Indian space Research Organisation (ISRO), proposed that India should move ahead with a missile development programme. The committee advised that as for rocket manufacture, India has already got permission with licensed production of the French centaure sounding Rocket. Therefore, research is to be done for developing propellants and guidance systems.

19. *ibid.*, p.202.

To achieve the objective, in 1970, the Project "Devil Programme" was launched to convert SA - 2s into surface to surface missile. By 1974, two liquid propulsion rocket motors were developed. However, following the failure of several prototype system, the project was cancelled in 1978. The liquid fuel motor developed under the 'Devil Programme' later became the basis for the propulsion system on India's first operational SSM, the Prithvi.²⁰

Again, in July 1983 India's Integrated Guided Missile Development Programme (IGMDP) was launched with a fund of Rs 380 crore (\$ 133 million) to develop four missile systems. Prithvi, with a range of between 40-250 km is designed to carry five types of conventional warheads, with a total payload of one tonne. The second is Trishul, a short range surface to air missile. The third is Akash, a surface-to-air missile with a 25 km range, capable of destroying low-flying aircraft and Scud-type rockets. The fourth is Nag, an antitank missile with 4-6 km range. However, it was the successful third testing of Agni that made Washington renew its efforts to accelerate the "capping" efforts in the

20. *ibid.* p-203.

subcontinent.²¹ Agni, a surface-to-surface missile having maximum range 1000 to 2500 km with a 1000 kg warhead.

Although India's programme on ICBM is not officially available but according to missile analyst Seth Carus, the powerful solid fuel motors developed by ISRO for the PSLV's first stage may be used in an Indian ICBM design.²²

No doubt, if we study the technical capabilities of India's missiles, we can conclude that the development of these missiles are basically have more to do with its desire to match Chinese military and nuclear challenges than with Pakistan. If we take the case of Agni missile, it makes no sense, if it is in the context of the countries hostilities with Pakistan.

The current design work by India's defense research and development laboratory on a longer - range ballistic missile than even the Agni indicates the determination of Indian security planners to develop a capability to strike targets deep into China. One Indian defence analyst writes, "The motivation for the Agni II comes from India's disadvantage of geography in relation to China : whereas Beijing could

21. John Cherian, "Missiles Under Fire", Frontline, June 3, 1994. p-13.

22. Timothy V. McCarthy, "India : Emerging Missile Power," in William C. Patter and Harlan W. Jencks. (ed) "The International Missile Bazar". p-210.

strike India's main Gangetic plain even with short range missile from Tibet. The Agni, even if fired from close to the Sino-Indian border, may not be able to reach Beijing".²³

As it is well known that since 1974 China is helping Pakistan to develop nuclear weapon and now recently the selling of M-11 missiles to Pakistan clearly indicates that the MTCR is based on the assumption that only some countries (nuclear weapon states) have a right to sophisticated missile technology. On August 30, 1994, delegation of countries representing the MTCR began their first time dialogue in New Delhi. Though the Western bloc dominant MTCR wants to convince India that adherence with MTCR would be beneficial in long run, but India keeping in mind its supreme national security dose not want to join MTCR as its neighbour are going ahead with their missile programmes.

As MTCR does not advocate the elimination of ballistic missile, it seems the only objective of MTCR is to stop the third world countries, particularly India to develop their own missile. The United States, through MTCR is trying to maintain its legitimacy in the field of missile. Denying that India now has a robust capability to design and develop

23. Brahma Chellancy, "India", Mitchell Reiss and Robert S. Litwak (ed), Nuclear Proliferation after the Cold War (Woodrow Wilson Centre Press, 1994, Washington. p-180.

a variety of missile system. The economic pressure on it provide a powerful incentive for missile export in the world's missile. Thus, MTCR members and other concerned states should therefore focus their energies on seeking some ground for non proliferation accommodation with India while recognising that it is indeed a missile power.²⁴ But for the U.S. the immediate goal of the MTCR is to achieve an NPT style discriminatory treaty imposing a missile test ban.

Jasjit Singh, Director of the Institute of Defence studies and Analyses (IDSA), New Delhi, is of the opinion that there is a need for a missile like Agni.²⁵ Even according to former Army chief, General K. Sundarji, on many occasions the Chinese have made it clear that they appreciate India's need for missile "deterrence".²⁶

The stopping of the Agni programme reflects poorly on India's political leadership and decision making. Although, knowing the great power tactics to interfere in the Third World. It was due to the United States that India has

24. William C. Potter & Harlan W. Jencks, The International Missile Bazar, p-224.

25. John Cherian, "Missile Manoeuvres-In the name of proliferation", Frontline, Vol.12, No.16, August 11, 1995, p.44.

26. *ibid.*, p.43.

developed cold feet on deployment of Prithvi and Agni missile.

Also, the dispatch by the United States of Task Force 74, led by the nuclear-powered, nuclear-armed aircraft carrier SS Enterprise, into the Bay of Bengal in December 1971 remains deeply etched in the consciousness of Indian defence planners and strategists.²⁷

The Indian missile programme is a symbol of its pride and indigenous technological capabilities. Hence, in July 1993, the United States persuaded Russia to cancel a deal involving the transfer of Russian cryogenic (liquid hydrogen-liquid oxygen) engines to India, since this transfer violated the guidelines of the MTCR. A closer study of the operational characteristics of cryogenic engines reveal that these engines are ideal for use in satellite launch vehicle, but are suited for ballistic missile.²⁸ It clearly shows that the United States does not want success of the Indian

27. Jasjit Singh, "Arms Control and the Proliferation of High-Technology weapons in South Asia and the Middle East : A view from India," ed. Shelley A. Stahl and Geofftrey Kemp, "Arms control and weapons Proliferation in the middle East and South Asia", (Machmillan, hampshire, 1992), p.126.

28. Dinshaw J.Mistry, "Dual-use Technology, Arms Control and Inter national Security", Defense Analysis, Vol.10, No.2. 1994, p.218.

expertise in space technology. As the dual characteristic of this technology might threat to the United States.

Though, India is the only threshold nuclear weapon country in the world having unsolved border disputes with China and Pakistan, which after demonstrating its capabilities in nuclear and missile technology is without any intention to weaponise its military with these weapons of mass destruction.

Therefore, The MTCR is a surreptitious club of a few countries that seeks to prevent others from acquiring commercial technologies critical to economic development.²⁹

India is to withstand against these states until they do not agree for dismantling their nuclear missiles for world peace. In summary, India considers MTCR discriminatory. Some Indian experts find it more discriminatory than the NPT. Besides the regime is also considered inconsistent. There have been many occasions when despite report and evidence of violation of the law designed on the MTCR guidelines, no action has been taken.

29. Brahma Chellaney, "Non-Proliferation: An Indian Critique of US Export Controls," Orbis, Summer 1994, p-443.

CONCLUSION

The Nuclear Non-Proliferation Regimes could have proved to be important instruments of the global efforts to control the spread of weapons of mass destruction. Unfortunately, so far the Nuclear Weapons states have only established discriminatory Regimes with many loopholes. Now that the cold war is over, the Nuclear Weapon states must bridge ideals and reality and perform practical steps to realize world peace. Undoubtedly, due to a variety of factors, our world today is advancing towards a global society, but world peace is still not in sight.

The confrontation of ideas between the Nuclear Weapon states and India creates a major problem. As the extension of Nuclear Non-Proliferation Treaty legitimises the nuclear weapons in the hands of Nuclear weapon states for indefinite period, the whole world has been divided into 'Nuclear have' and 'Nuclear have not' states. The fact is that as long as nuclear weapons exist on the earth, there is no guarantee that the future is totally safe. The United States leadership has played a decisive role in the development and nurturing of the Nuclear Non-Proliferation Regime, but on the other hand, the United States is also playing role in proliferation.

India, a third world nuclear state is monitoring those countries which always indulge in double speak; for example, the United States, China and France. Both China and France carried out nuclear explosions even during the negotiations on CTBT. Certainly, the delinkage of CTBT from verifiable and time bound disarmament, as India had proposed will only perpetuate nuclear apartheid, dividing the world into nuclear haves and have-nots like Nuclear Non-Proliferation Treaty. If Nuclear Weapon states will not denuclearize themselves, and if the United States, Russia and China whose nuclear missiles reach envelops India, will continue to wink at Pakistan's nuclear programme, then how can India commit itself to CTBT or NPT. So most of the non-nuclear nations realize that the CTBT is not a meaningful document.

As it is well known that after the disintegration of USSR, there was a lot of hue and cry concerning the danger of nuclear proliferation but the three nuclear weapon states - Belarus, Kazhakstan and Ukraine who had departed themselves from USSR have renounced their nuclear weapons. Also, three former threshold states - South Africa, Brazil and Argentina have renounced their nuclear option. No doubt, the targets of NPT and Missile Technology Control Regimes are the developing countries. Big power diplomacy from its very beginning is playing a very important role in

creating tension among the developing countries like Iran, Iraq, North Korea, South Korea, Pakistan, India, Vietnam. So, it is very important for the Third World countries to unite themselves under the banner of the United Nations and stand against the hegemonic nature of the NWSs and do not allow them to interfere in their domestic problems.

India's first Prime Minister called for test ban in 1954. At that time, if the two super powers stopped testing their nuclear devices and started negotiation for renouncing nuclear weapons, then today's world would have a strong Nuclear Non-Proliferation Regimes. The Universal Comprehensive Test Ban, which will be a first step towards disarmament, is within the reach of nuclear weapon states, if they think rationally for global peace.

The nature of nuclear weapon states is to maintain their supremacy by enjoying nuclear monopoly. Therefore, they do not want any other country to enjoy equal status with them. India being a threshold state is having a ambitious missile programme to counter China's missile power. Due to this very reason India developed Agni missile. Agni missile is still just a technological demonstration. But India is in no mood for nuclear arms race. If we analyse the period of cold war, vertical nuclear proliferation was much bigger problem to deal with.

As to many the Cold War period was a period of unusual degree of stability in relations between the two super powers. John Lewis Gaddis called it as "the Long Peace". But in actual fact, there was no peace. This period was one of the most difficult time in world history.

For India, signing the Nuclear Non-Proliferation Regime will be like neglecting its duty to help global people for the cause of universal disarmament. Therefore, India's not signing the discriminatory NPT, MTCR and CTBT is a right stand,

Also, Missile Technology Control Regime (MTCR) is as discriminatory as NPT and CTBT. It legitimizes Missiles in the hands of the United States and its allies. Besides, the several studies conducted in the USA have indicated towards an economic angle of the non-proliferation regimes. These studies have recommended strengthening of such regimes for 'holding the edge'. By this it is meant that the USA will and should maintain technological supremacy. The studies highlight that the technological supremacy is essential, and, in a way, indispensable for maintaining commercial competitiveness of the American industry, for these regimes are basically targeting that use technology.

This angle is not a hidden agenda or a classified matter. Importantly, it is found in the published and

clearly expressed non-classified documents of the US library. In a changing globalising world adopting free trade as its creed and the World Trade Organization as an auxiliary agency, it is totally unacceptable to a newly industrializing country like India. The barricades, erected in the name of national security which thwart Indian economic and technological development. It is necessary for India, which in recent years has demonstrates its commitment to the principle of Free Trade, to oppose such regimes tooth and nail for this economic factor, too.

To conclude, India must seriously engage the NWS in pursued of its goal of nuclear disarmament. It must do so by unleading the creativity and imagination that have traditionally informed its disarmament diplomacy. But until the vision of a nuclear free world has a chance of translating into reality, it must continue to oppose the NPT, CTBT and MTCR.

SELECT BIBLIOGRAPHY

PRIMARY SOURCES

ACDA Document on Disarmament, 1965, 1968.

General Assembly Official Record, Sessions: 1st, 10th, 13th, 15th, 16th, 20th, 21st and 38th.

NPT Conference, 1995/MC 1/1 & 11/1.

Security Council Resolution 255. 19th June, 1968.

SIPRI, Year Book 1972.

Special Report of the Conference of the Committee on Disarmament, New York, UN, 1971.

The Irish Proposal at the UN General Assembly.

The UN Disarmament Year Book, Vol.18, 1993.

The United Nations and Nuclear Non-Proliferation, (UN Publication, New York, 1995), Blue Books Series, Vol.III.

Zachary S. Davis, "Non-Proliferation Regimes", CRS Report for Congress, 1st April, 1991.

SECONDARY SOURCES

Books

Appadorai, A. and Rajan, M.S., India's Foreign Policy and Relations, South Asia Publishers, New Delhi-1985.

Bailey, C. Kathleen, Doomsday weapons in the hands of many : The Arms Control Challenge of the 90s, University of Illinois Press Urbana and Chicago, 1991.

- Bailey, C. Kathleen, Weapons of Mass Destruction Costs and Benefits, Manohar Publishers & Distributors, New Delhi, 1994.
- Barnaby, Frank. How Nuclear Weapons Spread : Nuclear Proliferation in the 1990s, Routledge, London, 1993.
- Basu, Rumki. The United Nations : Structure and Functions of an International Organization, Sterling Publishers (Pvt) Ltd., New Delhi, 1994.
- Basu, Sujay, "NPT IAEA and Nuclear Weapon Proliferation" in Arun K Banjerji (ed) Arms Race, Disarmament and Security : Some Perspectives, K.P. Bagchi & Co., Calcutta, 1991.
- Bidwai, Praful and Vanaik, Achin, Testing Times : The Global Stake in a Nuclear Test Ban, Dag Hammar - Skjold Foundation, 1996.
- Blacker, Coit D. and Gallacher, eds., The Nuclear Non-Proliferation Treaty, London, 1985.
- Breuner, Michael J., Nuclear Power and Non-Proliferation : The Remarkings of US Policy, Cambridge, 1981.
- Burrows, E. William and Winderm, Robert, ed., Critical Mass, Simon and Schuster Ltd., London, 1994.
- Chari, P.R., Indo-Pak Nuclear Stand Off : The Role of the United States, Manohar, New Delhi, 1995.
- Challaney, Brahma, Nuclear Proliferation : The Us-Indian Conflict, Orient Longman, New Delhi, 1993.
- Cortright, David and Mattoo, Amitabh, ed., India and the Bomb : Public Opinion and Nuclear Options, University of Notre Dame Press, Notre Dame, Indiana, 1996.

- Dahlitz, Julie, Nuclear Arms Control : With Effective International Agreement, George Allen and Urwin Publishers Ltd., London, 1983.
- Dewitt, B. David, Nuclear Non-Proliferation and Global Security, Croom Helm Ltd., London, 1987.
- Epstein, William and Toyoda, Toshiyuki, eds., A New Design for Nuclear Disarmament, Pugwash Symposium, Kyoto, Judan, The Bertrand Russell Peace Foundation Ltd., Nottingham, 1977.
- Fisher, David A.V., The International Non-Proliferation Regime 1987, United Nations Institute for Disarmament Research, Geneva, (New York, 1987).
- Frankel, Francine, R., ed. Bridging the Non-Proliferation Divide : The United States and India, Konark Publishers Pvt. Ltd., Delhi, 1995.
- Gallik, Daniel, ed. World Military Expenditures and Arms Transfers 1987, US Government Printing Office, Washington, D.C., 1988.
- Goldbalt, Tozef, Army Control Agreements : A Handbook, Praeger Publishers, New York, 1987.
- Karp, Aaron, Ballistic Missile Proliferation in the Third World, SIPRI Year Book, 1989.
- Martel, William C. and Savage L. Paul, ed., Strategic Nuclear War : What the Super Powers Target and Why, Greenwood Press, New York, 1986.
- McCarthy, Timothy V., India Emerging Missile Power in William C Potter and H.W. Jencks, ed., The International Missile Bazaar - The New Suppliers' Network, Boulder, San Francisco, Oxford, West View Press, 1994.
- McKnight, Allan, Atomic Safeguards : A Study of International Verification, UN Institute for Training and Research, New York, 1971.

- Meyer, Stephen M., The Dynamics of Nuclear Proliferation, The University of Chicago Press, Chicago, 1984.
- Mirchandi, C.C., India's Nuclear Dilemma (Popular Book Service, New Delhi, 1968).
- Mitchell, Reiss and Litwak, Robert S., ed., Nuclear Proliferation After the Cold War, The Woodrow Wilson Center Press, Washington D.C., 1994.
- Muller, Harald, Fischer David, Kotter Wolfgang, eds., Nuclear Non-Proliferation and Global Order, Oxford University Press, Sipri, New York, 1994.
- Nakarada, Radmila and Oberg, Jam, Surviving Together, The Olof Palme Lectures on Security, Dartmouth Pub., Hampshire, 1989.
- Nehru, Jawaharlal, India's Foreign Policy, The Publication Division, Government of India, New Delhi, 1983.
- Nolan, Janne E., ed., Global Engagement : Co-operation and Security in the 21st Century, The Brookings Institute, Washington D.C., 1994.
- Palmer, Norman D and Perkins, Howard C., International Relations - The World Community in Transition, CBS Publishers and Distributors, Delhi, 1985.
- Pandey, Savita, The Future of NPT, Lancers Publication, New Delhi, 1995.
- Pgany, Istvan, ed., Nuclear Weapons and International Law, Aldershot, U.K., 1987.
- Potter, William C. and Jencks, Harlan W., ed., The International Missile Bazaar : The New Suppliers, Network, Westview Press, Oxford, 1994.

- Poulose, T.T., The United Nations and Arms Control : Nuclear Proliferation in the United Nations and the Maintenance of Internal Peace and Security, Martinus Nijhoff Publ., Dordrecht, 1987.
- Poulose, T.T., Perspectives in India's Nuclear Policy (Young Asia, New Delhi, 1989).
- Poulose, T.T., United Nations and Nuclear Proliferation, B.R. Publications, New Delhi, 1988.
- Sanders, Benjamin, Safeguards Against Nuclear Proliferation, A SIPRI Monograph, Cambridge, 1984.
- Schafter, Jurgen and Karp Aaron, The National Implementation of the Missile Technology Control Regime, In Hans Gunter Branch ed., AFES Press Conference on Controlling Military R&D and Exporting of Dual Use Technologies as a problem of Disarmament and Arms Control Policy in the 1990's, Mosbach, Germany, 1992.
- Sehwarz, Urs., Confrontation and Intervention in the Modern World, Dobbs Ferry, New York, Oleana Publ., 1970.
- Shaker, I. Mohamed, The Nuclear Non-Proliferation Treaty : Origin and Implementation 1959-79, Ocean Publications, INC, London, Rome, New York, 1980.
- Shyam Babu, D., Nuclear Non-Proliferation towards a Universal NDT Regime, Konark Publishers, Delhi, 1992.
- Singh, Swaran, Limited War : The Challenge of US Military Strategy, Lancers Books, New Delhi, 1995.
- Stahl, A. Shelley and Kemp, Geoffrey, ed., Arms Control and Weapons Proliferation in the Middle East and South Asia, MacMillan Academic and Proliferation Ltd., London, 1992.

Subrahmanyam, K., Nuclear Myths and Realities : India's Dilemma IDSA, New Delhi, ABC Publishing House, New Delhi, 1983-84.

Vershbow, Alexander R., Nuclear Weapons and World Politics : Alternative for the Future, Mc Graw Hill Book Company, New York, 1977.

Walker, William and Mans, L., Nuclear Power Struggle : Industrial Competition and Proliferation Control, George Allen and Urwin Publishers Ltd., London, 1983.

ARTICLES

Albright, David, North Korea drops out, Bulletin of the Atomic Scientists 49(4), May 93.

Babar, Farhatullah, Nuclear debate in South Asia: A path to sanity, Regional Studies 10(4), Autumn 1992.

Balachandran G., CTBT and India, Strategic Analysis, vol.XIX, no.3, June 1996.

Bhaskar, C. Uday, American Nuclear Double - Speak, Mainstream, vol.XXXIV, no.47, October 14, 1995.

Blix, Hans, IAEA safeguards: New challenges, Strategic Digest 22(9), Sep.92.

Boudreau, Donald G., On advancing non-proliferation, Strategic Analysis 14(11), Feb.92.

Chellaney, Brahma, Non-Proliferation: An Indian Critique of US Export Controls, Orbis, Summer 1994.

Chellaney, Brahma, Will India Tie the CTBT Noose?, World Focus, vol.17, Number 2, February 1996.

Cherian, John, Geneva Standoff India's firms stand against CTBT, Frontline, July 12, 1996.

- Cherian, John, Missiles Under Fire, Frontline, June 3, 1994.
- Choudhury, Upendra, Implications of North Korean withdrawal from NPT, Mainstream 31(29), 29 May 93.
- Cohen, Avner and Miller, Marvin. Facing the unavoidable: Israel's nuclear monopoly revisited, Journal of Strategic Studies, 13(3), Sept.90.
- Datt, Savita, India and NPT in the World of tomorrow, Mainstream 29(52), 19 Oct.91.
- Datt, Savita, NPT and the non-nuclear weapon states: Options and non-options, Strategic Analysis, 15(10), Jan.93.
- Datt, Savita, Nuclear peril: North Korea's nuclear weapons programme, Strategic Analysis 16(2), May 93.
- Datt, Savita, Strengthening safeguards and tightening controls: The beginning of the end?, Strategic Analysis 14(10), Jan.92.
- Dunn, Lewis A., Containing nuclear proliferation, Adelphi Papers (263), Winter 1991, 1-75. (Series of articles).
- Evron, Yair, Opaque proliferation: The Israeli case, Journal of Strategic Studies 13(3), Sept. 90.
- Ghali, Boutros Boutros, Disarmament in a Changing World: Opportunities, Trends and Perspectives, Disarmament, vol.17, no.2, 1994.
- Goldblat, Jozef, Nuclear non-proliferation: A balance sheet of conflicting trends, Bulletin of Peace Proposals 20(4), Dec.89.
- Goldblat, Jozef and Lomas, Peter, Nuclear non-proliferation: The problem states, Transnational Perspectives 15(1), 1989.
- Gupta, Rakesh, Sign or be struck, Link 34(32), 22 Mar. 92.

- Haidar, Salman, Statement by India, World Focus, vol.17, no.2, February 1996.
- Hoffmann, Wolfgang, The Verification Regime, Disarmament, vol.18, no.1, 1995.
- Jayaranu, P.S., India and the nuclear question: Some suggestions, Indian Journal of Political Science 52(4), Oct.-Dec.91.
- Joeck, Neil, Tacit bargaining and stable proliferation in South Asia, Journal of Strategic Studies 13(3), Sept.90.
- Kapur, Ashok, Dump the treaty, Bulletin of the Atomic Scientist 46(6), July-Aug.90.
- Kapur, K.B., IAEA/NPT safeguard regime after the Gulf crisis, Foreign Affairs Report 42(3-4), Mar.-Apr.93.
- Karlekar, Indraneel, India and non-proliferation, Mainstream 31(39), 7 Aug.93.
- Karp, Aaron, Controlling ballistic missile proliferation, Survivals 33(6), Nov.-Dec. 91.
- Kim, Taewoo, North-South politics in nuclear diplomacy: NPT and review conference revisited, Korea Observer 22(2), Summer 91.
- Kumar, Dinesh, India and the CTBT, Mainstream, vol.XXXIV, no.14, March 9, 1996.
- Malik, J. Mohan, Missile Proliferation: China's Role, Strategic Digest, vol.XXI, Number 2, February 1991.
- Mistry, J. Dinshaw, Dual-Use Technology, Arms Control and International Security; preventing Russian rocket engines sales to India, Defense Analysis, vol.10, no.2, 1994.

- Mohan, Raja C., CTBT should be Genuinely Comprehensive, World Focus, vol.17, no.2, February 1996.
- Mojsov, Lazar, Collateral measures and the non-proliferation treaty, Review of International Affairs 41(971), 20 Sep.90.
- Non-Proliferation Treaty, World Focus 14(5), May 93 (Series of articles).
- NPT Treaty review, Bulletin of the Atomic Scientist 46(10), Dec. 90, 39-47. (Series of articles)
- Opaque Nuclear proliferation: Methodological and policy implications, Journal of Strategic Studies 13(3), Sept.90. (Series of articles)
- Ozga, A. Deborah, A Chronology of Missile Technology Control Regime, The Non-Proliferation Review, Winter 1994.
- Pande, Savita, Israel and the nuclear non-proliferation regime, Strategic Analysis 16(2), May 93.
- Pant, K.C., India: Nuclear Weapons and CTBT, World Focus, vol.17, no.2, February 1996.
- Paranjpe, Shrikant, American policy toward problems of nuclear proliferation in South Asia: An Indian perspective, Asian Affairs 16(4), Winter 1989-90.
- Qingshan, Tan, US-China nuclear cooperation agreement: China's non-proliferation policy, Asian Survey 29(9), Sep.89.
- Rajkumar, Towards a NAM nuclear energy authority: A way out of India's nuclear dilemma, Gandhi Marg 12(2), Jul.-Sep.90.
- Report to Congress on progress toward regional non-proliferation in South Asia, Strategic Digest 23(6), June 93.

- Rope, William F., US initiatives in non-proliferation, Strategic Digest 22(7), July 92.
- Rudolf, Peter, Non-proliferation and international export control, Aussen Politik, 42(4), Quarter 1991.
- Sabherwal, O.P., India's Nuclear Policy Under Seige, World Focus, vol.17, no.2, February 1996.
- Sanders, Ben, Non-proliferation treaty: A broken record?, Bulletin of the Atomic Scientist 46(6), July-Aug.90.
- Sanders, Ben, NPT stronger, not weaker, Bulletin of the Atomic Scientists 47(7), Sept.91.
- Scheinman, Lawrence, Safeguards: New threats and new expectations, Strategic Digest 22(9), Sep.92.
- Shah, Prakash, Nuclear non-proliferation implications and the NPT review: An Indian perspective, Strategic Analysis 16(2), May 93.
- Shashi, Agha, Nuclear non-proliferation and Pakistan, Strategic Digest 22(1), Jan.92.
- Shashi, Agha, Nuclear non-proliferation and Pakistan, Strategic Studies 14(3), Spring 1991.
- Shyam, Babu, Dasari, France and the NPT: Return of the prodigal, Strategic Analysis 14(7), Oct. 91.
- Shyam Babu, Dasari, China's nuclear U-turn, Monthly Public Opinion Surveys, 27(2-3), Nov.-Dec. 91.
- Simpson, John, 1990 Review Conference of the Nuclear Non-Proliferation Treaty: Pointer to the future or diplomatic accident?, Round Table (318), Apr.91.
- Simpson, John, Non-proliferation agenda beyond 1990, Bulletin of the Atomic Scientist 46(6), July-Aug. 90.

- Simpson, John and Howlett, Darryl, Nuclear non-proliferation: The way forward, Survivals 33(6), Nov.-Dec.1991.
- Singh, Arun, Non-strategic naval nuclear arms control, UP Journal of Political Science 2(2), July-Dec.90.
- Singh, Gurdip, MTCR as an Impediment to SLV Development: Legal Aspects, Strategic Analysis, vol.XVI, no.5, August 1993.
- Singh, Jasjit, Future of NPT, World Focus 13(11-12), Nov.-Dec. 92.
- Singh, Swaran, US nuclear non-proliferation policy: The Clinton doctrine, Strategic Analysis, 16(5), Aug.93.
- Singh, Swaran, Nuclear non-proliferation treaty: Issues before the Fourth review conference, Mainstream 28(40), 28 July 1990.
- Subrahmanyam, K., India should leave Negotiations, World Focus, vol.17, no.2, February 1996.
- Subramaniam, R.R., NPT and Israel, Pakistan, North Korea, World Focus 14(5), May 93.
- Supply-Side controls on nuclear proliferation, Orbis 36(2), Spring 1992, 163-210, (Series of articles).
- Tate, Trevor, McMorris, Regime-building in the Non-Proliferation system, Journal of Peace Research 27(4), Nov.90.
- Viswam, S., India and NPT, World Focus 14(5), May 93.
- Zuberi, Martin, "CTBT - Testing Times", World Focus, vol.17, no.2, February 1996.
- Zuberi M., Non-proliferation of Soviet nuclear weapons, Mainstream 30(13), 18 Jan. 92.

NEWSPAPERS

The Times of India (New Delhi)

The Economic Times (New Delhi)

The Hindustan Times (New Delhi)

The Pioneer (New Delhi)

The Washington Post (Washington D.C.)