ARMSCONTROL AND DISARMAMENT AFTER THE COLD WAR: EAST-WEST AGREEMENTS

Dissertation submitted to Jawaharlal Nehru University
in partial fulfilment of the requirements
for the award of the Degree of
MASTER OF PHILOSOPHY

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INDIA
1996

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19 July 1996

CERTIFICATE

This is to certify that the dissertation entitled, **ARMS CONTROL AND DISARMAMENT AFTER THE COLD WAR: EAST-WEST AGREEMENTS** submitted by **Shri Senthil Ram A G** in partial fulfilment of the requirements for the degree of **Master of Philosophy,** has not been previously submitted for any other degree of this University or any other university. This is his own work.

We recommend that this dissertation may be placed before the examiners for evaluation.

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FOR

APPA, AMMA and KAVI

CONTENTS

PREFACE

A hesitant, uneven but nonetheless new and real momentum towards global disarmament has dawned at the end of the Cold War. This is reflected in the ongoing debate over a comprehensive Test Ban Treaty and the various arms control and disarmament measures between the cold war adversaries. The new strategic environment which evolved from the nuclear age is actually witnessing the withdrawal and dismantling of thousands of Russian and American nuclear warheads and missiles. Three nuclear weapon states - Belarus, Kazakhstan and most importantly Ukraine - have gone non-nuclear. Three threshold states - South Africa, Brazil and Argentina - have renounced their nuclear capacities. There is a growing positive opinion the worldover in favouring disarmament. If this programme continues, all nuclear warheads could be eliminated in a little over ten years from now. And a paradigm shift in the international system is a likely possibility.

The objective of this dissertation is to look at how much progress has been made towards zero nuclear status. This dissertation focuses on various arms control and

disarmament agreements signed in the post-Cold War period and tries to place these agreements - which opened up unprecedented opportunities for cooperation on a whole range of East-West security issues - in perspective. Chapter One analyses the role of nuclear weapons in the US-Russian policies and the role of arms control and disarmament in shaping new security perceptions and strategies. Chapters Two and Three reviews the main provisions of the recent major agreements and provides an assessment in the light of political events subsequent to the signing of these treaties. Chapter Four reviews the scope of cooperative denuclearization programmes and the progress made in implementing them.

I have learnt a lot from the detailed lecture to the finer discussions of Dr. Kanti P. Bajpai, my teacher and supervisor. With his able guidance my views and thoughts have crystallised in to this present form. My heart felt thanks to him. Prof. Martin Zuberi has always been a towering force of inspiration. Bob, Saravanan, Anni and Naks, Disha and Percy, Sakthi and Ramachandran have given something very valuable to this dissertation. Their time. Without all those friends who left me in peace during the

scorching summer, this dissertation would not have been possible. They deserve a very special place in my acknowledgement. I also express my gratitude to my classmates who were with me in the thick of things. I thank Debu and Sagar for their sheer dedication infront of the computer. Full responsibility of any errors of fact or judgement rests with me.

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ACRONYMS

ABM	*Anti-ballistic missile*
ALCM	*Air-launched cruise missile*
ASLCM	*Advanced sea-launched cruise missile*
ASM	*Air-to-surface missile*
ATBM	*Anti-tactical ballistic missile*
ATTU	*Atlantic-to-the-Urals*
BMD	*Ballistic missile defence*
CBM	*Confidence building measure*
CFE	*Conventional Armed Force in Europe*
CIS	*Commonwealth of Independent States*
CSBM	*Confidence- and security-building measure*
CSCE	*Conference on Security and Co-operation in Europe*
CTB(T)	*Comprehensive test ban (treaty)*
CTR	*Cooperative Threat Reduction*
CWC	*Chemical weapons convention*
DOD	*Department of Defense (US)*
DOE	*Department of Energy (US)*
FSU	*Former Soviet Union*
GLCM	*Ground-launched cruise missile*
GPALS	*Global Protection Against Limited Strikes*
HEU	*Highly enriched uranium*
ICBM	*Intercontinental ballistic missile*
INF	*Intermediate-range nuclear forces*
IPM	*International plutonium management*
IPS	*International plutonium storage*
IRBM	*Intermediate-range ballistic missile*
JCC	*Joint Consultative Commission*
LEU	*Low-enriched uranium*
MIRV	*Multiple independently targetable re-entry vehicle*
MOU	*Memorandum of Understanding*
NATO	*North Atalantic Treaty Organization*
NPT	*Non-Proliferation Treaty*
NTM	*National technical means (of verification)*
OSCE	*Organization for Security and Co-operation in Europe*
OSI	*On-Site Inspection*
RV	*Re-entry vehicle*
SALT	*Strategic Arms Limitation Talks*
SAM	*Surface-to-air missile*
SDI	*Strategic Defense Initiative*
SLBM	*Submarine-launched ballistic missile*
SLCM	*Sea-launched cruise missile*
SNDV	*Strategic nuclear delilvery vehicle*
SRAM	*Short-range attack missile*
SRBM	*Short-range ballistic missile*
SS(M)	*Surface-to-surface (missile)*
START	*Strategic Arms Reduction Talks/Treaty*
TLE	*Treaty-limited equipment*
TMD	*Theatre missile defence*
WTO	*Warsaw Treaty Organization (Warsaw Pact)*

GLOSSARY

Atalantic-to-the-Urals	The zone of the 1990 CFE (ATTU) zone Treaty and the 1992 CFE-1A Agreement, stretching from the Atlantic Ocean to the Ural Mountains, which comprises the entire land territory of the European NATO states, the CEE states and the CIS states.
Ballistic missiles	A missile which follows a ballistic trajectory (part of which may be outside the earth's atmosphere) when thrust is terminated.
Confidence on Security building measure (CSBM)	A measure to promote confidence and security under taken by a state. A CSBM is miliitarily significant, politically binding and verifiable. The CSBMs of the CSCE are embodied in the 1986 Stockholm Documents and the Vienna Documents.
Cruise missile	A guided weapon-delivery vehicle which sustains flights at subsonic speeds throughh aerodynamic lift, generally flying at very low altitudes to avoid radar detection, sometimes following the contours of the terrain. It can be air-, ground- or sea-launched and deliver a conventional, nuclear, chemical or biological warhead.
Fissile material	Material composed ofn atoms which fission when irradiated by either fast or slow (thermal) neutrons. Uranium-235 and plutonium-239 are the most common examples of fissile material.
Intercontinental ballistic	Ground-launched ballistic missile with a missile (ICBM) range greater than 5500 km.

Intermediate-range forces (INF)	Theatre nuclear ballistic nuclear missile with a range of from 1000 km upn to and including 5500 km
Multiple independently targetable re-entry vehicles (MIRV)	Re-entry vehicles, carried by a single ballistic missile, which can be directed to separate targets along separate trajectories. A missile can carry two or more RVs.
National technical means verification (NTM)	The technical intelligence of means, under the national control of a state, which are used to monitor compliance with an arms control treaty to which the state is a party.
Re-entry vehicle (RV)	That part of a ballistic missile which carries a nuclear warhead and penetration aids to the target, re-enters the earth's atmosphere and is destroyed in the terminal phase of the missile's trajectory. A missile can have one or several RVs; each RV contains a warhead.
Strategic nuclear weapons	ICBMs and SLBMs with a range usually of over 5500 km, as well as bombs and missiles carried on aircraft of intercontinental range.
Submarine-launched ballistic missile (SLBM)	A ballistic missile lanuched from a submarine, usually with a range in excess of 5500 km.
Tactical nuclear weapon	A short range nuclear weapon which is deployed with general purpose forces along with conventional weapons.
Throw-weight	The sum of the weight of a ballistic missile's re-entry vehicle(s), dispensing mechanisms, penetration aids, and targetting and separation devices.

Treaty-limited equipment (TLE)	The five categories of equipment on which numerical limits are established in the CFE Treaty : battle tanks, armoured combat vehicles, artillery, combat aircraft and attack helicopters.
Warhead	That part of a weapon which contains the explosive or other material intended to inflict damage.

CHAPTER I

INTRODUCTION

Arms Control and Disarmament in the Post Cold War

Nature of New International System

Role of Arms Control and Disarmament in Shaping New Security Perceptions and Strategies

Function of Nuclear Weapons in US-Russian National Security Strategies

Efforts to control arms and armaments are not new concepts of international relations. As early as 431 B.C. Athens and Sparta argued over Athens' decision to extend its walls. To Athens, the extension was purely defensive in nature. Sparta, however, reasoned that the Athenian wall would render Athens invulnerable to land attack, thereby removing the only check on Athenian imperialism that other Greek city-states had. Sparta hence saw the walls as offensive. Efforts to negotiate failed, and the Pelopponesian war resulted.[1]

Modern efforts to control arms and armaments are generally traced to the Hague conference of 1899 and 1907. During the period between World War I and II a variety of efforts were undertaken to limit arms and outlaw war. Following World War II new efforts were again made to limit arms and armaments. At first these efforts were aimed at nuclear weapons, but as it became gradually evident that conventional war itself was growing ever more destructive, these efforts expanded into non-nuclear areas as well.

The period of 1919 saw significant efforts to achieve disarmament, while the years 1959 to 1986 were dominated by the arms control approach. Arms control is not the same thing as disarmament. The two approaches have different

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1. The New Encyclopedia Britannica, "The Theory and Conduct of War", Vol.29, p.639.

historical origins and are inspired by a quite different set of assumptions.

The classical disarmament theory is based upon certain key assumptions[2]: That the central problems of international relations is war, that war is a barbaric and illegitimate tool of policy and that the obvious way to abolish war is to abolish the weapons with which it is waged. Proponents of disarmament argue that weapons themselves are a cause of war in that they deepen the tensions between states warily matching each other for signs of hostile intent.[3] Thus in Bull's definition, "disarmament is the reduction or abolition of armaments. It may be unilateral or multilateral, general or local, comprehensive or partial, controlled or uncontrolled".[4] The key element is reduction, without which disarmament cannot be said to be occuring. The arms control approach impact emerged because of loss of faith in the disarmament process as it had operated in the first half of the twentieth century.[5] The disarmament route to security failed during the inter-war period, it had directly

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2. Michael J. Sheehan, The Arms Race (Oxford: Martin Robertson, 1983), p. 186.

3. Michael J. Sheehan, Arms Control : Theory and Practice, (Oxford: Basil Blackwell, 1988).

4. Ibid., pp.1-2.

5. Ibid., pp.1-2.

contributed to Hitler's victory over the poorly armed British and French before 1939.[6]

In the late 1940s, nuclear weapons and the cold war changed the context of disarmament debates. The enormous buildup of nuclear weapons since 1945 was primarily the product of the cold war. The character of the military competition between the two superpowers was shaped by the existence of strategic nuclear weapons. Having hastily demobilized its armed forces at the end of the second world war, the United States by 1947 began to rely heavily on nuclear weapons to counter the perceived threat to Western Europe from the large Soviet army that had not been demobilized. The buildup of overseas U.S. airbases on the periphery of the Soviet Union and the deployment to them of nuclear-capable bombers stimulated a corresponding, though a much slower, build up of Soviet strategic forces.[7]

The United States and Soviet Union interpreted international problems in bipolar terms and their rivalry drove them into an ever escalating arms race which no other powers were capable of matching. The possession of nuclear weapons by the superpowers added a totally new dimension to this confrontation. For nearly 45 years the international

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6. Ibid., p.5.

7. Carl Kaysen, Robert S. MeNamara and George W. Rathjens, "Nuclear Weapons After the Cold War", Foreign Affairs (New York), Autumn 1991, p.102.

political, economic, social and military environment was dominated by the centrality of this East-West confrontation.

These developments created shapeless fears about 'nuclear armageddon' and the degree of trust between the superpowers was clearly unattainable. Therefore disarmament became an unrealistic objective. From this point onwards arms control began to replace disarmament as the goal of NATO and Warsaw pact state.[8]

The objective of arms control is reducing the likelihood of war, its scope and violence if it occurs, and the political and economic costs being prepared for it.[9] Unlike disarmers, the arms controllers did not see nuclear deterrence as an immoral expedient. Arms control sought to make the world safe for nuclear deterrence rather than to abolish nuclear weapons. Arms controllers promoted a balance of military power in which arms control complemented universal force improvements as a means to achieve security.[10]

For most of the cold war era, arms control efforts were aimed primarily at dampening the effects of superpower

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8. Sheehan, Arms Control, p.4.
9. Ibid., p.6.
10. Ibid., pp. 8 & 10.

competition.[11] This approach put stabilizing limits on the large standing nuclear and conventional forces of East and West. The object was not to reduce forces or to stop the technological race in armaments, but to build confidence through a process of dialogue, agreement, and verification.[12]

One of the rationales for arms control in the late 1950s was that disarmament required too great a degree of trust between states.[13] 1960 to 1985 that trust simply did not exist. So, the possiblity of disarmament was non-existent and even the success registered in arms control were limited;[14] From for example, banning atmospheric nuclear tests; prohibiting biological weapons; placing ceilings on permitted growth in strategic nuclear forces.

In the last few years, with the extraordinary changes in the international security environment, that picture has changed dramatically. Over a very short time, remarkable

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11. Documents Issued from the White House, "National Security Strategy of the United States", Strategic Digest (New Delhi), vol. 23, no. 4, April 1993, p. 578.

12. Randall Forsberg, "End Armscontrol, Begin Disarmament", The Bulletin of the Atomic Scientists (Chicago), vol. 47, no. 9, November 1991, p.30.

13. Documents Issued from the White House, National Security Strategy of the US, p. 578.

14. Sheehan, Arms Control, p.4.

successes were achieved in reducing nuclear and conventional arsenals, in the effort to ban chemical weapons, in establishing an extensive network of confidence - building measures and communications facilities among former adversaries.

After some 45 years of political combat, including some secondary military skirmishes, the cold war indeed came to a final end. From 1980 onwards the security environment of which arms control had been a reflection began to undergo a radical change.

The emergence of Mikhail Gorbachev as Soviet leader in 1985 was an event of historical importance, the evolution of 'Prestroika' began to demonstrate that Gorbachev's words were based on conviction and were not just rhetoric.[15] The USSR began a series of unilateral reductions and withdrawals. These cuts, in reducing the scale of the threat modified foreign perceptions of Soviet intentions and led to compensating reductions in the size of the Chinese army and a softening of NATO's military posture.[16]

The political changes in Eastern Europe, the emergence of pro-western democratic governments, combined with

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15. Ibid., pp.159-62.

16. Ibid., p.160.

'glasnost', the new openness in Soviet society, made sure that verification was no longer the bug-bear it had once been.[17] Eastern Europe has become as military transparent as the West.

The collapse of the Soviet Union fundamentally changed the strategic environment : Germany unified, the Warsaw pact was disbanded and Soviet forces have been evicted from Hungary and Czechoslovakia. All these changes helped produce an environment in which disarmament rather than arms control is the objective once again.

The August-September 1991 revolutionary changes in the Soviet Union gave a final overriding symmetry to the arms control treaties of 1991.[18] They closed the door on a long chapter in the history of arms control, and they opened a way to an entirely new process with new conditions, new players, and new goals.

The remarkable juncture in mid-1991 marked the crowning achievements of the disarmament process. The arms control agreements on which negotiations began at the end of the cold war were signed in 1992.[19] 'The Vienna Document' was signed to establish a new set of confidence

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17. Ibid., p.160.
18. Randall, "End Arms Control, Begin Disarmament", p.163.
19. Ibid., p. 165.

and security building measures, the unilateral treaty on 'Open Skies' was signed on 24 March 1992 and 'Conventional Forces in Europe (CFE) Treaty' entered into force on 17 July. The CFE treaty has an essential framework for lowering conventional force levels deployed by the 16 member states of NATO and the 6 member states of the Warsaw Pact in an area that stretches from the Atlantic to the Urals. The era of substantive reduction in the strategic nuclear arsenals began with the Strategic Arms Reduction Treaties I and II signed in 1991 and 1993. By the year 2003 Russia and the US will have between 3,000 and 3,500 warheads.[20] All these agreements mark the end of the traditional arms control approach and beginning of a new process to reverse the arms race and to demilitarize the international system.[21]

Nature of the New International System

The 1990s began with the hope that at last, with the end of the cold war, there was an opportunity to marginalise nuclear weapons, if not to eliminate them altogether in the conduct of international affairs.[22] A

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20. Dunbar Lockwood, "START I Enters Into Force, Clears Way for START II Approval", Arms Control Today (Washington, D.C.), vol. 25, no.1, January-February 1995, p.19.

21. Randall, 'End Armscontrol, Begin Disarmament', p. 165.

22. Lawrance Freedman, "Great Powers, Vital Interests and Nuclear Weapons", Survival (London), vol. 36, no. 4, Winter 1994-94, p. 35.

strategy of deterrence has always represented a minimalist approach in denying any intention to use a nuclear arsenal to intimidate and coerce others.[23] The answer to the question of marginalisation lies not only in the spread and size of nuclear arsenals, but also depends on the strategic objectives that these weapons are deemed to support.[24] To identify these objectives, it is necessary to examine the changing nature of the international system.

The present international system is quite different from the previous one which came to an end in 1991 with the end of cold war. Historians mark it as the end of 20th century.[25] The two world wars, the cold war and the process of decolonisation appears to be a self-contained historical period.[26] The new era resembles the 19th century, because there does not exist among the great powers either a major ideological divide or a dominating power rivalry.[27]

Charles Krauthammer passing a categorical judgement about the nature of the post cold war international system

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23. Ibid., p. 36.
24. Ibid, p. 36.
25. Barry Buzan, "New Patterns of Global Security in the Twenty First Century", International Affairs (London), vol. 67, no. 3, January 1991, p. 433.
26. Ibid., p. 438.
27. Ibid., p. 439.

asserted that "the immediate post cold war world is not multipolar, it is unipolar in that sense that the centre of world power is the unchallenged superpower, the USA attended by its western allies."[28] But the order that will replace the bipolar system of cold war is still in the process of evolution and it may look like a unipolar political system in the sense, that there is a single dominant coalition under the US leadership governing international relations. The US influence in international affairs is gradually decreasing because of growing multilateralism that limits resentments and balances the behaviour of other nations that can lead them to resist American wishes and make it harder for Americans to achieve their national interest.[29]

According to some analysts, mostly 'neo-realists', this system is still shaped by great powers that gain their elite position through military strength and particularly by the possession of nuclear weapons.[30] This has been further reinforced by the coincidence of the five permanent members of the Security Council, all of whom also possess nuclear weapons.

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28. Jasjit Singh, "Towards A New International Order", Strategic Analysis (New Delhi), vol. 14, no. 7, October 1991, p. 775.

29. Ibid., p. 783.

30. Freedman, "Great Powers, Vital Interest and Nuclear Weapons", p. 37.

One thing is certain: the implementation of the arms control accords and the work of the institutions that they called into being will be carried out under new political and military premises.[31] While they must address a different reality it would be a mistake to underestimate their significance. They constitute an important part of the new politico-military environment.[32] As stated by the UN Secretary - General Mr. Boutros Boutros Ghali in his report, the legacy of 11 global multilateral agreements, 4 major regional multilateral agreements and 16 bilateral agreements between the USA and the Russian Federation provides a basis for the disarmament and arms control process today and in the immediate future and establishes some procedures and rules of conduct for the search for a co-operative security system.[33]

Role of Arms Control and Disarmament in Shaping New Security Perceptions and Strategies

Now that the cold war is over and the Soviet Union no longer exists, strategic nuclear arsenals can play a very different role. They no longer have the task of managing

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31. Adam Daniel Rotfeld, "Parameters of Change", in SIPRI Year Book 1993: World Armaments and Disarmament (Oxford: Oxford University Press, 1993). p. 6.

32. Ibid., p. 6.

33. Ibid., p. 6.

the military status quo because the status quo no longer exists. Their role can become vastly more positive, facilitating a transition to a world in which nuclear weapons are marginalised, if not irrelevant.

The end of the Soviet threat and the new non-ideological relations emerging between the West and the new post-Soviet states have sharply reduced the requirements for effective deterrence.[34] In the new political circumstances the most crucial challenge for arms control agreements is effectively to prevent the proliferation of weapons and their means of delivery.[35] This applies equally to conventional, nuclear, chemical and biological weaponry. The important role of arms control and disarmament in the post cold war era is also to maintain the arms control accords already in force and to ratify and implement negotiated agreements not yet ratified.[36]

Present arms control efforts may become more

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34. Regina Cowen Karp, "The START Treaty and the Future of Strategic Nuclear Arms Control", in SIPRI Year Book 1992: World Armaments and Disarmament (Oxford : Oxford University Press, 1992), p. 34.

35. Rotfeld, "Parameters of Change", p. 6.

36. Michael Krepon, "Arms Control in the Post Cold War World", Link (New Delhi), vol. ,no. , September 27, 1992, p.21.

regional.[37] Regional arrangements can add predictability and openness to security relations, advance the rule of international law and promote cooperation among participants. They help maintain deterrence and a stable military balance at regional level.[38]

The improved US-Russian relations and the joint objective of deep cuts in strategic offensive arms requires a wholesale revision of the ABM treaty.[39] The issue is adaptation of the ABM treaty in changing circumstances. New understandings treaty will be required to permit both sides to upgrade their theatre ballistic missile defences and improve early-warning and attack characterisation capabilities.[40] This treaty might help to remove the threat of loose nuclear weapons and to improve American-Russian cooperation in nuclear issues.

Arms control agreements can head off potential arms races in certain weapons categories or in some environments.[41] It is important to seek greater

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37. William J. Clinton, "US National Security Strategy of Engagment and Enlargement", Strategic Digest (New Delhi), vol. 25, no. 5, May 1995, p. 605.

38. Ibid., p. 605.

39. Krepon, "Arms Control in the Post Cold War World", p. 21.

40. Ibid., p. 21

41. Clinton, "US National Security Strategy of Engagement and Enlargement", pp. 605-606.

transparency, responsibility and, where appropriate, restraint in the transfer of conventional weapons and global military spending.[42] The UN Register of Conventional Arms Transfers is a start in promoting greater transperancy of weapons transfers and build ups.[43] Confidence Building Measures (CBMs) are a central feature of cooperative security in the new arms control agenda, particularly in regions of tension.[44]

Arms Control measures to reduce oversized defense industrial establishments, especially those parts involved with weapons of mass destruction, will also contribute to stability in the post cold war world.[45]

Instead of merely dampening competition, arms control now plays a major role in creating the framework for cooperation. In keeping with that change, the process of arms control has also altered dramatically. In some areas, particularly with the independent states of the former Soviet Union, the USA can afford to take unilateral steps,

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42. Ibid., p.606.

43. Ibid., p. 606

44. Krepon, "Arms Control in the Post Coldwar World", p. 22.

45. Clinton, "US National Security Strategy of Engagement and Enlargement", p. 606.

often based on anticipated reciprocity.[46]

Function of Nuclear Weapons in US-Russian National Security Strategies

With the end of cold war, Russian initiatives concentrated on solving certain problems with the United States, the major one being the problem of nuclear armaments. US-Russian cooperation provides a more basic assurance of improving stable relations and long-term Russian prosperity, as well as cumulatively great defence savings for both parties.

The arms control agreements help to reinforce the partnership aspect of bilateral relations by encouraging Russia's ongoing political and economic reforms, providing another channel of assistance for accelerated dismantlement and encouraging reallocation from military to civilian sectors.[47] Moscow had reduced the amount of resources it allocates to strategic weapons modernisation. Russian spending on strategic offensive arms is 'considerably below

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46. Documents issued from the White House, National Security Strategy of the United States, p.578.

47. Yuri K. Nazarkin and Rodney W. Jones, "Moscow's START II Ratificatiton: Problems and Prospects", Arms Control Today (Washington, D.C.), Vol. 25, no. 7, September 1995, p. 13.

cold war levels'.[48] Because of its political turmoil and economic crisis, Russia will desire to play a more positive role in international affairs and the resulting defense budget cuts will prevent it from promoting or sustaining anything close to the strategic force modernisation effort that was witnessed in the past.[49]

On security and nuclear arms control issues, Russia placed its first priority on working out agreements for dismantlement assistance with the US, the compensation and terms for US purchase of highly enriched Uranium (HEU) extracted from nuclear weapons and the conditions required for the exchange of START-I instruments of ratification with the other parties.[50]

The implementation of arms control agreements, particularly the ratification of START II, forms an important goal of Russia.[51] The Russian ratification of START II will depend on the following conditions[52]; unconditional implementation of the 1972 ABM treaty, a time

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48. Dunbar Lockwood, "Senate Panel Ends START Hoarings; Full Vote may come Before Summit", Arms Control Today (Washington, D.C.), vol. 25, no. 3, April 1995, p. 17.

49. Ibid., p. 17.

50. Nazarkin and Jones, "Moscow's START II Ratification", p. 9.

51. Ibid., p. 9.

52. Ibid., p. 9.

table for the implementation of START II which corresponds to Russia's economic possibilities, and the provision of adequate funds for the maintenance of Russia's strategic nuclear arsenal. NATO enlargement as a Western instrument of broader European security arrangements is keenly felt as a potential threat to Russian security in foreign and defence policy circle in Moscow.[53]

The end of the cold war fundamentally changed America's security imperatives. The central security challenge of the past half century - the threat of communist expansion is gone. The dangers the US face today are more diverse. Focusing on new threats and new opportunities, its central goals [54] are:

- To sustain US security with military forces that are ready to fight.
- To bolster America's economic revitalisation
- To promote democracy abroad.

Nuclear deterrence will continue to play a critical role in US National Security policy, given the foreign policy and defence implications of the continuing spread of

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53. Ibid., p. 10.

54. Clinton, "US National Security Strategy of Engagement and Enlargement", p. 587.

nuclear weapons and other weapons of mass destruction.[55] With the deep reductions in the number of nuclear warheads and the resulting smaller nuclear stockpile, it will become even more important to ensure that the remaining nuclear weapons are as safe, secure, and reliable as possible.[56]

Even though the risk of a massive strategic nuclear attack has decreased significantly with the rise of democratic forces and the collapse of the Soviet Union, deterring nuclear attack will remain the highest defence priority of the US.[57]It is the one threat that could put the national survival of the US at risk in a matter of moments. Therefore, the USA will maintain a capability that will deter any risk of nuclear attack upon it as it moves into this uncertain future.[58]

Washington's most threatening national security challenges in the post cold war era is the spread of weapons of mass destruction and the means to deliver them.[59] As the threat of nuclear confrontation with the

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55. U.S. Congress, Committee on Armed Services, Military Implications of START I and START II, (Washington, D.C.: U.S. Government Printing Office, 1992), p. 16.

56. Ibid., p. 16.

57. Ibid., p. 16.

58. Ibid., p. 16.

59. Clinton, "US National Security Strategy of Engagement and Enlargement", p. 603.

former Soviet Union recedes, the danger that a nuclear, chemical, or biological weapon will be launched from some other quarter by an aggressor is increasing.[60] The important goal of the US is to stem the proliferation of nuclear weapons and other weapons of mass destruction and their missile delivery systems and to develop an effective capability to deal with these threats.[61]

The full and faithful implementation of the existing arms control agreements, including the Anti-Ballistic Missile (ABM) Treaty, Strategic Arms Reduction Treaty (START) I, Biological Weapons Convention (BWC), Intermediate range Nuclear Force (INF) Treaty, Conventional Forces in Europe (CFE) Treaty, several nuclear testing agreements, the 1994 Vienna Document on Confidence and Security-Building Measures (CSBMs), Open Skies, the Environmental Modification Convention (EnMod), Incidents at Sea Agreement and many others, will remain an important element in US national security policy.[62]

The central component of the US strategy of engagement and enlargement is to enhance its security by maintaining a strong defence capability and promoting cooperative

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60. Ibid., p. 603.

61. Ibid., p. 603.

62. Ibid., p. 605.

security measures.[63] Through programmes such as the Nunn-Lugar Cooperative Threat Reduction effort and other denuclearisation initiatives, considerable progress has been made to build a more secure international environment.[64]

With the collapse of the Soviet empire and the emergence of new democracies in its wake, the US has an unparalleled opportunity to contribute toward a free and undivided Europe.[65] The US goal is an integrated democratic Europe cooperating with the US to keep the peace and promote prosperity.[66] Vibrant European economics mean more jobs for Americans at home and investment opportunities abroad.[67] Thus, European stability is vital to American security, a lesson the US learnt twice at great cost this century.

With the end of the cold war, NATO's mission is evolving[68]. Today NATO plays a crucial role helping to

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63. Ibid., p. 592.

64. Dunbar Lockwood, "The Nunn-Lugar Programme: No Time to Pull the Plug", Arms Control Today (Washington, D.C), vol. 25, no. 5, June 1995, p. 8.

65. Clinton, "US National Security Strategy of Engagement and Enlargement", p. 616.

66. Ibid., p.616.

67. Ibid., p. 616.

68. Ibid., p. 617.

manage ethnic and national conflict in Europe. Expanding the alliance will promote US interests by reducing the risk of instability or conflict in Europe's eastern half where two world wars and the cold war began.[69]

As the leading military and political power in the world, the United States bears a special responsibility to spearhead the movement to gradually decrease and eliminate the dangers associated with nuclear weapons. The United States and Russia have already committed themselves to the long term objectives of eliminating nuclear weapons. As signatories to the NPT, they pledged to pursue negotiations in good faith on effective measures relating to the cessation of the nuclear arms race and nuclear disarmament. Adoption of an evolutionary nuclear posture, and a revitalized commitment to eliminate all nuclear weapons could bring important national security benefits to the US and Russia.

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69. Ibid., p. 618.

CHAPTER II

STRATEGIC ARMS REDUCTION TREATIES

On 31 July 1991 the then US President George Bush and his counterpart Mikhail Gorbachev of the erstwhile USSR signed the first Strategic Arms Reduction Talks (START-I) treaty at the Moscow Summit.[1] And closely following this and consequent upon the disintegration of the mighty Soviet empire, on 3 January 1993 the Second Strategic Arms Reduction Talks (START II) treaty was signed between US President Bill Clinton and the Russian President Boris Yeltsin.[2] Among these two treaties, START-I was ratified and entered into force on 5 December, 1994.[3]Similarly, it is hoped that the second treaty will also be ratified and will also enter into force soon.

The signing of the two accords marks a new beginning for a world that has witnessed an unprecendened nuclear arms race since the first use of atomic weapons on 6 and 9 August 1945. Taken together, these two treaties signify a change in the strategic relationship between the two major nuclear powers of the world and therefore these documents

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1. Dunbar Lookwood, "Start Treaty Signed; Brings Historic Cuts in Strategic Warheads", Arms Control Today (Washington D.C.), vol. 21, no. 7, September 1991, p. 25.

2. Dunbar Lockwood, "Nuclear Arms Control", in SIPRI Yearbook 1994: World Armaments and Disarmament, (Oxford: Oxford University Press, 1994).

3. Dunbar Lockwodd, "Start I Enters into Force, Clears Way for Start II Approval", Arms Control Today (Washington D.C.), vol. 25,no.1, January-February 1995, p. 19.

merit a close examination for their implications for nuclear arms control and disarmament. Moreover, the treaties were evolved over a period of 12 years of hard negotiations and bargaining by the two super powers in a fast changing international political scenario. A study of such treaties become more meaningful only when we analyse the background that gave rise to the way the treaties were shaped and to relate these changing events of the world with the changing situation in military affairs, especially between the US and the USSR and the independent nations of the former Soviet Union.

This chapter will look into the original goals that set the agenda of START I in June 1992 when these two countries began the START process. It examines the provisions in the treaties to get a glimpse of the achievements and failures; it aims to analyse and assess the treaties in light of the fast changing post Cold War world; and it also attempts to relate these developments to the future events of world politics in terms of their impact in evolving a new world order - a minimal nuclear world, if not a completely nuclear free society.

START Treaties : Original US Goals

Before embarking upon the offensive nuclear weapons reduction talks in 1992 the US had a set of goals to pursue, while USSR perhaps had only counter goals and

proposals in reaction. The US goals were:

i) to balance deterrence and achieve stability through significant reductions in the most destabilsing nuclear systems, i.e., ballistic missiles and most importantly Inter Continental Ballistic Missiles (ICBMs);

ii) to maintain an overall level of strategic nuclear capability sufficient to deter conflict;

iii) to underwrite US national security; and

iv) to meet US commitments to allies and friends.[4]

Though there had been dramatic changes in the political, economic and military affairs of the world, these goals set by the US in 1982, remained valid when START became a reality.

START I : Negotiations

The START I Treaty was signed between the US and the USSR at the time of its disintegration and after the coup by the hardliners in an attempt to topple the Gorbachev regime in 1991. It was the end result of hard and tortuous negotiations between the two parties over a period of almost a decade. Though the momentous political and

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4. Gen. Colin L. Powell, U.S. Congress. Committee on Armed Services, "Military Implications at Start-I and Start II", (Washington D.C.: US Government Printing Office, 1992), pp. 23-24.

economic changes that were sweeping East Europe and the USSR clinched the issues, the process began way back in May 1982.[5] On 31 May 1982 both these superpowers announced their understanding to begin such a negotiation on the reduction of offensive nuclear weapons.[6]

US President Ronald Reagon had modified the Strategic Arms Limitation Treaty (SALT) Talks as he was dissatisfied with the emphasis on the limits to nuclear offensive weapons.[7] The negotiations began in Geneva on 29 June led by Rowney from the US and V.P. Karpov from the USSR.[8] The US put across a two-phase plan for reduction of strategic weapons.[9]

The first phase attempted to reduce the weapon position as follows:

USSR : To cut missiles from 2350 to 850; to limit warheads to 5000; of these 5000 warheads, only 50 percent

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5. Linton F. Brooks, "The Strategic Arms Reduction Treaty: Reducing the Risk of War", Nato Review (Brussels), vol. 39, no. 5, October 1991, p. 7.

6. B.K. Srivastava, 'Start, Achievements and Limitations', Link (New Delhi), vol. 4, no. 1, 18 August 1991, p. 45.

7. U.S Congress, Congressional Budget Office, "The Start Treaty and Beyond" (Washington D.C.: US Government Printing Office, 1991), p. xi.

8. Srivastava, "Start, Achievements and Limitations", p. 45.

9. Ibid., p. 45.

to be mounted on land-based missiles. The number of heavy bombers were to be limited as on that date, i.e. 350; SS-18 missiles were to be reduced; on the number of cruise missiles there was a deadlock as the discussions proceeded.

USA :To cut the missiles from 1700 to 850; to limit war heads to 5000; of these 5000 warheads, only 50 percent to be mounted on land-based missiles; The number of heavy bombers were to be limited to 400.

The second phase required the USSR to give up its 3:1 advantage in ballistic missiles. For this, the USSR had no counter proposal.

The meeting focussed on 70 percent of the USSR nuclear missiles which the Americans argued had the twin advantages of speed and accuracy, and were also the best suited as first strike weapons. These therefore had to be reduced.[10]

Here, we may take note of the emphasis given by both the sides on the reduction as against limits of the strategic offensive weapons, despite the differences the negotiation encountered. This was the qualitative change of attitude that marked the beginning of START in direct contrast to the earlier arms control negotiations like SALT I and SALT II. However, the Soviets withdrew on November

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10. Ibid., p.46

1983 in retaliation for NATO's deployment of cruise and Pershing II missiles in Europe.[11]

The basic outline of the up coming reduction treaty was fully discussed in October 1986 at Reykjavik.[12] This discussion proceeded in a cordial atmosphere. Better relations between the two countries dominated the tone of the discussion on arms control. The main achievement of this discussion was that both the sides agreed to reduce the number of strategic nuclear delivery vehicles (SNDVs) to 1600 which will carry no more than 6000 warheads.[13]

The issue of Soviet "heavy" ICBMs were taken up in a meeting of the Foreign Ministers on 15-17 September 1987 where the USSR agreed to a 50 percent reduction of the heavy ICBMs with a warhead ceiling of 1540.[14]The Washington Summit meeting, held on 7-10 December 1987, further clarified that the limit of warheads on ballistic missile would be a maximum of 4900 within the overall warhead ceiling of 6000.[15]

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11. The New Encyclopeadia Britannica, vol. 28, p. 1016.
12. Regina Cowen Karp, "The Start Treaty and the Future of Strategic Nuclear Arms Control", in SIPRI Yearbook 1992: World Armaments and Disarmament (Oxford : Oxford University Press, 1992), p. 15.
13. Ibid., p.15.
14. Ibid., p.15
15. Ibid., p.15.

On 22-23 September 1989, the Foreign Ministers of both sides met again at Wyoming and thrashed out the remaining important issues in arms control.[16]However, several issues were also left out: counting missiles for heavy bombers carrying nuclear Air Launched Cruise Missiles (ALCMs); sublimits on ICBM warheads; sublimits on warheads on mobile ICBMs; modernisation of heavy ICBMs; the problem of Submarine Launched Ballistic Missiles (SLBMs); non-deployed missiles; telemetry and encryption; cuts in throw weight by the USSR; and a verification regime to monitor the compliance of the envisaged treaty.[17]

As strategic arms control became politically the focal point for a strategic relationship between the superpowers and also because the discussions had reached the technical stage of negotiations which demanded fine tuning of the details, the negotiations moved slowly during 1990.

Again, early 1991 witnessed no great progress in the continuation of the arms reduction talks. There were problems due to the Gulf War, use of force in Baltics by USSR and also due to the differences among signatories on the 1990 CFE treaty.[18] The changing international situation

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16. Ibid., p.15.

17. Ibid., p.15.

18. Ibid., p.17.

and the irritant of discussing one or other minor details to be covered in the treaty bogged the negotiations down.

However, the momentum picked up as the political will to reach an arms reduction treaty grew and as events seemed to move faster.[19] On 7 June the Foreign Ministers met in Geneva.[20]Again, they met on 2 June in Berlin.[21]Between 26 June and 2 July, the experts from both sides met in Geneva.[22] These discussion progressed to such a level that the US made a major move. On 6 July, President Bush urged President Gorbachev to move ahead in negotiations and invited a high-level Soviet delegation to Washington on 11-14 July.[23] These six weeks saw the irritant issues being resolved by both sides: downloading, new types of missiles, and data denials.[24]

After a formal meeting between President Bush and President Gorbachev at the Group of Seven (G-7) Summit meeting in London, on 17 July, they announced that the START Treaty was ready for signature at a Summit in Moscow

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19. Ibid., p.17.
20. Ibid., p.17
21. Ibid., p.17.
22. Ibid., p. 17.
23. Ibid., p.17.
24. Ibid., p.18.

towards the end of the month.[25]

START I : Provisions

The START treaty is over 1000 pages long including protocols and annexes, and its provisions are complex and technical.[26] The overall accord includes 19 treaty articles; annexes on agreed statements and definitions; protocols on conversion or elimination, on on-site inspections, notifications, ICBM and SLBM throw-weight, telemetry, and the Joint Compliance and Inspection Commission; a Memorandum Of Understanding (MOU) establishing basic data on each sides' strategic forces; related agreements; letters signed by US and Soviet representatives; other correspondence related to the treaty; and a series of joint statements, unilateral statement and declaration.[27] The START treaty also consists of 19 articles governing basic provisions.[28]

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25. Ibid., pp.17-18.

26. U.S. Congress, Military Implications at Start I and Start II : Hearings before the Committee of Armed Services (Washington D.c.: US Gorl. Printing Office, 1992), p. 4.

27. Start Executive Summary, Arms Control Today, (Washington D.C.), vol. 21, no. 9, November 1991, p. Start Supplement 4.

28. Karp, "The Start Treaty and the Future of Strategic Nuclear Arms Control", p. 20.

The main provision articles are as follows: I. The basic commitment; II. General reductions, limits and sublimits; III. Counting rules; IV. Non-deployed mobile systems; V. Basic prohibition; VI. Restrictions on basing and movement of deployed mobile systems; VII. The verification principles; VIII-XV. The verification regime; XV. Joint Compliance and Inspection Commission; XVI. Conflicting international obligations; and XVII. Entry into force and amendments and other associated documents.

Article I : The Basic Commitment

Article I commits both the US and USSR to limit and reduce their strategic offensive nuclear weapons in accordance with treaty provisions and also to comply with its annexes, protocols and Memorandum Of Understanding.

Article II : General reduction, limits and sub-limits.

Article II imposes numerical limits on deployed SNDVs[29] and the weapons they carry. These limits are to be met over a period for seven years after the treaty comes into force. It will be implemented in three phases : in a 36,60,84 months time schedule. At the end of each phase, certain reductions must be completed in order to provide for a structured, certifiable, reduction process.

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29. Here the Strategic Nuclear Vehicles (SNDVS) include ICBMS, SLBMS and Heavy Bombers.

The limits set thus are: (i) Both sides may not deploy more than 1600 SNDVs; (ii) the 1600 SNDVs may not carry more than 6000 accountable warheads; (iii) out of the 6000 warheads, a maximum of 4900 warheads may be carried by ballistic missiles and not more than 1100 warheads may be carried as ICBMs on mobile launchers. Besides, 1540 warheads was the maximum limit set to be carried by heavy ICBMs; and (iv) the treaty also sets the aggregate ballistic missile throw-weight for deployed ICBMs and SLBMs for both sides upto 3600 tonnes.

Article III : Counting Rules

The treaty prescribes a counting rate method to determine the number of SNDVs and warheads and the amount of throw weight that are attributed to each side's strategic offensive arms.

According to this rule, each deployed ICBM and SLBM launcher and its associated missile and each deployed heavy bomber count as a single SNDV. Each existing type of ballistic missile has a specified number of warheads attributed to it. This loading, which may not be exceeded, will be verified by both flight test monitoring and on site inspections. Warheads on new types of SNDVs will be counted in two ways, which each side can decide to get a greater warhead advantage. One method counts the maximum

number of reentry vehicles (RVs) with which the missile has been flight tested. The other method takes into account 40 per cent of the missile's throw-weight and divides it by the weight of the highest RV with which the missile has been tested.[30]

Heavy bombers that carry only short-range nuclear armament will be counted as having one warhead, regardless of the Short Range Attack Missiles (SRAMs) they carry. Moreover, two bombers with long-range nuclear ALCMs will be counted as one. However, US heavy bombers may not carry more than 20 ALCMs and the first 150 such ALCMs equipped with bombers will be counted as having 10 each. On the Soviet side, the heavy bombers may not carry 16 ALCMs and the first 180 ALCMs equipped bombers will be counted as having 8 each. Beyond this specific threshold, additional bombers will be counted as having as many ALCMs as they are equipped to carry.

Article IV : Non Deployed Mobile Systems

This article limits the number of non-deployed mobile missiles and non-deployed launchers and specifies rules on where and how-they are to be stored. This makes rapid reload and refire more difficult. According to the

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30. The Second Method of Counting Takes 40 percent of Throw Weight because this is Roughly the Portion taken up by the Warheads.

provisions, each side is allowed a maximum of 250 non deployed ICBMs for mobile launchers of ICBMs. It also limits the number of ICBM rail mobile launchers to a miximum of 125. Among the non-deployed mobile ICBM launchers limited to 110, no more than 18 may be non-deployed ICBMs for mobile ICBM launchers. They must be stored separately from non-deployed mobile launchers located at the same facility.

Article V : Some Prohibitions

According to this article both sides agreed not to produce, test, or deploy certain types of weapon; not to convert existing types of weapons which are counted in the treaty as having a specified purpose and capability; not to base weapons subject to treaty limitations outside both the party's national territory.[31]

Besides, both the sides agreed not to produce, test or deploy an ICBM or SLBM with more than 10 RVs, not to flight-test or deploy an ICBM or SLBM with a greater number of warheads attributed to it; not to produce, flight-test or deploy systems for rapid reload; and not to produce,

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31. The Start Treaty does not Prohibit Modernisation or Replacement of Strategic Systems Except where Specifically Stated. The Treaty Provisions are Especially Concerned with Prevention of Production, Testing, and Deployment of Heavy ICBMS of A New Type, Heavy SLBMS, Mobile Launchers for Heavy ICBMS, Launchers of Heavy SLBM and Downloading of ICBMS.

flight-test or deploy long-range nuclear armed ALCMs with more than one warhead.

Both the parties also agreed not to locate long-range nuclear ALCMs at those bases where heavy bombers designated as non-long-range nuclear ALCM-carriers are located. In the same way, heavy bombers equipped to carry long-ranged nuclear ALCMs must not be located at a base where heavy bombers carrying other nuclear or conventional payloads are based.

Article VI : Restrictions on Basing and Movement of Deployed Mobile Systems

As per this article, road-mobile launchers can only be based in restricted areas not exceeding five square kilometers and holding no more than 10 deployed road-mobile launchers and associated missiles each. Besides, on-site fixed structures for these launchers are restricted, in order to facilitate monitoring to assure that launchers cannot be hidden. A restricted basing area must be located within deployment areas to which launchers can be moved for routine exercises.

Both the sides may only deploy rail mobile ICBM launchers and their associated missiles in rail garrisons, of which no more than seven are permitted. Along with restrictions on the number of entrances and exits a rail garrison may have, agreements were also reached on the

number of fixed structures and parking sites, etc. Restrictions were also imposed on half of the rail mobile launchers and missiles movement as a routine at a time.

The treaty provisions also regulated the number of systems that can be moved at any one time for purposes of relocation. That would effectively mean only 15 per cent of road-mobile launchers and 20 per cent of the rail launchers and their missiles can leave restricted or rail garrisons at any one time for relocation.

Article VII : The Verification Principle

According to this article, verification is facilitated through National Technical Means (NTM or satellite monitoring as it is otherwise known) and on-site inspection in accordance with the protocol on conversion or elimination and protocol on inspections and continuous monitoring activities.

This article also makes it explicit that only after treaty obligations have been met will weapon systems covered by the treaty cease to be subject to the treaty.

Article VII-XV : The Verification Regime

These 8 articles establish the treaty verification regime. Their cumulative effect is to assure mutual confidence that treaty provision are being complied with by

both sides.

Articles VIII: According to this article, there will be a data base. Both sides will be committed to providing data on the number, location structures and facilities, and to update the data on a regular basis. Moreover, each side is required to provide notifications concerning movement, conversion or elimination of items converted; data on ICBM and SLBM throw-weight; flight test of ICBMs and SLBMs; and telemetric information on new types of strategic offensive weapons.

Article IX : This article commits both the parties not to interfere with the other's NTMs and not to use concealment nearness that might interfere with satellite monitoring of treaty compliance.

Article X : This article requires both the signatories to provide full access to telemetric information obtained from ICBM and SLBM flight tests to the other; neither will engage in jamming, encryption or encapsulation of data. However, exemption is given to 11 ICBM and SLBM flight tests per year.

Article XI : The treaty also makes provision for 12 types

of On-site inspection (OSI) and exhibition.[32] And each party shall also have the right to conduct continuous monitoring activities at the perimeter and portals of the other's production facilities for ICBMs and for mobile launchers. The inspection protocol and the conversion and elimination protocol specify the procedures for the above mentioned inspections and rehibitions.

OSI and exhibitions are provided for compliance with the provisions of the treaty and also for the compliance with the counting rules mentioned in the treaty. These are expected to minimise the potential for circumventing treaty commitments and for clandestine activities.

Article XII : This articles provides for cooperative measures by both parties so that they can request each other upto seven times a year in order to enhance satellite verification of the displays by the other : the open road - mobile launchers of ICBMs, rail-mobile launchers of ICBMs, heavy bombers and former heavy bombers.

Articles XII : this article spells out the specific rules on the number of exercise dispersals and their duration.

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32. The 12 Types of OSI and Exhibition are: Baseline Data Inspections, Data Update Inspectious, New Facility Inspectious, Suspect Site Inspections, Re-Entry Vehicle Inspections, Post-Exercise Dispersal Inspections, Conversion or Elimination Inspection, Close-Out Inspectious, Formerly Declared Facility Inspections, Technical Characteristics Exhibitions, Distinguishability Exhibitions and Heavy Bomber Baseline Exhibitions.

Post-exercise dispersal inspections of mobile ICBM launchers and missiles are intended to ensure that the number of those returned and those not returned does not exceed the number specified for that base.

Article XIV : This establishes the right of each party to conduct operational dispersal of its strategic nuclear forces in accordance with the protocol on notifications.[33]

Article XV : Joint Compliance and Justification Commission. The task of the joint compliance and inspection commission is to resolve compliance questions and improve the treaty's effectiveness.

Article XVI : Conflicting International Obligations

This article prohibits either side from assuming international obligations that would conflict with treaty provisions. For example, no transfer of strategic offensive systems to a third country is allowed.

Articles XVII-XIX : Entry into Force and Amendments

As per these articles, this treaty will remain in force for a period of 15 years. It can also be extended by

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33. An operational dispersal is an extreme measure and indicates that one side (or both sides) fear on attack on their strategic nuclear forces. Treaty provisions regarding conversion or elimination of strategic nuclear weapons, verification and co-operative measures will be suspended during such a dispersal. They also have established procedures to resume treaty provisions when normal operations have resumed.

successive five year period or be superseded by another agreement on the reduction and elimination of offensive strategic weapons. Each party has the right to withdraw from the treaty if it decides the continued adherence to the treaty would jeopardise its interests.

START I : An Assessment

Karp (1992) argued that the START I treaty must be assessed on two grounds : achievement and relevance.[34]

The achievements and failures of the treaty are as follows:

i) It is the first arms control treaty that reduces offensive long range nuclear weapons by both sides. US strategic nuclear war heads will decline by 20-25 per cent; and for the USSR it would be 30-35 per cent. Ballistic missile warhead reductions will be 35 per cent for the US and 50 per cent for the USSR. There will be a 50 per cent cut on the Soviet Union's 308 SS-18 heavy ICBMs.[35]

ii) The treaty makes detailed provisions to limit the potential of Soviet mobile ICBMs - SS24 and SS25. These ICBMs were of special concern to the US because their mobility increases survivability and they are difficult to verify. This is a great achievement for

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34. Karp, 'The START treaty and the future of strategic nuclear armscontrol', p.26.

35. Ibid., p.26.

the American negotiators.[36]

iii) Besides the above, all the major treaty provisions were American inspired ones and therefore they are an achievement for the US[37] : the limits on delivery vehicles and warheads, the bomber counting rules, and the throw-weight limits etc. Similarly, definitions of new types of missiles, limits on missile downloading, and access to flight data are all US ideas. In the same way, Soviet efforts to link START to US assurances on the traditional interpretation of the ABM treaty was avoided by the US in its own interest; thus the US managed to preserve the SDI despite Soviet concerns.[38] The US has also managed to avoid constraints on long range nuclear armed Sea-Launched Cruise Missiles (SLCMs) and safeguarded its conventional SLCM and ALCM options and made an agreement with the UK on the transfer of Trident II SLBMs.[39]

iv) The START treaty permits both sides to make the required force reduction among older, less capable systems, thus preserving the most modern and accurate

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36. Ibid., p.27.
37. Ibid., pp.27-28.
38. Ibid., p.28.
39. Ibid., p.28.

ones.[40] Thus, despite the size of nuclear force cuts to be undertaken, the START treaty cannot be viewed as anything more than a first step towards larger reductions.

v) The biggest achievement of the treaty is the creation of a verification regime.[41] This regime is very significant because of the magnitude and the areas of coverage : Concession or elimination of nuclear systems, compliance of treaty provisions etc.

vi) The START treaty sets a series of major monitoring tasks, such as monitoring by number and type of nuclear offensive weapons.[42]

vii) The protocol on procedures governing conversion and elimination of items subject to the treaty lays out very successfully detailed provisions on what constitutes elimination and procedures on how these items are to be eliminated.[43]

viii) Similarly the protocol on inspections and continuous monitoring activities governs all activities to regular inspections, suspect-site inspections and continuous monitoring of mobile ICBM production facilities. Combined with the protocol, there are 12

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40. Ibid., p.28.

41. Ibid., p.28.

42. Ibid., p.29.

43. Ibid., p.29.

annexes further specifying procedures for inspections and continuous monitoring, and the criteria to be applied by the inspecting party when inspecting treaty items.[44] This is yet another achievement.

ix) Besides the above mentioned, START will provide a framework for deeper reduction that could further reduce the risk of nuclear war, stimulate an increasingly cooperative relationship between the US and USSR or its successors and save billions of dollars.[45]

x) START has succeeded in the following areas in an unparalleled way : reducing force vulnerability, enhancing stability and providing military cooperation and transparency.[46]

xi) START has enhanced the checks and balances of nuclear deterrence.[47] For the first time, both sides acknowledged that stability can be bolstered not only by reducing the number of vulnerable weapons that promote first strike, but also by moving to more survivable, deterrent weapons such as SLBMs and cruise

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44. Ibid., p.29.

45. Dunbar Lockwood, "START : An essential step in a New era", Armscontrol Today (Washington, D.C.), vol.21, no.9, November 1991, P. START Supplement 2.

46. Richard Burt, "Strategic Arms Reduction Talks - A look at end game and beyond", NATO Review (Brussels), vol.38, no.4, August 1990, p.24.

47. Ibid., p.24.

missiles.

xii) The signing of the START treaty signalled its acknowledgement and reflected the historic changes that occurred in and around Eastern Europe and in the Soviet Union and of the future of nuclear deterrence brought about by those changes.

xiii) However, on actual reduction of nuclear weapons, START has fallen short of the 50 per cent reductions promised when the talks got underway in the early 1980s.[48]

xiv) As important as the technical results of START, as also the timing of the treaty, it had been some 18 years since the US and USSR had signed a treaty on strategic offensive arms.[49]

xv) START is the security blanket that allows the US to face the new world order with common sense and a structured approach to the deepening relationship between the NATO nations and the East.[50]

xvi) As concerns continued to increase over Soviet political instability and the control of Soviet nuclear weapons, START provided a politically palatable justification for the central successor

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48. Srivastava, "START, achievements and limitations", p.46.

49. Burt, "Strategic Arms Reduction Talks", p.27.

50. Ibid., p.27.

government to eliminate strategic nuclear forces from any seceding republics and to move the forces to the Russian republic.[51]

xvii) The Congressional Budget Office (CBO) has estimated that START itself will save roughly $ 7 billion a year when compared to pre-START 1990 force plans, and that cutting to 3000 strategic warheads per side, for example, would save more than $ 200 billion over the next 15 years.[52]

xviii) The implementation of START strengthens efforts to curb nuclear proliferation as both US and USSR fulfilled their obligations under the NPT to pursue negotiations in good faith; it also made explicit their faith that nuclear weapons provide only limited military and political benefits - an important signal to non-nuclear weapon states.[53]

xix) START is truly a historic political achievement in the following ways: realisation of the value of international security agreements; respect for international obligations; a commitment to steep, stabilising reductions in strategic arms; centralised

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51. Lockwood, "START : An esssential step in a new era", P.START Supplment 2.

52. U.S. Congressional Budget office, "The START Treaty and Beyond", p.71-73.

53. Lockwood, "START : An essential step in a new era", P.START Supplement 3.

responsibility for the command and control of nuclear arsenals : and greater openness in military activities. The legacy of the START Treaty will make a substantial contribution to world security.

xx) The treaty achieves what was possible to achieve when it was conceived. It reflected an era of cold war confrontation in which strategic nuclear arms control was a conservative force in US-Soviet security relations. Its aim was to maintain the military status quo, expressed in terms of strategic parity based on mutual deterrence through strategic offensive nuclear weapons. This military status quo existed since the Soviet Union achieved parity in the early 1970s. Since then arms control had the task of managing parity (Strategic Arms Limitation Talks - SALT I and SALT II agreements) and of preserving it, albeit at a reduced level of forces (as in the START Treaty). Contrary to widely held popular beliefs, strategic arms control was never intended to transcend the existing force of balance. Rather, its aims were to maintain that balance, preserve military options prescribed by nuclear strategy, anticipate and forestall force developments that might endanger the balance and thus maintain strategic stability. Achieving these objectives was the mandate for the

START treaty.[54]

xxi) A majority of the theoretical assumptions of arms control like the concepts of deterrence, specific threat, etc. do not seen relevant in the post-Soviet era as they used to be: not merely because the Soviet Union itself has ceased to exist but also because the entire intellectual, political framework of arms control approaches has foundered.

xxii) Though START is the last cold war strategic nuclear arms control treaty, it is also the first treaty of a new era.[55] This is due to following five reasons: (i) With the emphasis on reduction rather than limits, START has made it almost impossible for either party to justify the growth of strategic forces in the future; (ii) the treaty provides transparency of future strategic forces in the former Soviet Union especially the new republics are undergoing propound changes; (iii) the treaty acts as a spring board for larger nuclear reductions in the future; (iv) the ratification of START proved that Russia is a reliable partner to the Western world; and (v) the ratification and the economic aid from the Western countries were linked in such a way that Russia and the other

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54. Karp, "The START treaty and the future of strategic nuclear armscontrol", p.30.

55. Ibid., p.31.

republics had to go through the process of ratification.

START II : Negotiations

The START II process began just six months after START I was signed. But it was preceded by a very significant political development in the international scene. Just a month before the USSR collapsed, on 28 January 1992 the US president George Bush, taking advantage of the situation, proposed deeper cuts in the offensive nuclear arms than was envisioned in START I. He offered to cut about a third of US SLBM war heads if CIS states banned MIRVed ICBMs. That would alter the US position as follows after their cuts : 4700 deployed strategic war heads 500 on ICBMs, 2300 on SLBMs, and 1900 on bombers. The Russian president, too, joined the issue the very next day by proposing that the two sides cut their strategic nuclear war heads to 2000-2500 each. This allows us to understand and appreciate how the changed political situation accelerated the movement towards the START II Treaty.[56]

Secreatry of state Baker and Foreign Minister Kozyrev held ministerial meetings in March, May and June 1992, paving the way for a Washington summit meeting between Bush

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56. Dunbar Lockwood, "Nuclear arms control", in SIPRI Year book 1993 : World Armaments and Disarmament, p.355.

and Yeltsin in June.[57] On 17 June, Bush and Yeltsin signed the joint understanding on further reduction in strategic offensive arms to form the basis for a follow-on to the START treaty.[58] Soon after this, the US Presidential election, bureaucratic inertia on both sides and differences over several implementation issues slowed negotiations.[59]

In July 1992, the USA submitted a draft treaty to Moscow and in November Moscow responded to this with its own treaty draft touching the issues raised on 24 September meeting at the UN between Lawrence Eagleberger and Kozyrev.[60]

Yet another important factor that influenced this process is the economic crisis faced by Russia. It asked whether it could convert rather than destroy SS-18 silos to hold single warhead ICBMs such as the SS-25.

The same is the case with the Russian view in the rules of downloading. Since only single warhead missiles would be permitted under the START II treaty and the SS 19 has six warheads, Russia could not retain this missile

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57. Ibid., p.355.
58. Ibid., p.355.
59. Ibid., p.355.
60. Ibid., p.356.

unless the US agreed that a missile could be downloaded by five warheads rather than four.[61]

Addressing its own concerns, Russia proposed various items that would become part of the treaty. They are: verification limits on US bombers; insistence on external observable differences between conventional and nuclear bombers as a way of distinguishing them; and also insistence on the inspection of the US B-2 stealth bomber to determine that it is not equipped with more nuclear weapons than 16 which the US has attributed to it.[62]

In December 1992, President Bush and President Yeltsin as well the President Clinton agreed that START II be completed before 20 January 1993, or the day President Bush remitted his office.[63] This was necessitated due to the expected delay that may effect the START II process consequent upon the change of guard in the White House and the associated paraphernalia of the presidential staff that goes with every president of the US.[64] Moreover, it was also that President Bush had his presidential policy to think of and the president elect could concentrate on the

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61. Ibid., p.356.
62. Ibid., p.356.
63. Ibid., p.357.
64. Ibid., p.357.

domestic policy agenda.[65]

Above all, President Boris Yeltsin's political and economic compulsions were major factors to quickly complete negotiations of the START II Treaty.[66] There were specific factors which influenced treaty negotiations which need to be carefully noted:[67] (i) personally, after the collapse of the USSR and since, Yeltsin thought that a treaty would boost his image in his own country, as it would show that the US recognised his leadership; (ii) the Russian economy was in very bad shape and it was calculated that the savings on operations and maintenance costs for Russia's strategic force as well as the goodwill generated in the West would promote a climate conducive to granting economic assistance to Russia.[68]

The above picture brings out the situation that made the leadership of both sides quickly move towards a formal treaty. On 20 and 21 December 1992 these two leaders consulted on the phone and brought their team of technical specialists to Geneva on 22-24 December. Final shape was given to the treaty by US Secretary of State Eagleburger and Russian Foreign Minister Kozyrev and Defense Minister

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65. Ibid., p.357.

66. Ibid., p.357.

67. Ibid., p.357.

68. Ibid., p.357.

Pavel Grachev in Geneva on 28 and 29 December.[69] Finally the accord was ready for signature.

START II : Provisions

i) This treaty will require the US and Russia to eliminate their MIRVed ICBMs and reduce the number of their deployed strategic nuclear warheads to 3000-3500 each.[70] the US may help finance the elimination of the Russian arms so that this can be accomplished by 1 January 2003 if not by 2000AD.[71]

ii) This Treaty also limits the number of SLBMs warheads to 1700-1750 each. However the rules of downloading of START II will be less restrictive than that of START I.[72]

iii) This treaty will count strategic bombers as having the number of nuclear weapons for which they are actually equipped. However, each side will be permitted to exempt up to 100 strategic bombers from the treaty limits, provided they have never been equipped with long range nuclear ALCMs, by reorienting them to

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69. Ibid., p.357.

70. Dunbar Lockwood "Nuclear Arms Control", in SIPRI Year Book 1994; World Armaments and Disarmament, p.644.

71. Ibid., p.644.

72. Yuri K.Nazarkin and Rodney W. Jones, "Moscow's START II Ratification Problems and prospects", Armscontrol Today (washington D.C.), vol.25, no.7, September 1995, p.10.

conventional roles.[73]

iv) The Treaty will require the US to reduce its deployed strategic nuclear warheads by more than 70 per cent from its September 1990 level and by almost 60 per cent from the number it had planned to deploy under the START I Treaty.[74]

v) Russia will be required to reduce its strategic forces by approximately 70 per cent from the number the USSR deployed in September 1990 and by about 50 per cent from the number which projected Russia would deploy under the START Treaty.[75]

vi) To sum up, the following scenario emerges with respect to post-START II strategic nuclear forces:[76]

U.S. delivery vehicles :

ICBMs :	450/500 Minuteman IIIs downloaded to 1 warhead each
SLBMs :	336 Trident IIs (D-5) (downloaded to 5 warheads each
Bombers:	32 B-52 Hs (equipped to carry 20 ALCMs/ACMs each). 30 B-52 Hs (equipped to carry 12 ALCMs/ACMs each) 20 B-2s

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73. Ibid., p.10.

74. Dunbar lackwood, "Nuclear arms control", SIPRI year book 1993, p.355.

75. Ibid., p.355.

76. James E. Goodby, Shannon Kile and Hevald Muller, "Nuclear Arms Control", In SIPRI year book 1995 world Armaments and disarmament, p.643.

Russian delivery vehicles :

ICBMs : 605 SS-25s road mobiles
90 SS - 25s (based in converted SS-18 silos)
105 SS-19s downloaded to 1 warhead each

SLBMs : 176 SS - N - 18s;
120 SS - N - 20s downloaded to 6 warheads each
112 SS - N - 23s

Bombers: 40 Tu - 95 Bear Hs (equipped to carry 16 nuclear armed cruise missile each);
25 Tu - 160 Blackjacks

vii) The key provisions relating to START II are[77] : downloading; SS-18 silo conversion; heavy bomber provisions; and implementation dates.

START II : An Assessment

i) Russia's willingness to deploy MIRVed ICBMs, the most lethal and the most feared offensive nuclear weapon system and carriers was a great achievement for the US negotiators and it brings great relief to the people of the West who feared these ICBMs;[78]

ii) The START II Treaty is also in Russia's security interests.[79] It improves mutual stability, increases predictability and transparency, improves prospects for a long term extension of the NPT at the 1995

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77. Nazarkin and Jones, "Moscow's START II Ratification problems and prospects", p.10.

78. Dunbur Lockwood, "Nuclear Arms control", p.359.

79. Ibid., p.359.

Extension Conference and potentially saves a significant amount of money, all of which will serve Russian interests;[80]

iii) The START II treaty saves money for both countries. The direct savings from the treaty for the US will be approximately $100 million per year.[81] The US congressional Budget Office (CBO) estimated in June 1992 that the USA could save more than 50 million over the next 15 years.[82] Similarly, Russian officials have estimated that, while dismantling costs may be substantial, they will be exceeded in the long run by savings from reduced operations and support costs;[83]

iv) The START II treaty by reducing offensive nuclear warheads upto 3000-3500 on each side has also brought the hope of going down further, to 1000-2000 warheads to maintain a minimum level of deterrence.[84] It even triggered the imagination of former US secretary of Defense Robert Mc Namara to argue that 100-200 warheads would be sufficient for deterrence and such a situation will call for France, the UK and China to be

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80. Ibid., p.359.
81. Lockwood, "Nuclear armscontrol", p.359.
82. Ibid., p.359.
83. Ibid., p.360.
84. Ibid., p.360.

party to such agreements.[85] This is a great and promising future which, if pursued, may well become possible and the role of START II in this direction is very significant;

v) The US agreed for the first time to limit the number of missiles and bombs carried by heavy bombers;[86]

vi) The START II structure based on the principles of strategic stability, increases the removal of the threat of a first strike and the mutual ability to retaliate second strike at reduced force levels;[87]

vii) The START II is a milestone in post cold war US-Russian relations. It encourages strategic partnership and security cooperation between Russia and the US, and it strengthens Russia's incentive for political and economic reform, including transition from a military-dominated state to a civilian, market economy;[88]

viii) The treaty provides Russia with strategic parity with the US, even though its territory, population and resources are smaller than the erstwhile Soviet Union;

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85. Ibid., p.360.

86. Alexi Arbator, "START II, Red ink andBoris Yeltsin", The Bulletin of the Atomic Scientists (Chicago), vol.39, no.3, April 1993, p.19.

87. Ibid., p.18.

88. Nazarkin and Jones, "Moscow's START II Ratification", p.8.

ix) The US and Russia now shifted their emphasis from bilateral nuclear disarmament to preventing proliferationlike NPT and CTBT agreements, thus resulted in the slow process of START II ratification.[89]

x) The START II agreement is in the legislative assemblies of Moscow and Washington for ratification. There is no opposition in the US against the treaty but a serious debate is going on in Moscow about the pros and cons of the treaty.[90] There is wide opposition against START from the representatives of the military-industrial complex, political opposition and retired military officers.[91] According to them, START II has more far-reaching, irreversible and costly consequences for Russia than the US. The following points strengthen their arguments :

1) The START II implementation will cost more for Russia than the US, because the US can retain its existing ICBMs, SLBMs or heavy bombers. But Russia has to physically destroy the silo and rail-mobile launchers for nearly 200 MIRVed ICBMs and convert 90 SS-18 silos to house single

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89. Praful Bidnai, 'START - more armscontrol than reduction', Times of India (New Delhi), 5 Aug 1991.

90. Ibid., p.8.

91. Arbator, "START II, Red ink and Boris Yeltsin", p.17.

warhead missiles.[92]

2) The US violations of the ABM treaty might constrain Russian ratification of START II and even the START I reductions. Russia has an interest in retaining MIRVed ICBMs against US deployment of nationwide missile defenses.[93]

3) START II gives the US a major rearmament advantage. If the treaty fails, it can easily reinstall downleaded (500 MIRVed minuteman ICBMs) warhead and convert conventional heavy bombers into nuclear ones. But the ban on Russian MIRVed ICBMs and particularly heavy (SS-18) missiles, would eliminate its land-based 10 warhead ICBMs completely.[94]

4) By banning MIRVed ICBMs, START II not only destroys the current balance of power but will eliminate the foundation of the Russian deterrent.[95]

5) From the point of view of crisis stability, mobile MIRVed missiles are not as dangerous as

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92. Nazarkin and Jones, "Moscow's START II Ratification", p.12.

93. Ibid., p.10-11.

94. Ibid., p.11.

95. Dunbar Lockwood, "Senate Panel Ends START Hearings : Full vote may come before summit", Arms Control Today (Washington, D.C.), vol.25, no.3, April 1995, p.17.

sea launched missiles.[96] The START II approach here is controversial because it bans Russian rail-mobile, MIRVed SS-24 missiles and allows American MIRVed SLBMs in the Trident submarine force.[97]

6) START II does not limit long-range nuclear sea-launched cruise missiles (SLCMs), in which US has an advantage.[98]

7) The proposed principles and objectives of START III are not clear; it needs clarification.[99]

8) The Nunn-Lugar assistance package for Moscow for the dismantlement of weapons and related programmes under START II needs an adjustment regarding the initial implementation cost.[100]

9) NATO enlargement as an European security arrangement is viewed by Russia as a potential threat to its security.[101]

START II makes a large cut out of existing nuclear arsenals and ensures that Russian and American forces

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96. Arbator, "START II, Red ink and Boris Yeltsin", p.17.

97. Nazarkin and Jones, "Moscow's START II Ratification", p.12.

98. Ibid., p.12.

99. Ibid., p.14.

100. Ibid., p.14.

101. Ibid., p.11.

remain at rough parity in an era of tight budgets and pressing conventional force requirements. But this opportunity for deep arms reductions may soon close if they don't implement the START II treaty. The US should support to prevent the road blocks against Russian START II ratification, by offering additional financial assistance if necessary. Failure to move promptly in implementing the agreement will result in the failure of these far reaching disarmament treaties, and the growth of new tensions in US-Russian relations.

CHAPTER III

CONVENTIONAL ARMS CONTROL IN EUROPE

Conventional Forces in Europe (CFE) Treaty

CFE-1A Agreement on Manpower

The Vienna Document 1992 on Confidence and Security Building Measures

The Treaty on Open Skies

Arms control or security cooperation is not the only panacea for Europe's problems. However, together with political, conflict-prevention and crisis management activities may ease the difficult period of transition. It is emperative to seek a measure of stability in the turbulent environment of Eastern and Western Europe today. The process of building a cooperative security regime in the face of mounting obstacles is not yet seriously endangered, but clearly signals the need for greater efforts to complete a comprehensive agenda for arms control and security cooperation.

CONVENTIONAL FORCES IN EUROPE (CFE) TREATY

The Conventional Armed Forces in Europe (CFE) Treaty marks a fundamental shift away from the Cold War to a new and free Europe. CFE does not simply alter the shape of military confrontation in Europe. It develops more stable and predictable security relations in Europe, fostering a political and military environment that is essential to healing old divisions and safeguarding the new democracies of Europe.

The main purpose of the treaty is to create a balance on conventional military capabilities between East and West within a geographical area from the Atlantic to the Urals which would eliminate the possibility of a surprise attack

by one side or the other.[1]

The objectives of the treaty in the Cold War world of 1989 were:[2]

- To eliminate the massive preponderance of Soviet offensive forces capable of attacking Western Europe.
- To remove the danger of a short-warning blitzkrieg created by military secrecy and closed societies in the East.
- Against the political strength of Soviet forces in control of Eastern Europe burdening the prospects for change.
- To reduce the economic costs of defending against the Soviet threat.

The CFE treaty resulted from just twenty months of negotiations, but it was preceded by fifteen years of fruitless Mutual and Balance Force Reduction (MBFR) talks.[3] The recent, rapid progress was due to the Soviet acceptance of deep reductions in the East's ground forces. In

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1. Necil Nedimoglu, "NATO and Partner Countries Cooperate in Implementing the CFE Treaty", NATO Review (Brussels), Vol.42, no.3, June 1994, p. 18.
2. James A. Baker, "CFE: Foundations for Enduring European Security", Strategic Digest (New Delhi), Vol.22, no.2, February 1992, p.148.
3. Randall Forsberg, Rob Learitt and Steve Lilly-Weber, "Conventional Forces Treaty Buries Cold War", The Bulletin of the Atomic Scientists (Chicago), Vol.47, no.1, January-February 1994, p. 32.

December 1988, Soviet President Mikhail Gorbachev took the first step towards reducing the superiority of Soviet force in Europe by announcing a unilateral troop reduction of 500,000 men, including 50,000 commissioned and non-commissioned officers with the corresponding weaponry. This served as a catalyst to the CFE negotiations.[4]

Negotiations

In the framework of the Conference on Security and Cooperation in Europe (CSCE), the seven WTO States and the sixteen NATO states began the negotiations on Conventional Armed Forces in Europe (CFE) treaty on 6 March 1989.[5] The objectives of the CFE negotiations were:[6]

- to establish a stable and secure balance of conventional armed forces;
- to eliminate disparities affecting stability and security; and
- to eliminate the capability to launch a surprise attack and to initiate large scale offensive action.

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4. Lothar Ruehl, "The Agreement on Conventional Forces in Europe: Culmination and End of European Arms Control", Aussenpolitik (Hamburg), vol.42, no.2, Quarterly Edition 1991, p. 122.

5. Jane M.O. Sharp, "Conventional Arms Control in Europe", in SIPRI Year Book 1990: World Armaments and Disarmament, p. 478.

6. Ibid., p. 478.

They had five rounds of talks from 6 March 1989 to 22 February 1990. Each negotiating round had different priorities, but the discussion mainly revolved around five issues:[7]

a) Definition of Treaty-limited Items (TLI)

b) Numerical limits for each group of states as well as regional and national sub-ceilings

c) The disposition of TLIs i.e. whether to withdraw or dismantle

d) How to monitor and verify compliance with CFE limits

e) What stabilizing measures should complement numerical limits.

The weapons-ceilings were negotiated for the entire treaty area in five weapon systems : battle tanks, armoured combat vehicles, artillery pieces, combat aircraft and combat helicopters including `offensive helicopters' and `Combat Support Helicopters'[8]. The US and Soviet Foreign Ministers, Baker and Shevarnadze, reached a compromise in New York at the beginning of October 1990 enabling an agreement.[9] The agreement was signed on 19 November 1990 with seven additional protocols and three supplementary

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7. Ibid., p. 480.

8. Ruehl, "The Agreement on Conventional Forces in Europe, p.124.

9. Ibid., p. 124.

declarations.[10] The CFE mandate called for equal ceilings on NATO and WTO land based forces from the Atlantic to the Urals. The participants agreed not to include nuclear weapons, chemical and naval weapons and not to exclude any conventional armaments and equipment.[11]

A lot of events took place during the negotiations which delayed the ratification of this treaty.[12] The unification of Germany and its re-election in the NATO alliance, the collapse of the Warsaw Pact and the Soviet disintegration of the Soviet Union raised doubts about the binding of the former Soviet Republics in the CFE treaty zone.

Three problems related with the Soviet Union were resolved in 1991 : transfer of equipments east of the Urals, credibility of the data submitted; and attempts to redefine land-based equipment as naval force equipment. Later, the Soviet CFE delegation agreed to give revised data and to destroy some of the equipment transferred east

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10. Ibid., p. 123.

11. Sharp, "Conventional Arms Control in Europe", SIPRI Year Book-1990, p. 478.

12. Jame M.O. Sharp, "Conventional Arms Control in Europe: Developments and Prospects in 1991", in SIPRI Year Book 1992: World Armaments and Disarmament, p. 459.

of the Urals.[13]

Finally, the treaty entered into force on 17 July 1992, with thirty signatories.[14] The original signatories were sixteen NATO countries and the six countries of the WTO, Bulgaria, the Czech and Slovak Federal Republic, Hungary, Poland, Romania and the Soviet Union. In the meantime, the eight successor states of the Soviet Union with territory in Europe (Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Moldova, the Russian Federation and Ukraine) have acceded to the treaty.[15]

Provisions

This treaty will codify stability by eliminating thousands of pieces of military equipment through destruction subject to notification and observation.[16] The Treaty sets equal ceilings from the Atlantic to the Urals on key armaments essential for conducting surprise attacks and initiating large scale offensive operations in five

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13. Jame M.O. Sharp, "Conventional Arms Control in Europe", in SIPRI Year Book 1993: World Armaments and Disarmament, p. 593.

14. "CFE Update" in The Bulletin of the Atomic Scientists" (Chicago), Vol. 39, no.3, April 1993, p. 24.

15. Nedimoglu, "NATO and Parner Countries Cooperate in Implementing the CFE Treaty", p. 18.

16. Baker, "CFE: Foundations for Enduring European Security", p. 149.

categories of weapons:[17]

- Battle tanks are limited to 20,000 each for NATO and the Warsaw Pact.
- Armoured Combat Vehicles are limited to 30,000 for each side.
- Artillery pieces are limited to 20,000 for each side.
- Combat aircraft are limited to 6,800 for each side.
- Attack helicopters are limited to 2,000 for each side, excluding combat support helicopters and land-based naval helicopters.

To further limit the readiness of armed forces, the treaty sets equal ceilings on equipment that may be with active units. Each side may not exceed the following equipment levels in active units.[18]

-16,500 tanks

-17,000 artillery pieces, and

-27,300 armoured combat vehicles.

The treaty limits the proportion of armaments that can be held by any one country in Europe to about one-third of the total for all countries in Europe. This provision con strains the size of Soviet forces more than any other in

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17. Forsberg, Leavitt and Lilly-Weber, "Conventional Forces Treaty Buries Cold War", p. 34.

18. James A. Baker, "The CFE Treaty", Strategic Digest (New Delhi), Vol.22, no.2, February 1992, p. 152.

the treaty. Country ceiling limits are:[19]

-13,300 tanks

-13,700 artillery pieces

-20,000 armoured combat vehicles

-05,150 combat aircraft

-01,500 attack helicopters.

The Treaty restricts the number of tanks (750) and armoured combat vehicles (3,000) that can be converted to civilian use. In addition certain models of combat aircraft trainers and helicopters may be disarmed and used in training or support roles.[20]

In the spirit of `transparency and confidence building', the treaty provides for an extensive and regular exchange of data on national force structures as well as on the location of units and their holdings of heavy weapons and equipment.[21]

Reductions are governed by strict procedures to ensure that the equipment cannot be used for military purposes, and all reductions must be completed within forty months from the treaty's entry into force or by 14 November

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19. Ibid., p. 152.

20. Forsberg, Leavitt and Lilly-Weber, "Conventional Forces Treaty Buries Cold War", p. 34.

21. Ibid., p. 18.

1995.[22]

CFE includes provisions for regular, detailed information exchanges on equipment covered by the treaty, numerous on-site inspections and direct monitoring of the destruction or conversion of excess weaponry.[23] On-site inspections follow four phases. After treaty ratification four months of intensive baseline inspections confirm the accuracy of the data each country has provided on its existing forces. For the next three years, inspections will monitor weapon destruction and conversion. A post implementation phase will validate the reductions and finally a permanent inspection process will monitor ongoing compliance.[24]

Assessment

i. This treaty is the first legally binding agreement by which a number of countries in the interest of creating a stable balance of forces voluntarily agreed to limit conventional forces with an offensive capability.

ii. CFE verification provisions and data exchanges make armed forces in Europe `transparent' for the first time, it

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22. Ibid., p.36.

23. Ibid. p. 36.

24. Baker, "XCFE: Foundations for Enduring European Security", p. 149.

will pave a new way for cooperation between East and West.

iii. CFE limits the states from possessing more than roughly one-third of the total treaty limited equipment in their area thereby restricting the potential for any state to achieve military and political hegemony on the continent.[25]

vi. CFE constrains force concentrations and ensures balances not only in Central Europe but also on the flanks by creating an interlocking system of geographical limitations on the size of military forces.[26]

v. This treaty requires NATO to cut little while the Soviets and East Europeans will make major reductions. Thus, it will put an end to the East's huge numerical advantage in ground forces, which has long been used to justify the arms race.[27]

vi. The CFE treaty strengthens predictability and openness by an extremely intrusive verification regime.[28]

vii. The CFE treaty helps in the removal of Soviet forces

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25. Ibid., p. 149.

26. Forsberg, Leavitt and Lilly-Weber, "Conventional Forces Treaty Buries Cold War", p. 32.

27. Baker, "CFE: Foundations for Enduring European Security", p. 150.

28. Ibid., p. 150.

from Eastern Europe. No state party to CFE may station forces on the territory of another state without the consent of that state.[29]

viii. CFE cannot be considered as the only solution to European security, because the treaty places no restrictions on small arms or the production of new weapons. Any nation may manufacture major weapon systems for sale or for its own arsenal as long as its forces remain below CFE ceilings.[30]

ix. CFE treaty solves many of the old problems that plagued the Cold War relationships in the European continent, but does nothing to deal with the new post Cold War problems such as genocidal aggression in Bosnia and Herzegovina and unrest within and between former Soviet Republics.[31]

x. The CFE treaty is numerically disadvantageous for the former WTO. They are obligated to reduce their holdings of TLE by almost 35,000 pieces of equipment, the corresponding figure for NATO countries is around 17,000. This is also considered a humiliating loss of status for Russia. Many conservative Russians regard the CFE treaty as the

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29. CFE update, p. 24.

30. Sharp, "Conventional Arms Control in Europe", SIPRI Year Book 1993, p. 616.

31. Ibid., p. 616.

`Versailles Treaty of the Cold War'.[32]

xi. According to Russia, the CFE treaty did not reflect geographical and political concerns that emerged with the break up of the Soviet Union. Russia will be allowed to keep larger equipment inventories along its flank regions than originally envisioned under the CFE treaty following revisions agreed by the treaty's thirty signatories. The new modifications have three elements: a realignment of the geographic `flank' areas in the original treaty, making them smaller; new equipment levels for the larger previously existing flank areas that now include the new smaller flanks; and a new inspection regime.[33]

xii. The important outcome of CFE is the reduced defence budgets of the signatories. CFE allows the US to maintain deterrence at lower levels of forces and reductions in the resources devoted to European defence. It also allows the Soviets to turn new thinking into new policy and convert their defence resources to civilian use by defining security through a negotiated, legally binding regime rather than through the threat of a massive use of force.[34]

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32. Ibid., p. 616.

33. "CFE countries agree to revise Russian limits", Jane's Defense Weekly (Alexandria), Vol.25, no.24, 12 June 1996, p. 10.

34. Baker, "CFE: Foundations for Enduring European Security", p. 150.

CFE - 1A AGREEMENT ON MANPOWER

The history of manpower negotiations dates back to 1973 to the Mutual and Balanced Force Reductions (MBFR) talks, in which a group of countries failed to achieve reductions after sixteen years of negotiations.[35] Around mid-1990, a decision was taken to conduct separate negotiation on manpower after the signing of the CFE treaty.[36] Twenty-two signatories began negotiations in Vienna on 20 November 1990.[37] The objective of CFE-1A negotiations was to conclude an agreement to limit the personnel strength of the conventional armed forces within the area from the Atlantic to the Urals.[38]

The main difference between the CFE-1A and CFE negotiations was that there was no identity between WTO states, the former WTO states negotiated independently or closely with individual NATO states.[39] In the beginning of the negotiations, they had disputes related to data; when these

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35. Lambert W. Veenendal, "Conventional Stability in Europe in 1991: Problems and Solutions", NATO Review (Brussels), Vol.39, no.4, August 1991, p.23.

36. Ibid., p. 23.

37. Jane M.O. Sharp, "Conventional Arms Control in Europe: Developments and Prospects in 1991," in SIPRI Year Book 1992: World Armaments and Disarmament, p. 476.

38. Veenendal, "Conventional Stability in Europe in 1991", p.24.

39. Sharp, "Conventional Arms Control in Europe", p. 476.

problems were resolved in the summer of 1991 the talks went relatively smoothly.[40] Another event which gave the impetus was the singular limitation of the Germans, who agreed to limit the armed forces of a unified Germany to 370,000 in the context of making unification acceptable to the Soviet Union.[41] The CFE-1A Agreement was signed on 10 July 1992 at the CSCE Summit meeting in Helsinki.[42] The treaty sets the ceiling on various categories of military personnel in the territories of thirty state parties within the Atlantic to the Urals zone.[43]

The Agreement comprises of eight articles.[44]

Article I lists seven categories of full-time and one category of reserve manpower to be limitedand three categories not subject to limitation which are - peace time security forces, personnel in transit in one place for less than seven days, and personnel serving under UN command.

Article II lists the national personnel limits.

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40. Jane M.O. Sharp, "Conventional Arms Control in Europe", SIPRI Year Book 1993: World Armaments and Disarmament, p. 614.

41. Ibid., p. 614.

42. Ibid., p. 614.

43. Ibid., p. 614.

44. Veenendal, "Conventional Stability in Europe in 1991", p. 24.

Article III deals with the required notification to make revisions in national limits -- 42 days in most cases.

Article IV deals with information exchange requirements.

Article V provides for stabilizing measures.

Article VI deals with verification and evaluation.

Article VII deals with review mechanisms and

Article VIII states that the limits which are political rather than legally binding will have the same duration as the CFE treaty and may be supplemented, modified or expressed. The monitoring of manpower will be carried out as part of the on site inspection process for TLE under the CFE treaty.[45]

The scope of these limitations would include all full time military personnel of land, air and air defence forces, together with military personnel in all other formations or units based on land which hold battle tanks, armoured combat vehicles, artillery, combat aircraft or attack helicopters as defined in Article II of the treaty,

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45. Major David Declerq, "CFE: Status and Implementation" in Steven Mataija and J. Marshall Beier, ed., Multilateral Verification and the Post-Gulf Environment: Learning From the UNSCOM Experience (Toronto: The York Centre for International and Strategic Studies, 1992), p. 19.

thus covering indirectly the contested units of coastal defence, naval infantry and strategic racket forces.[46]

There was no pressure among the signatories to make deep cuts. Even for the same parties the CFE-1A limits are higher than current force levels, which allows them increase of forces.[47]

The manpower limits in the CFE-1A agreement were designed primarily to satisfy a German desire to not be the only European state to have accepted numerical limits on military personnel.[48]

The reduction of military personnel was carried out smoothly. The reduction process in the former WTO states is slower, because of the result of economic and social problems associated with restructuring of the armed forces. The Russian troops withdrawal from the central European states and Baltic states were carried out successfully.

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46. Sharp, "Conventional Arms Control in Europe", in SIPRI Year Book 1993, p. 614.

47. Ibid., p. 617.

48. Zdzislaw Lachowski, "Conventional Arms Control and Security Dialogue in Europe", in SIPRI Year Book 1995: World Armaments and Disarmament", p. 776 and 789.

The regime of confidence that has been developed for the past 17 years has played a significant role in the emergence of a new European consciousness inspired by the desire for genuine cooperation which contributed to the present European security.

The Geneva sessions of 1973 to 1975 marked the first pan-European negotiating forum which discussed the problems relating to military security culminating in the Helsinki Final Act[49]. This was followed by the negotiations held in Stockholm from 1984 to 1986. These negotiations were pervaded by an evident mistrust between the delegations of the NATO countries and the WTO states [50]. The CSBMs conceived in the East-West adversarial relations were intended to inhibit options for surprise attack, reduce the risk of misunderstanding or miscalculation and deter the threat or use of military force for the purpose of intimidation[51]. As the cold war faded, CSBMs required fresh roles in the new Europe to demonstrate mutual

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49. Massimiliano Bandini, "The CSBM Negotiations in Vienna: a commitment to build a new European military security system", Nato Review (Brussels), Vol. 38, no. 9, October 1990, p. 12.

50. Ibid., p. 12

51. Bruise George, "The Negotiations on confidence -and security Building measures. The Vienna Agreement and beyond", Nato Review (Brussels), Vol. 32,no.1, February 1991, p.15.

willingness to build confidence and security and to redefine the security relationships among East European states and assuring stability in this period of transition[52]. The new possibility of transparency has made it possible to achieve a degree of openness and to organise various initiatives relating to new CSBMs[53].

A new set of negotiations were conducted in Vienna from March 1989 to March 1992, by the representatives of 35 CSCE countries.[54] The purpose of these negotiations were not only to further develop the existing military security regime in the CSCE framework, but to adapt that regime to the new political changes that has taken shape in Europe during the recent years[55]. The important goals of these talks were better information exchange, detailed verification of military exercise, improved arrangements for observing exercises, greater freedom of movement on each others' territory and stronger provisions for on-site inspections[56].

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52. Ibid., p.15.

53. Bandini, "The CSBM Negotiations in Vienna", p.13

54. SIPRI yearbook 1990: World Armaments and Disarmament, p.501 and also see "Documents on Conventional armscontrol in Europe, 1992", in SIPRI Year Book 1993: World Armaments and Disarmament, p. 635.

55. Bandini, "The CSBM Negotiations in Vienna", p. 12.

56. SIPRI.90 p. 502.

The Vienna Document 1992 of the Negotiations on Confidence and Security Building Measures was signed by 27 states in Vienna on 4 March 1992 and entered into force on 1 May 1992.[57] It is a politically binding document and not a proper treaty[58]. It is developed and built upon the CSBMs established by the Vienna Document of 1990 and supplements with detailed parameters and some additional measures[59]. The signatories agreed to undertake new effective and concrete actions designed to make progress in strengthening confidence and security in achieving disarmament, and to refrain from the threat or use of force in their mutual relations as well as in their international relations[60].

The signatories have adopted the following measures[61].

I **Annual Exchange of Military Information** : The signatories will exchange annually the information on their military forces concerning the military organisation, manpower and major weapon and equipment systems in the zone of

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57. Zdzislaw Lachowski, "The Vienna Confidence - and security Building measures in 1992", in SIPRI yearbook 1993: World Armament and Disarmament, p. 618.

58. Ibid.,p. 618.

59. Ibid., p. 618.

60. Text of Vienna Document 1992 - Document on Conventional Arms Control in Europe - 1992, in SIPRI Year Book 1993, p. 635.

61. Ibid., pp. 635-653.

application for Confidence and Security Building Measures (CSBMs).

II **Risk Reduction** : Participating states will consult and cooperate with each other about any unusual and unscheduled activities of their military forces outside their normal peacetime locations which are militarily significant. This further encourages states to host visits of other states concerned about military activities.

III **Contactsf** : New types of major weapon and equipment systems are to be demonstrated to representatives of all other participating states who visit peacetime air bases to gain an impression of the appropriate number of air sorties and type of missions being flown.

IV **Prior Notification of Certain Military Activities** : States will give notification to others 42 days or more in advance of the start of military activities in the zone of application for CSBMs.

V **Observation of Certain Military Activities** : The participating states will invite observers for notifiable military activities.

VI **Annual Calenders** : Each participating state will exchange with others an annual calender of its military activities, subject to prior notifications, for the subsequent calender year.

VII Constraining Provisions : This provision limits the size and number of various military activities.

(a) No state will conduct a military activity more than once in two years involving more than 40,000 troops or 900 battle tanks.

(b) No state will conduct more than 6 military activities within a year each involving more than 13,000 troops or 300 battle tanks, but less than 40,000 troops or 900 battle tanks.

(c) No state will carry out within a year more than three military activities each involving 25,000 troops or 400 battle tanks.

(d) No state will carry out simultaneously more than three military activities each involving more than 13,000 troops or 300 battle tanks.

(e) Each state will communicate to all others by 15 November every year about military activities involving more than 40,000 troops or 900 battle tanks.

(f) No state will carry out a military activity involving 40,000 troops or 900 battle tanks, unless it has been communicated in the annual calender before 15 November of each year.

VIII Compliance and Verification : Signatories recognized that the national technical means can play a role in monitoring

compliance with agreed CSBMs. They will form a multinational inspection team headed by the inspecting states. This provision makes non-active formations and combat units temporarily active and also made available for evaluation during the period[62].

IX **Communications** : States have established a direct network of communications between their capitals for the transmission of messages. This will complement the existing use of diplomatic channels.

X **Annual Implementation Assessment Meeting** : Every year the states will hold each year a meeting to discuss the present and future implementation of agreed CSBMs.

The CSBMs urged for a cooperative dialogue, a role which was linked to the idea that security must no longer be treated as a purely national matter, but as a collective responsibility, involving all the participating states regardless of their size or geographic location[63].

The Vienna Document makes no mention of the support and maintenance units. There is no provision regarding the paramilitary forces. It also does not give detailed

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62. Lachowski, "The Vienna Confidence and Security Building Measures in 1992", p. 625.

63. Victor Yves Ghebali, "The CSCE Forum for Security Cooperation: The Opening Gambits", Nato Review (Brussels), Vol. 41, no.3, June 93, p.23.

information at the level of independent battalion/ squadron level.[64]

The CSBMs have been criticised for not adequately responding to the new developments in Europe, especially in preventing conflicts. Events in the former Yugoslavia show that CSBMs are of little use in the new, non-bloc type of conflict that emerge as an intra-state conflict[65].

During the entire 15 years of the CSBM regime from the Helsinki Final Act until the present time, not a single violation or case of non-compliance by the signatories has been reported, despite the fact that the commitments are purely political in nature and not subject to ratification at national level and not legally binding in the manner of an international treaty [66].

The long negotiating process among the CSCE countries on the military aspects of security had proved fundamental in establishing relationships among the NATO and WTO states. The transparency in the military activities in the European continent helped to bring about the present climate of confidence in inter-European relations in the military field.

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64. Ibid., p. 25

65. Lachowski, "The Vienna Confidence and Security Building Measures in 1992", p.618 and 620.

66. Bandini, 'The CSBM. Negotiations in Vienna', p.13.

THE TREATY ON OPEN SKIES

The transformation of international system in the past few years has given a new force to Open Skies. Under this new strategic environment, the need for extensive confidence building measures is apparent. In this era of political openness and flexibility, the security of all states requires the maximum degree of openness in the military sphere.[67] The Open Skies treaty can achieve its objective of providing information on military activity and facilities on an all-time, all-weather basis with relatively simple technology.[68]

The concept of Open Skies was first put forward by President Dwight Eisenhower on 21 July 1955 at the Geneva Conference of the Heads of Government.[69] Nobody accepted his idea of openness and the concept of transparency was also not understood at that time.[70] On 12 May 1989, US President George Bush relaunched the Open Skies proposal for an agreement that could allow flights by unarmed

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67. John H. Hawes, "Open Skies: from idea to negotiation", NATO Review (Brussels), Vol.38, no.2, April 1990, p. 6 and 9.

68. Ibid., p. 9.

69. Richard Kokoski, "The treaty on Open Skies", in SIPRI Year Book 1993: World Armaments and Disarmament, p. 632.

70. Hawes, `Open Skies: from idea to negotiation', p. 6.

reconnaissance aircraft over the territories of the US, the USSR and their allies.[71] It proposed a way to check the cheating on the CFE agreement, to remodel the political and strategic architecture of the New Europe.[72]

The Open Skies talks were conducted parallel to the CFE and CFE 1A negotiations in Vienna during 1990 and 1991. Four rounds of negotiations were held : the first in Ottawa in early 1990 and two subsequent rounds in Budapest and Vienna in 1991, the fourth round at Helsinki from 13 January to March 1992.[73] The treaty was signed on 24 March 1992 by sixteen members of NATO, the five former members of the WTO (Bulgaria, Czechoslovakia, Hungary, Poland and Romania), Russia, Ukraine, Belarus and Georgia.[74]

The important organ of the Open Skies treaty is the Consulative Commission (OSCC), which is mentioned in Article X of the treaty. This body deals with compliance questions, resolves ambiguities and technical and administrative problems.[75]

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71. Kokoski, "The treaty on Open Skies", p. 632.
72. Hawes, "Open skies: from idea to negotiation", p. 7.
73. Kokoski, "The treaty on open skies", p. 632.
74. Ibid., p. 632.
75. Ibid., p. 632.

Signatories would voluntarily open their airspace on a reciprocal basis, permitting overflight of their territory in order to strengthen confidence and transparency with respect to military establishments.[76] The observation flights will help to provide a warning of possible surprise attack, to reduce misperceptions and to promote mutual confidence.

The signatories conducted an increasing number of demonstrations and trial overflights for training purposes. The first trial overflight was made over Poland on 2 April 1992, by a Belgian aircraft.[77]

The Open Skies observation aircraft, equipment and flight operations are not accessible to small states. So, further agreements on equipment and operations are possible.[78] As an additional co-operative measure, states are considering sharing a single Open Skies aircraft with a limited sensor package consisting of video and panoramic cameras. Belgium, Luxembourg and Netherlands concluded an agreement under which they will operate jointly from the

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76. Hawes, "Open Skies: from idea to negotiation", p. 6.

77. Stefanie Bailer, "The treaty on Open Skies", in SIPRI Year Book 1995: World Armaments and Disarmament, p. 822 and also see Kokoski, `The treaty on open skies', p. 633.

78. Zdzislaw Lachowski, "The treaty on open skies", in SIPRI Year Book 1994: World Armaments and Disarmament, p. 603.

Belgian Air Force base. Another eleven nations including Canada and the Benelux countries, will jointly operate a single aircraft.[79]

The importance of the treaty lies in the point that this is one of the most intrusive confidence building measures agreed ever.[80] This treaty will improve openness and transparency to facilitate the monitoring of compliance with existing and future arms control agreements.[81]

This treaty strengthens the capacity for conflict prevention and crisis management in the framework of the CSCE and in other international institutions.[82]

In addition to confidence building, Open Skies can also provide significant background information in support of specific arms control measures, particularly in verification of treaties like the CFE. This treaty contributes more to European security by extending arms checking east of the Ural mountains. It covers an area from Vancouver to Vladivostok.[83]

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79. Ibid., p. 603.

80. Bailer, "The treaty on Open Skies", p. 822.

81. Documents on the treaty on Open Skies, in SIPRI Year Book 1993: World Armaments and Disarmament, p. 653.

82. Ibid., p. 653.

83. The Economist, "Opening the Skies", Vol.322, no.7752, March 28, 1992, p. 44.

The Open Skies treaty is important for states which lack satellite observations and very useful for smaller states because the data acquired can be shared by them widely.[84] This treaty can provide a flexible and efficient means of supplementing information even for states which have satellite reconnaissance systems.

Open Skies is more advantageous than satellites because they cannot be disturbed by weather conditions, higher maneuverability and nothing can be hidden in the ground.[85] Satellite technology is expensive but Open Skies is relatively inexpensive and accessible.[86]

The Open Skies treaty can also be useful in environmental monitoring. Using Open Skies for the protection of the environment also gained importance among the signatories.[87] This treaty gives impetus to expand the security regimes like CSCE to other countries and regions.[88]

The ratification process of this treaty is very slow because the political urgency of the treaty is greatly

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87. Bailer, "The treaty on Open Skies", p. 822.
85. The Economist, "Opening the Skies", p. 44.
86. Hawes, "Open Skies: from idea to negotiation", p. 9.
84. Bailer, "The treaty on Open Skies", p.824.
88. Lachowski, "The treaty on Openskies", p.603.

reduced.[89] The important reason behind the treaty was to provide transparency in the military set up of Soviet Union but this objective achieved by other arms control agreements and CBMs like Vienna Document.[90] The observation satellites also provided much of the essential basis for mutual confidence and arms control process. Another reason is the cost of implementing the provisions of the Open Skies treaty.[91]

The Open Skies treaty is one of the most wide ranging confidence building measures agreed in the post cold war era within the framework of the arms control negotiations. The Open Skies treaty originally intended to strengthen East-West arms control agreements, but now with the collapse of Soviet Union, it has a much bigger role in helping to track and reduce regional tensions. In the post cold war era the concept of transparency acquires new meaning and importance. Thus, the Open Skies regime could contribute to a new and more open structure of European security.

Inspite of political arguments over the shape of security regime for Europe, the implementation of existing arms control and disarmament agreements preceeded without

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89. Ibid, p.601.

90. Bailer, "The treaty on Open Skies", p.824.

91. Lachowski, "The treaty on Open Skies", p.602.

major delays, and CSCE states continued to abide by their provisions. This is largely because; (a) the attention of the international community was focused on the challenging problems and issues; and (b) the cold war heritage handled by conventional arms control had lost its acuteness.

CHAPTER IV

COOPERATIVE DENUCLEARIZATION

The Cold War is over, now the NATO and former WTO states have mutually pledged that nuclear weapons will no longer dominate their relations. They have come out of the illusion that their security can be guaranteed by vast stockpiles of nuclear weapons. Thus, the probability of a large scale nuclear war among the industrialised nations has decreased dramatically.[1] But the risk of one or two detonations in the peripheries of Russia, Europe, the US, Japan, the Middle East or elsewhere has increased as a result of the crisis in the former Soviet Union.[2] The present danger is that nuclear warheads or components or missile materials from the thousands of former Soviet nuclear weapons might slip into the wrong hands, because of the current economic and political transformations in the states of the former Soviet Union, and their reliance on a security system for nuclear materials which is not designed for a new environment.[3] There are lot of factors responsible for the nuclear leakage from the former Soviet Union. These factors include enormous inventories of

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1. Graham Allison, Ashton B. Cartev, Steven E. Miller and Philip Zelikow, "Cooperative Denuclearization : An International Agenda", in Graham Allison and others, eds., Cooperative Denuclearization : From Pledges to Deeds, CSIA Studies in International Security 2 (Harvard University : Centre for Science and International Affairs, January 1993), p.9.

2. Ibid., p.9.

3. John P. Holdren, "Reducing the Threat of Nuclear Theft In the Former Soviet Union", Arms Control Today (Washington, D.C.), vol.26, no.2, March 1996, p.14.

weapon-usable materials, under developed safeguards, inadequate export controls, a rise in political instability and corruption and corresponding decline in the perception of national interests.[4]

Reducing the proliferation risk posed by the theft or diversion of weapons-usable missile materials will require a comprehensive plan of action on many fronts. The most important issues include : [5]

- improving the security and accounting of nuclear materials
- combatting nuclear smuggling
- increasing transparency in the management of weapons-usable nuclear materials.
- halting or minimizing production of these materials, and
- earning out disposition procedures to reduce the risks from excess missile materials by making them far more difficult to use in weapons.

These are global problems, and the only way for the international community to combat these challenges is through "cooperative engagement". An appropriate policy to

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4. William C. Potter, "Before the Deluge? Assessing the Threat of Nuclear Leakage From the Post Soviet States", Arms Control Today (Washington, D.C.), vol.25, no.3, October 1995, p.12.

5. Holdren, "Reducing the Threat", p.14.

this new form of nuclear threat is denuclearizing through new policies of cooperative engagement with the former Soviet Union.[6] The basis for such cooperation is mutual acceptance and support for the defence of the home territory as the most important national military objective.[7] The objective of cooperative denuclearization are : [8]

- safe, secure and military control over the nuclear arsenal of the former Soviet Union.
- elimination of US and Russian nuclear weapons stockpiles in a safe and secure manner.
- non-proliferation of nuclear weapons capability to countries which are not recognized as nuclear weapons states.

The US has a vital interest in reducing the number of nuclear weapons in the former Soviet Union, since many of them were designed to be used against Americans and they

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6. Allison and others, "Cooperative denuclearization : An international Agenda" in Allison and others, eds., Cooperative Denuclearization : From pledges to Deeds, p.9.

7. Introduction "The concept of Cooperative security "in Jane E.Nolan, ed., Global Engagement ; Cooperation and security in the 21st Century (Washington, D.C.: The Brookings Institution, 1994), p.5.

8. Philip Zelikous, "Current Organisation of the International community for cooperative Demelearization", in Allison and others, eds., Cooperative Denuclearization, p.280.

remain aimed at the US.[9] Indeed, the nuclear dangers emanating from the disintegration of the USSR are the central security problems facing the US now and in the years to come.[10] Thus, the US and its principal allies organised themselves for effective action to promote denuclearization. Various forms of international assistance could help remove practical barriers to cooperative denuclearization and help the newly independent states of the former Soviet Union to bear the associated costs. The various programmes of cooperation in the denuclearization agenda are discussed briefly in this chapter.

I-Financial Assistance : In August 1991, when the Soviet Union had entered into a period of internal turmoil and instability, the fate of the tens of thousands of nuclear warheads stored or deployed in the Soviet republics became a source of serious concern to the US Government. Three months later, Senators Sam Nunn and Richard Lugar sponsored the Soviet Nuclear Threat Reduction Act, which was designed to address the immediate need to accelerate the implementation of existing arms control agreements, consolidate former Soviet nuclear weapons in Russia and to

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9. Allison and others, "Cooperative Denuclearization : An International Agenda", in Allison and others, eds., Cooperative Denuclearisation, p.21.

10. Ibid., p.21.

eliminate all the MIRVs and reduce the number of deployed strategic war heads to 3,500 each. Belarus, Kazakhstan and Ukraine are eliminating strategic warheads on their territories far faster than the seven-year deadline set by START I.[15]

The Nunn-Lugar programme played an important role in the negotiation and implementation of the January 14, 1994 trilateral statement signed by the US, Russian and Ukraine.[16] That agreement committed Ukraine to withdraw all the strategic warheads on its territory to Russia for dismantlement. The trilateral statement paved way for Kiev's accession to the nuclear non-proliferation treaty, which in turn allowed START I to enter into force, a prerequisite for START II ratification. The US commitment of additional Nunn-Lugar assistance gave Kiev an incentive to sign the trilateral statement.[17]

Once the agreement was signed the Defence Department supplied equipment funded by Nunn-Lugar including diesel fuel, gasoline, truck batteries, all-terrain jeeps, and radios to help the convoys moving ICBM warheads from

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15. "Belarus, Kazakhstan, Ukraine START I Cuts", Arms Control Today (Washington, D.C.), vol.25, no.3, April 1995, p.22.

16. Lockwood, "The Nunn-Lugar Programme", p.8.

17. Ibid., p.8.

Ukraine to Russia for dismantlement.[18] At the time of the START I's entry into force, Belarus, Kazakhstan and Ukraine had already deactivated or transferred nearly half of the roughly 3,300 warheads they are required to give up under the treaty.[19] Out of 1,555 strategic warheads, 45 SS-25 ICBM warheads in Belarus, 240 SS-19 and 460 SS-24 ICBM warheads in Ukraine, 370 air launched cruise missiles (ALCM) and 440 SS-18 ICBM warheads in Kazakhstan have been removed from missiles. Of these 1,097 have been withdrawn to Russia, including 45 from Belarus, 632 from Kazakhstan and 420 from Ukraine.[20] Another Nunn-Lugar contribution has between the delivery of equipment to accelerate the dismantlement of strategic nuclear delivery vehicles (SNDVs) in states of the FSU.[21] The LTR programme provides assistance to eliminate the ICBM silos in Ukraine and the dismantlement of SS-19 missiles.[22]

III - Dismantlement and Monitoring : While past arms control agreements have focussed primarily on limiting missiles and launchers, the objective of both irreversible nuclear arms reductions and reducing the risk of nuclear theft called

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18. Ibid., p.8.
19. "Belarus, Kazakhstan, Ukraine START I Cuts", p.22.
20. Ibid., p.22.
21. Lockwood, "The Nunn-Lugar Programme", p.8.
22. Ibid., p.8.

for the next generation agreements to focus on controlling nuclear weapons and the missile material needed to make them.[23] The National Academy of Science (NAS) report on management and disposition of excess plutonium recommended that the US should work with Russia to reach agreement on a broad reciprocal regime to monitor warhead dismantlement and the commitment of excess fissile materials to non-weapons use or disposal.[24] Such a regime would build confidence in the size and management of each side's nuclear stockpiles and the progress of nuclear arms reductions. The information exchanged and onsite visits conducted would provide critical additional information to support cooperative material protection control and accounting (MPC & A) efforts.[25]

The US and Russia have agreed to several such measures to ensure the 'transparency and irreversibility' of nuclear arms reduction.[26] The US provides incentives for participant Russian parties in such a transparency programme. The US has worked with Russia to ensure the integrity and security of its weapons dismantlement system primarily through the Nunn-Lugar security assistance

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23. Holdren, "Reducing the threat", p.16.
24. Ibid., p.17.
25. Ibid., p.17.
26. Ibid., p.17.

programme.[27] The US is providing financial assistance for the actual dismantlement of nuclear weapons as envisioned in the Nunn-Lugar programme. For each warhead dismantled, Russia will get $ 5,000 thus, annually it will get $ 10 million for dismantling 2,000 warheads.[28]

IV - Fissile material control / Storage Facilities : The most efficient approach to reduce the proliferation risk in the former Soviet Union is to control the fissile material at its source.[29] Therefore the first priority is to establish effective material protection, control and accounting (MPC & A) procedures to ensure that all unclear weapons and weapons-usable materials are secure and accounted for.[30] In July 1994, the US hosted a Russian delegation at the Department of Energy facility at Washington to demonstrate and discuss the ways to strengthen the physical protection of fissile material in Russian civilian and military programmes. The two countries signed an amendment to an existing Nunn-Lugar agreement that increased the money committed for MPC & A assistance to $ 30 million.[31] Other MPC & A initiatives taken by US and Russian national

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27. Ibid., p.15.
28. Ibid., p.18.
29. Ibid., p.14.
30. Ibid., p.14.
31. Lockwood, "the Nunn-Lugar Programme", pp.11-12.

laboratories have also proven much more effective than Nunn-Lugar efforts.[32]

At Arzamas-16, the US and Russian scientists have begun integrating their different MPC & A systems at a demonstration facility to certify equipment for implementation throughout the Russian nuclear weapons complex.[33] These systems are used to control entry to nuclear facilities and to measur e are verify declared fissile material inventories.

The US has suspended production of fissile material for all purposes. All 14 plutonium production reactors have been shut down permanently.[34] The situation in Russia is more complicated. All four of its low enrichment Uranium (LEU) fuel and 10 of its 13 plutonium production reactors are shut down. The remaining three continue to operate because they provide heat for nearby cities. The huge quantities of spent fuel discharged by these reactors are reprocessed, resulting in the continued separation of one or two tons of weapons-grade plutonium per year.[35]

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32. Ibid., p.12.

33. Ibid., p.12.

34. Steve Fetter and Frank Von Hippel, "A Step-by-Step Approach to a Global Fissle Material Cut off", Arms Control Today (Washington, D.C.), vol.25, no.8, October 1995, p.5.

35. Ibid., p.5.

US would have periodic access.[39] The US signed a $ 15 million implementing agreement in October 1992 to help to design a storage facility, and another agreement in September 1993 worth $ 75 million to provide equipment for it.[40] Currently, a new storage facility for plutonium and HEU from dismantled weapons is being built at Chelyabinsk with partial financing from Nunn-Lugar programme.[41] Total costs for this facility are estimated at $ 300 million to $ 500 million. This facility will provide greatly improved security and accounting compared to the locations where nuclear materials are currently being stored. Russian Ministry of Atomic Energy (MINATOM) is also investing its own resources in this project.[42]

V - Nuclear Safety : There are approximately 100 sites handling weapons usable nuclear materials in the former Soviet Union. Roughly a dozen of the sites are outside Russia, in Belarus, Georgia, Kazakhstan, Latvia, Ukraine and Uzbekistan.[43] The U.S. DOE has a rapidly expanding programme to cooperate with the former Soviet republics in upgrading security and accounting systems at these

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39. Lockwood, "The Nunn-Lugar Programme", p.13.
40. Ibid., p.12.
41. Holdren, "Reducing the Threat", p.15.
42. Ibid., p.15.
43. Ibid., p.14.

facilities.[44] This includes formal government-to-government efforts, a complementary lab-to-lab programme and work with nuclear regulatory agencies in the former republics pursued in cooperation with the U.S. Nuclear Regulatory Commission (NRC).

Nuclear weapons in Russia appear to be held under comparatively high standards of security and accounting. The Nunn-Lugar programme contributed much to this safety measure.[45] Even if Russia agrees to cooperate in upgrading the physical systems at the roughly 100 storage sites with nuclear weapons, the effort will cost less than the MPC & A upgrade effort because accounting systems for warhead are not complex and substantial physical protection systems are already in place.[46] Nuclear weapons are clearly Russia's responsibility, it has to bear the cost of protecting them.[47]

During transport, nuclear weapons and weapons-usable nuclear materials are particularly vulnerable to overt theft by armed groups.[48] Ensuring effective security during transportation should be given a high priority. The

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44. Ibid., p.14.
45. Ibid., p.15.
46. Ibid., p.15.
47. Ibid., p.15.
48. Ibid., p.15.

Department of Defence is already providing warhead-transportation equipment to the Russian Ministry of Defense which has made a major difference in improving security of Russian warhead and Russian material transport.[49]

VI - Strict Export Controls : Most nuclear materials and related technology and equipment that leaves the FSU is exported through official channels.[50] Foreign access to nuclear supplies from the successor states depends on both a national export policy and the effectiveness of each states export controls.[51] The effectiveness of Russia's export control is undermined by the absence of effective customs controls between Russia and other post-Soviet republics.[52] This factor combined with underdeveloped export controls outside Russia, and a lack of equipment for monitoring illicit nuclear material and technology from Russia or Ukraine to other post Soviet states and from there to countries of major proliferation, is of great concern.[53]

Export decisions involving nuclear material and technology have been taken by MINATOM and the Ministry of

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49. Ibid., p.15.
50. Potter, "Before the Deluge", p.14.
51. Ibid., p.14.
52. Ibid., p.15.
53. Ibid., p.15.

Foreign Economic Relations, with little input by the Foreign Affairs Ministry or the Export Controls Commission.[54] Some of the Russian nuclear export initiatives include contracts to provide nuclear assistance to Iran; to assist the development of China's nuclear programme, including the provision of reactors and a uranium enrichment plant; and to build two 100-megawatt reactors at Koodangulam in India.[55] Although there has been some progress in developing new export control procedures in Belarus, Kazakhstan and especially Ukraine, there is no apparent high-level political commitment to stringent export controls in these states.[56]

VII - Nuclear Smuggling/Terrorism : Keeping fissile materials secure and accounted for at their source is the most critical part of the effort to reduce the threat of nuclear smuggling, because once the materials are stolen then it is difficult to find and recover them before they can be used.[57] Efforts to train and equip police, investigators, customs officials and border guards in the relevant states are being pursued and ought to be substantially

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54. Ibid., p.14.

55. Ibid., p.14.

56. Ibid., p.15.

57. Holdren, "Reducing the Threat", p.16.

expanded.[58] In the US the State Department, the Customs Service, the FBI, the Commerce Department's export control section, the intelligence agencies and others have undertaken some programmes in this area.[59] This is a global problem requiring intensive national cooperation.

The immense volume of traffic that crosses international borders every day and the vast and sparsely populated length of the borders between some of the key countries make the task of interdicting nuclear materials extremely difficult as envisioned by the massive flows of drugs and other contraband that governments have so far been unable to stop.[60] But a carefully targeted training and equipment programme could have a significant deterrent effect and greatly increase the chance of catching the 'amateur' smugglers.[61] In close cooperation with DOE, the Customs Service has developed a training programme and basic equipment suited to customs officers. Such equipment is inexpensive, customs agents and border guards at all the major crossing points in Central Europe and the FSU could probably be provided with basic training and equipment for

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58. Ibid., p.16.

59. Ibid., p.16.

60. Ibid., p.16.

61. Ibid., p.16.

a cost on the order of $ 20 million to $ 30 million.[62]

The risk of nuclear terrorism was minimal in the Soviet Union due to the pervasiveness of internal security measures.[63] The probability of non-state actors resorting to nuclear violence has increased with the fracturing of the Soviet state, ethnic upheaval and the location of nuclear assets proximate to regions experiencing organized violence.[64] Now the possibility of nuclear terrorism is reduced but not eliminated by the transfer of all tactical nuclear weapons to Russian territory.[65] Tactical nuclear weapons are preferred by terrorists because they are relatively small and they do not have 'Permissive Action Links' (PALs) to protect their unauthorized use.[66] Another potential threat is the possible use of conventional weapons against a civilian nuclear power facility.[67] Russian officials take seriously the possibility of terrorist attacks by Chechen commandos against nuclear power installations.[68] Some nuclear power facilities are

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62. Ibid., p.16.
63. Potter, "Before the Deluge", p.13.
64. Ibid., p.13.
65. Ibid., p.14.
66. Ibid., p.14.
67. Ibid., p.14.
68. Ibid., p.14.

now guarded by rapid reaction troops as well as police units. Implementing planned physical protection upgrades at nuclear sites in Russia and other Soviet successor state will go a long way toward reducing the danger of nuclear terrorism in the region.[69]

VIII - Defence Conversion : In addressing the issue of defence conversion the DOD argues that it would not make sense to help dismantle weapons of mass destruction while ignoring the industry that could quickly rebuild them.[70] Spending money on defence conversion is cheaper than developing new weapons to counter continued production of weapons of mass destruction.[71] State defence conversion programmes are the main instruments of government policy in Russia, because they dismantle weapons production and could turn Soviet talent and technology into much needed commercial products.[72] Many Russians have been more enthusiastic about defence conversion programmes than other Nunn-Lugar projects because of their job creation potential.[73]

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69. Ibid., p.14.

70. Lockwood, "The Nunn-Lugar Programme", p.10.

71. Ibid., p.10.

72. Elisabeth Skons and Ksenia Gonchav, "Arms Production", in SIPRI Year Book 1995 : World Armaments and Disarmament, pp.480-481.

73. Lockwood, "The Nunn-Lungar Programme", p.4.

There are four CTR 'demonstration' defence conversion projects in Russia : Double Cola and Mashinostroyenia; Hearing Aids International and ISTOK (to design and manufacture hearing aids); International American Products and Leuitnets (dental chairs); and Rockwell and GOSNIIAS (to provide air traffic control equipment).[74] There have been concerns in Moscow that the US is simply trying to collect intelligence on the Russian defence industry. Despite problems like this, conversion is taking place in the FSU independent of US government assistance through increasing involvement in Russia by the private sector from Japan and Western states.[75]

Another step in this broader effort will be developing new business to diversify the economic base of the nuclear cities in the FSU.[76] Some programmes designed to foster such diversification are already underway. Existing defence conversion programmes have begun contributing to the shift of some facilities from commercial to civilian production, but none of these programmes has been targetted specifically at establishing substantial new commercial businesses in the nuclear cities.[77] A useful first step

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74. Ibid., p.10.

75. Ibid., p.11.

76. Holdren, "Reducing the Threat", p.20.

77. Ibid., p.20.

might be to organize business development conferences in each of the major nuclear cities, bringing together local and foreign investors, and international banks and financial institutions who is interested with ideas for new businesses.[78]

IX - Preventing 'Brain Drain' : Significant proliferation risks will continue to exist if the personnel who must guard and manage the nuclear weapons and fissile materials are under employed, ill-paid, embedded in a culture of growing crime and corruption, and confronted with an uncertain future offering no assurance that will be able to provide the necessities of life for themselves and their families.[79]

The Nunn-Lugar programme has funded efforts to help prevent a 'brain drain' from the FSU. Together with the European Union and Japan, the US is paying for the Moscow-based International Science and Technology Centre (ISTC), which provides former weapon scientists and engineers with employment for peaceful purposes.[80] Some weapon scientists employed by the ISTC may continue to work for their current laboratories or factories, the programme facilitates their transition from defence to civilian work and gives them an incentive not to emigrate to potential

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78. Ibid., p.20.

79. Ibid., p.19.

80. Lackwood, "The Nunn-Lugar Programme", p.9.

proliferators such as Iran.[81] Recently the ISTC has approved a total of 130 projects which will sponsor more than 8,200 scientists and engineers for up to three years.[82]

The control of plutonium and HEU are perhaps the most serious and urgent security challenge faced by the US in the present era. The cost to the US of improving the protection of nuclear materials in the former Soviet Union should be seen as an investment in national and international security. Meeting these challenge will require a comprehensive programme of action on many fronts. To succeed, this programme will require more energetic leadership and substantially higher levels of funding than it has had today.

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81. Ibid., p.9.

82. Ibid., p.9.

CHAPTER V

CONCLUSION

There is no sphere in international relations in which the end of the cold war has brought as many favourable changes as in arms control and disarmament. In the new strategic environment nuclear weapons are of declining value. Since the end of the cold war the two superpowers have begun to make massive reductions in their nuclear arsenals. Each of them is dismantling about 2,000 warheads a year. Recently, the nuclear powers acknowledged that there were no emerging disputes that were worth a nuclear exchange. It looks like the nuclear era might face extinction in the 21st century.

The Russian military at present lacks the infrastructural resources and facilities to adjust its huge stockpile to the new political environment. Many of the problems it faces are now being removed with the help of US-Russian military cooperation. Since 1991, the US government has been providing funds not only to help Russia for dismantling and safeguarding its nuclear arsenals, but also providing infrastructural support to revive Russia's economy.

Despite these encouraging tendencies, there has not been enough progress towards the complete elimination of nuclear weapons. The United States seeks to convince would-be proliferators that nuclear weapons are neither a

legitimate tool nor an effective means of safeguarding their national security. But its foreign and defence policies convey an altogether different message. That the United States continues to rely on nuclear weapons as the ultimate guarantor of its own security and to protect its key allies is a clear reminder of its faith in nuclear weapons. This will cripple the efforts to achieve complete disarmament and non-proliferation around the world.

National priorities have changed significantly after the breakdown of the Soviet Union. The pressing economic and political problems in Russia have diverted attention from nuclear issues, once a matter of high priority. The polarisation of politics has also reduced the chances of ratification of START II. The growing mistrust of the West in Russian political circles has also given rise to strong lobbies for slowing the arms reduction process. The shift in the conventional balance has pushed Russia towards the more overtly nuclear stance, including withdrawing a previous policy of no-first-use of nuclear weapons. Moreover, the Russia think tank realise that their nuclear weapons are an inexpensive means to defend their borders.

After the collapse of communism and the disintegration of the Soviet Union, the rationale for having a nuclear option disappeared, but nuclear deterrence - the basic philosophy of the arms race - has not changed. According

to deterrence theorists disarmament weakens strategic stability. This was used as an excuse to maintain unnecessarily large inventories. On the basis of the cold war experience, countries assumed that they can deter a major war by the slightest risk of a nuclear exchange. Unless there is a change in the basic philosophy of nuclear deterrence we will not see a reduction of nuclear arsenals to zero levels in the near future.

The superpowers realised that even the best offensive and defensive weapon systems will not provide adequate protection in the present nuclear age. Thus collaboration on nuclear weapons are planned, for instance, for a joint response to nuclear terrorism, taking strategic missiles off alert, and creating a shared early-warning system. Through various arms control and disarmament agreements they are trying to establish sufficient control over the use of weapons of mass destruction. This eventually could be a great leap for mankind.

The troublesome features of the post cold war World against the arms control and disarmament agreements that command our attention are at least a few. The dangers posed by the thousands of nuclear weapons that are still deployed at various stages of readiness for use primarily in the US and Russia, and also some hundreds of warheads in the undeclared nuclear weapon states. Following is the

failure of the US and Russia to verify the START II agreement, and the possibility that the US will choose to abandon the ABM treaty could bring a halt to progress in arms reductions. The dangers of further proliferation of nuclear, chemical and biological weapons capabilities have been aggrerated by the end of the cold war. This has increased ambiguities about regional security interests and the commitments of major nuclear weapon states. And finally there are the physical problems posed by the existing stockpiles - storage, dismantlement and the dispositions of fissile material.

Arms control has retained its function and purpose of constraining and retaining geo-political and military competition between possible rival states and alliances within the threshold of stable demarcations. The cardinal principle of arms control still remains what it has been for the last forty years - the careful avoidance of nuclear war. The coming years will witness more arms control agreements than the preceeding decades, and those agreements would be far more radical than their predecessors involving considerable reductions in nuclear weaponry.

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APPENDICES

APPENDIX I

US AND FORMER SOVIET STRATEGIC NUCLEAR FORCES : 1990, 1995 AND AFTER IMPLEMENTATION OF THE START II TREATY

1. Strategic nuclear forces, September 1990

US delivery vehicles

ICBMs : 450 Minuteman IIs; 500 Minuteman IIIs; 50 Peacekeepers (MX).
SLBMs : 192 Poseidon (C-3); 384 Trident Is (C-4); 96 Trident IIs (D-5).

Soviet delivery vehicles

ICBMs : 326 SS-IIs; 40 SS-13s; 188 SS-17s; 308 SS-18s; 300 SS-19s; 56 SS-24s (silobased); 33 SS-24s (rail-mobile); 288 SS-25s (road-mobile).
SLBMs : 192 SS N-6s; 280 SS N-8s; 12 SS-N-17s; 224 SS-N-18s; 120 SS-N-20s; 112 SS-N-23s.
Bombers : 17 Tu-95 Bear A/Bs; 46 Tu-95 Bear Gs; 57 Tu-95 Bear-Hs (equipped to carry 16 nuclear-armed cruise missiles each); 27 Tu-95 Bear-Hs (equipped to carry 6 nuclear-armed cruise missiles each); 15 Tu-160 Blackjacks.

2. Current sttegic nuclear forces, January 1995

US delivery vehicles

ICBMs : 530 Minuteman IIIs, 50 Peacekeepers (MX).
SLBMs : 192 Trident Is (C-4); 168 Trident IIs (D-5).
Bombers : 94 B-52Hs; 95 B-IBs; 5 B-2s.

CIS delivery vehicles

ICBMs : 248 SS-18s; 260 SS-19s; 10 SS-24s (silo-based); 36 SS-24s (rail-mobile; 333 SS-25s (road-mobile).
SLBMs : 224 SS-N-18s; 120 SS-N-20s; 112 SS-N-23s.
Bombers : 57 Tu-95 Bear-Hs (equipped to carry 16 nuclear-armed cruise missiles each); 27 Tu-95 Bear-Hs (equipped to carry 6 nuclear-armed cruise missiles each); 25 Tu-160 Blackjacks.

3. **Post-START II strategic nuclear forces**

US delivery vehicles

ICBMs : 450/500 Minuteman IIs downloaded to I warhead each.
SLBMs : 336 Trident IIs (D-5) downloaded to 5 warheads each.
Bombers : 32 B-52Hs (equipped to carry 20 ALCMs/ACMs each); 30 B-52Hs (equipped to carry 12 ALCMs/ACMs each); 20 B-2s.

Russian delivery vehicles

ICBMs : 605 SS-25s (road-mobile); 90 SS-25s (based in converted SS-18 silos); 105 SS-19s downloaded to 1 warhead each.
SLBMs : 176 SS-N-18s; 120 SS-N-20s downloaded to 6 warheads each; 112 SS0-N-23s.
Bombers : 40 Tu-95 Bear-Hs (equipped to carry 16 nuclear-armed cruise missiles each); 10 Tu-95 Bear-Hs (equipped to carry 6 nuclear-arms cruise missiles each); 25 Tu-160 Blackjacks.

Source : SIPRI year book 1995 : World Armaments and Disarmament, Oxford : Oxford University Press, 1995, pp.642-643.

APPENDIX-II

FINAL WEAPONS REDUCTIONS UNDER THE CFE TREATY

The top row marks the weapon holdings at the time of tre entry into force.

The middle row marks the weapon holdings at the end of 40-reduction period.

The bottom row marks the current CFE-imposed ceilings set by group of states.

NATO

	Tanks	ACVs	Artillery	Aircraft	Helicopters	Total
Belgium	362	1383	378	202	8	2333
	334	704	316	169	46	1569
	334	1099	320	232	46	2031
Canada	76	136	32	28	0	272
	0	0	6	0	0	6
	77	277	38	90	0	482
Denmark	499	316	553	106	12	1486
	343	303	552	75	12	1285
	353	316	553	106	12	1340
France	1335	4387	1436	695	366	8189
	1289	3556	1251	667	317	7080
	1306	3820	1292	800	396	7614
Germany	7170	9099	4735	1040	256	22300
	3061	2679	2056	578	225	8599
	4166	3446	2705	900	306	11523
Greece	1971	1432	1975	455	0	5833
	1735	2324	1878	489	6	6432
	1735	2534	1878	650	30	6827
Iceland	0	0	0	0	0	0
	0	0	0	0	0	0
	0	0	0	0	0	0
Italy	1232	3774	2013	542	176	7737
	1162	2986	1939	524	137	6748
	1348	3339	1955	650	139	7431
Luxembourg	0	0	0	0	0	0
	0	0	0	0	0	0
	0	0	0	0	0	0

Table Contd.

	Tanks	ACVs	Artillery	Aircraft	Helicopters	Total
Nether-	913	1445	837	176	90	3461
lands	734	1002	580	182	0	2498
	743	1080	607	230	50	2710
Norway	205	124	544	89	0	962
	170	203	246	75	0	694
	170	225	527	100	0	1022
Portugal	146	280	354	90	0	872
	174	367	320	105	0	966
	300	430	450	160	26	1366
Spain	858	1223	1368	178	28	3655
	630	1199	1210	188	28	3255
	794	1588	1310	310	90	4092
Turkey	3008	2059	3107	360	11	8545
	2608	2450	3125	387	20	8590
	2795	3120	3523	750	103	10291
United	1159	3206	534	757	389	6045
Kingdom	662	2574	536	640	342	4754
	1015	3176	636	900	371	6098
United	5163	4963	1973	398	349	12846
States	1254	2238	854	222	150	4718
	4006	5372	2492	784	431	13085
TOTALS	24097	33827	19839	5118	1685	84566
	14156	22585	14869	4301	1283	57194
	19142	29822	18286	6662	2000	75912

EASTERN EUROPE

	Talks	ACVs	Artillery	Aircraft	Helicopters	Total
Bulgaria	2269	2232	2154	335	44	7034
	1475	1985	1750	235	44	5489
	1475	2000	1750	235	67	5527
Czech	1803	2515	1723	228	37	6306
Republic	953	1363	767	187	36	3306
	957	1367	767	230	50	3371
Hungary	1345	1731	1047	143	39	4305
	835	1540	840	144	59	3418
	835	1700	840	180	108	3663
Polnad	2850	2396	2315	509	30	8100
	1720	1516	1581	400	92	5309
	1730	2150	1610	460	130	6080
Romaniy	2967	3171	3942	508	15	10603
	1375	2073	1471	373	16	5308
	1375	2100	1475	430	120	5500
Slovakia	901	1258	861	114	19	3153
	478	683	383	114	19	1677
	478	683	383	115	25	1684
TOTALS	12135	13303	12042	1837	184	39501
	6836	9160	6792	1453	266	24507
	6850	10000	6825	1650	500	25825

FORMER SOVIET UNION

	Talks	ACVs	Artillery	Aircraft	Helicopters	Total
Armenia	NA	NA	NA	NA	NA	NA
	102	285	225	6	7	625
	220	220	285	100	50	875
Azerbaijan	134	113	126	15	9	397
	285	835	343	58	18	1539
	220	220	285	100	50	875
Belarus	3457	3824	1562	390	76	9309
	2320	2984	1533	335	79	7251
	1800	2600	1615	260	80	6355
Georgia	77	28	0	0	0	105
	NA	NA	NA	NA	NA	NA
	220	220	285	100	50	875
Moldova	0	98	108	30	0	236
	0	209	155	27	0	391
	210	210	250	50	50	770
Russia	9338	19399	8326	4624	1005	42692
	5492	10372	5680	2986	826	25356
	6400	11480	6415	3450	890	28635
Ukraine	6128	6703	3591	1648	271	18341
	4026	4919	3727	1008	270	13950
	4080	5050	4040	1090	330	14590
TOTALS	19134	30165	13713	6707	1361	71080
	12225	19604	11663	4420	1200	49112
	13150	20000	13175	5150	1500	52975

Source : Arms control Today (Washington D.C.), vol.25, no.10, Decemb 1995-January 1996, pp.29-30.