

**THE DEMISE OF INTERMEDIATE RANGE NUCLEAR
FORCES (INF) TREATY: IMPLICATIONS FOR ARMS
CONTROL REGIME**

By

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CANDIDATE DECLARATION FORM

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Candidate of **Master of Philosophy** at the National University of Modern Languages do hereby declare that the thesis: **THE DEMISE OF INTERMEDIATE RANGE NUCLEAR FORCES (INF) TREATY: IMPLICATIONS FOR ARMS CONTROL REGIME** submitted by me in partial fulfillment of MPhil degree, is my original work, and has not been submitted or published earlier. I also solemnly declare that it shall not, in future, be submitted by me for obtaining any other degree from this or any other university or institution.

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DEDICATION

With utmost devotions, I dedicate my whole work to my beloved and affectionate Parents, Wife, Sister, Brothers, Friends and Respected Staff of International Relations Department who have always been source of encouragement, knowledge, illumination and wisdom for me, whose prayers and guidance showed me the right path and made the blessing of Allah shower on me.

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LIST OF ACRONYMS

ABM	Anti-Ballistic Missile (Treaty)
ALBM	Air-launched ballistic missile
ALCM	Air-launched cruise missile
APC	Armored personnel carrier
APL	Anti-personnel landmine
ASAT	Anti-satellite weapon
ATBM	Anti-tactical ballistic missile
BMD	Ballistic missile defense
BMDO	Ballistic Missile Defense Organization
BWC	Biological Weapons Convention
CBM	Confidence-building measure
CFE	Conventional Armed Forces in Europe
CIS	Commonwealth of Independent States
CSBM	Confidence- and security-building measure
CTBT	Comprehensive Nuclear Test Ban Treaty
CW	Chemical weapons
CWC	Chemical Weapons Convention
EU	European Union
FMCT	Fissile Material Cut-Off Treaty
GLCM	Ground-launched cruise missiles
GPS	Global positioning system
HGV	Hypersonic Glide Vehicle

IAEA	International Atomic Energy Agency
ICBL	International Campaign to Ban Landmines
ICBM	Intercontinental ballistic missile
INF	Intermediate-range nuclear forces
LAWS	Lethal Autonomous Weapon System
LTBT	Limited Test Ban Treaty
MBFR	Mutual and balanced force reductions
MIRV	Multiple independently targetable reentry vehicle
MOU	Memorandum of understanding
MTCR	Missile Technology Control Regime
NATO	North Atlantic Treaty Organization
NNWS	Non-nuclear-weapon state
NPT	Nuclear Non-Proliferation Treaty
NSG	Nuclear Suppliers Group
NST	Nuclear and Space Talks
NWFZ	Nuclear-weapons-free zone
NWS	Nuclear-weapon state
OSIA	On-Site Inspection Agency
OST	Open skies treaty
SALT	Strategic Arms Limitation Talks
SAM	Surface to Air Missile
SORT	Strategic Offensive Reductions Treaty
SLBM	Submarine-launched ballistic missile

SSM	Surface to Surface Missile
START	Strategic Arms Reduction Talks
SVC	Special Verification Commission (INF Treaty)
THAAD	Theater high altitude area defense (system)
TTBT	Threshold Test Ban Treaty
UCAV	Unmanned Combat Aerial Vehicle
UN	United Nations
UNGA	United Nations General Assembly
UNSC	United Nations Security Council
U.S.	United State
USSR	Union of Soviet Socialist Republics
WMD	Weapons of Mass Destruction

ABSTRACT

Thesis Topic: The Demise of Intermediate Range Nuclear Forces (INF) Treaty: Implications for Arms Control Regime

The U.S. and Soviet Union at the height of the cold war, engaged in several arms control treaties to deescalate the ever-growing nuclear competition. The INF treaty, signed in 1987, led to elimination of an entire category of ground-based ballistic and cruise missiles with a range between 500-5500 kilometers. Despite its successes, Trump administration took a unilateral withdrawal from the INF treaty on August 2, 2019, on the pretext of Russia's development of 9M729 ground-launched cruise missile, which was prohibited under the treaty. Besides terminating the INF treaty, President Trump has also abolished the Open Skies Treaty, Paris Agreement, Trans-Pacific Partnership and Joint Comprehensive Plan of Action. Although Russia cannot be given clean chit in INF treaty's collapse but strategic competition between the U.S. and China has encouraged Washington to exit from the arms control commitments. In the contemporary global politics, the rise of China has attracted special focus because of its deeper impact on international relations. The U.S. has withdrawn from INF treaty on the pretext of Russia's violations to the treaty whereas this decision is motivated by the U.S. strategic objective of countering the rising China. There is a prevalent thinking in the U.S. that INF treaty was an obstacle in the way of Washington to develop and deploy more intermediate range ballistic and cruise missiles in Asia in order to deter Beijing's military interests in the region. Hence, the U.S. withdrawal from INF treaty highlights its aggressive foreign policy towards China and intentions to keep the status quo intact while maintaining its hegemony. The INF treaty's demise is likely to have long-lasting impact on the arms control regime with severe implications for the global security. It may augment trust deficit among the great powers and eventually influence other arms control agreements. This situation is likely to disturb strategic balance at global level, leading to an instability. The ultimate outcome of this instability would be a security dilemma, which may result into global nuclear arms race and more frequent conflicts. Currently, arms control regime is directly dependent on the bilateral relationship between Moscow and Washington. Any positive initiative by these states can promote multilateralism and work as confidence building measures.

CHAPTER-1

INTRODUCTION

Arms control is a term used for international restrictions upon the development, production, stockpiling, proliferation and usage of small arms, conventional weapons and weapons of mass destruction (WMDs). It is simply described as arrangements between adversaries to limit their weaponry. Arms control is broadly described as international restraint exercised in respect of armaments policy, whether the number, type, deployment and use of armaments. According to a recent definition by Den Dekker, the concept of arms control can be elaborated as bilateral and multilateral treaties between various countries to limit or reduce certain weapons to maintain a stable military balance and avoid conflict.¹ Hence, the arms control regime encompasses treaties, agreements, understandings and commitments to reduce or limit the armaments. It can be applied to both WMDs and conventional weapons, although it is mostly used for WMDs which are named so because of their enormous potential to cause mass casualties.²

Arms control arrangements, in the form of treaties and agreements are helpful to avoid expensive arms race and competition which could prove detrimental for the global peace and stability. These arrangements prove beneficial to counter the spread of various military weapons and technologies. Sometimes arms control treaties are concluded to limit the destruction of a war, if it happens. These arrangements are also seen by the peace proponents as an important tool to avoid or limit a war and its expenditure. Arms control agreements reduce the high cost of developing and maintaining a particular weapon system which may be used to uplift the deprived faction of society. Hence the arms control arrangements limit the quantity of weapons besides outlawing their various categories. Addressing the security dilemma is also an objective of arms control arrangements. It enhances security, stability and mutual trust between the partners to curb an arms race. Cost reduction and damage limitation are

¹ Den Dekker, "Arms Control," Oxford Public International Law, accessed August 14, 2020, <https://opil.ouplaw.com/view/10.1093/law:epil/9780199231690/law-9780199231690-e246>

² William Epstein, *Last Chance: Nuclear Proliferation and Arms Control* (London: Collier Macmillan, 1976), 37-45.

the ultimate outcome of arms control treaties besides strategic stability and mutual confidence. Arms control mechanism seems a viable and more practical option as it allows the parties to retain the requisite number and type of weaponry for self-defense while limiting or eliminating the most lethal armaments.³

The history of arms control arrangements dates back to ancient Greece period when rules of engagement between adversaries were established through the Amphictyonic Leagues and a mechanism of punishments and financial penalties was introduced. Later, the Roman Catholic Church presented two important agreements, namely the Peace of God (989) and the Truce of God (1027) to reduce violence between Christians. Invention of firearms resulted into an intensification of war destruction thereby paving a way for Strasbourg treaty in 1675. This agreement was concluded between the Roman Empire and France to ban the use of chemical weapons (the Poison bullets at that time). Moreover, the Rush-Bagot Treaty (1817), the First Hague Conference (1899), the Second Hague Conference (1907), Washington Naval Conference (1921) and Geneva Convention (1925) were prominent initiatives to limit the conventional weapons.

The first ever nuclear attack resulted into unimaginable destruction and altered the balance of power at global level. The possession of nuclear weapons became a symbol of pride, dignity and state identity.⁴ Washington and Moscow created modern nuclear weapons and rapidly increased their stockpiles to an astonishing level. Hence, needs for legal and political controls were felt to halt the nuclear proliferation. Therefore, Washington and Moscow engaged in arms control negotiations to manage their nuclear competition during the cold war.

Those negotiations stemmed into various agreements in the arms control domain which include the Antarctic Treaty (1959), the Partial Test Ban Treaty (1963), The Outer Space Treaty (1967), Nuclear Nonproliferation Treaty (1968), Strategic Arms Limitation Talks-I (1972), Anti-Ballistic Missile Treaty (1972), Threshold Test Ban Treaty (1974), Biological Weapons Convention (1975), Strategic Arms Limitation

³ Stuart Croft, *Strategies of Arms Control: A History and Typology* (Manchester: Manchester University Press, 1996), 40-45.

⁴ Andrew Heywood, *Global Politics* (London: Palgrave Macmillan, 2011), 263-273.

Talks-II (1979), Intermediate Range Nuclear Forces Treaty (1987), Strategic Arms Reductions Treaty I (1991), Open Skies Treaty (1992), Strategic Arms Reductions Treaty II (1993), Comprehensive Test Ban Treaty (1996), Strategic Offensive Reductions Treaty (2002) and New Strategic Arms Reductions Treaty (2010). Most of these treaties were bilateral between the U.S. and USSR (later Russia), less the Outer Space Treaty, the Antarctic Treaty, Nuclear Nonproliferation Treaty, Biological Weapons Convention, Open Skies Treaty and CTBT. These agreements resulted into strengthening of strategic stability and global balance of power. Besides reducing the number of nuclear arsenals, these accords impacted positively to stabilize Washington-Moscow bilateral relationship.⁵

The U.S. President Ronald Reagan and Soviet leader Mikhail Gorbachev signed the Intermediate-Range Nuclear Forces (INF) Treaty in 1987, which proved to be the most successful arms control treaty. The INF treaty required the U.S. and the USSR to eliminate an entire category of ground launched ballistic and cruise missiles with ranges between 500-5500 kilometers. The INF treaty was concluded in the aftermath of INF crisis in Europe and led to a verifiable elimination of 2692 missiles deployed in Europe. According to the INF treaty's provisions, Moscow and Washington also destroyed 1409 missiles (430 U.S. and 979 Soviet missiles) which were not deployed or placed in storage.

The INF treaty was the first agreement in the arms control domain where the two superpowers of that time extended cooperation to reduce their nuclear weapons and eliminated all their ground based ballistic and cruise missiles with a range between 500-5500 kilometers. The INF treaty, at the peak of cold war, helped to end the nuclear arms race and resulted into future arms reductions agreements. The INF treaty proved to be instrumental to halt the deployment of numerous nuclear weapon systems. This treaty was a major breakthrough due to its contribution for the future arms control accords and outlawing the use of INF missiles as they can hit the enemy targets and strategic positions deep inside its territory. The lethality of INF missiles

⁵ Carl Ungerer and Marianne Hanson, *The Politics of Nuclear Non-Proliferation* (Canberra: Allen & Unwin, 2001), 26-35.

increases due to their short travelling time and minimum exposure to BMD radar system which multiplies the chances of miscalculation during a crisis.

Although the INF accord proved the most successful agreement in the history of arms control, but a dispute has been intensified gradually since 2014 over Russia's noncompliance to the treaty. Initially in 2014, Washington alleged Moscow for treaty's violation and the situation deteriorated further in 2017 when Russia test fired the 9M729 cruise missile. The 9M729 is a ground launched cruise missile while its range falls within the 500-5500 kilometers which is prohibited according to the INF treaty. On August 2, 2019 Trump administration formally withdrew from the INF treaty on the pretext of Russia's non-compliance and suggested to conclude a broader multilateral arms control accord with the inclusion of China which is not party to any arms reduction / limitation treaty. Consequently, on August 5, 2019 Russia also withdrew from the treaty.

The demise of INF treaty received a mixed response from the international stakeholders. NATO (North Atlantic Treaty Organization) responded that such a situation is not sustainable where Washington fully abides by the INF treaty while Moscow does not. Few countries like Germany and United Kingdom repented over the U.S. and Russia's attitude and expressed that the treaty could have been saved. The INF Treaty's breakdown has raised important new questions over the fate of arms control regime and conclusion of a broader multilateral arms control accord. Currently, there are sufficient nuclear weapons to destroy the world many times and the debate over the future of arms control is mandatory as it affects the fate of humanity in real sense.

The INF treaty's demise would have long-lasting impact on the arms control regime with severe implications for the global security. It would also implicate nuclear security of European states where the U.S. and Russia are very much active to enhance their influence.⁶ This setback to arms control regime is meant to raise security concerns among the European states which would result into security

⁶ Lara Seligman, "What does the demise of the INF treaty mean for nuclear arms control," Foreign Policy, August 2, 2019, <https://foreignpolicy.com/2019/08/02/what-does-the-demise-of-the-i-n-f-treaty-mean-for-nuclear-arms-control-intermediate-nuclear-forces-new-start-strategic-arms-limitation-nonproliferation-trump-russia-arms-control-explained/>

dilemma and arms race thereby increasing the probability of armed conflicts. The collapse of INF treaty would also augment trust deficit between Russia and the U.S. which would peril other arms control accords.⁷

1.1 Statement of the Problem

Washington and Moscow, at the height of the cold war, engaged in several arms control treaties to deescalate the ever-growing nuclear competition between the then two superpowers. Now, they have terminated the INF Treaty (1987) which was a success story in the history of arms control regarding nuclear arms reduction. Recently, on December 22, 2020 the U.S. has also withdrawn from the Open Skies Treaty (OST), a major accord that permits unarmed aerial surveillance flights over 34-member states to enhance transparency and mutual understanding vis-à-vis military forces and activities. Earlier the U.S. has also opted to withdraw from Paris Agreement, Joint Comprehensive Plan of Action (JCOPA) and Trans-Pacific Partnership (TPP). Currently, New START is the only remaining bilateral arms control agreement between Russia and the U.S. which consolidates the gains of all strategic arms limitation talks held between them from 1970 to 2010. The U.S. foreign policy under Trump administration has resulted in a dangerous trend of disregarding the arms control accords. The U.S. withdrawal from bilateral and multilateral treaties is destabilizing for the existing global world order and arms control regime.⁸ This situation would lead to no respect for international treaties and obligations. The fate of the INF treaty and OST indicates that bilateral arms control mechanism between U.S. and Russia may deteriorate further which will severely impact the global strategic equation. This means that the collapse of INF treaty may eventually influence other arms control agreements, while disturbing the strategic balance at the global level leading to an instability. The ultimate outcome of this instability would be a security dilemma, which may result into global nuclear arms race and more frequent conflicts.

⁷ Fareed Zakaria, "The New China Scare," *Foreign Affairs*, Volume 99, Number 1, January/February 2020, <https://www.foreignaffairs.com/articles/china/2019-12-06/new-china-scare>

⁸ Steven Pifer, "Nuclear Security, Arms Control, and the U.S.-Russia Relationship," *American Ambassadors Review*, Spring 2019, <https://www.americanambassadorslive.org/post/nuclear-security-arms-control-and-the-u-s-russia-relationship>

This study first delves into the reasons of the collapse of INF treaty, and then analyzes how the U.S. withdrawal from INF treaty will potentially weaken the arms control regime.

1.2 Objectives of the Study

- To identify the reasons of the U.S. withdrawal from the INF treaty.
- To illustrate the implications of INF treaty's collapse for the arms control regime.
- To elucidate the prospects of INF treaty's collapse for the New START.

1.3 Literature Review

The INF treaty's demise is likely to have far-reaching implications for the arms control regime hence it has become focus of contemporary international relations and war studies. The U.S. foreign policy shift under President Trump administration and initiatives of withdrawing from JCPOA (Joint Comprehensive Plan of Action), TPP (Trans-Pacific Partnership) and OST (Open Skies Treaty) has increased the significance of this study manifold. Some of the most relevant and important academic writings have been reviewed for better understanding and comprehension.

The history of arms control dates back to ancient Greece period when wars were limited to arrows and cross bows. But the arms control's concept is especially linked to twentieth century when the modernized and most sophisticated weapon systems including the nuclear weapons were developed. The arms control regime witnessed many turning points during the cold war era where the U.S. and USSR were engaged in a competition as well as cooperation to manage their strategic arsenals. These cooperative measures created an environment to engage into a constructive dialogue which paved a way for various arms control talks ultimately leading to arms reduction treaties to stabilize the nuclear equation and global balance of power.

It is pertinent to mention that during cold war, the arms control mechanism had a journey comprising of five phases.⁹ The first phase covers the period from the end of the World War-II to the late 1950s. In this phase the arms control system was constrained to various proposals to internationally control the spread of nuclear weapons or to go for total nuclear disarmament. The second phase starts from early 1960s till 1972, when a strong need for formal agreements was felt to help stabilize the U.S.-USSR relationship. Besides the bilateral agreements notably the SALT-I and the SALT-II, a multilateral agreement on nuclear non-proliferation was also signed. The third phase is from 1972 to the late 1970s, which highlights the attempts of superpowers to maintain the momentum of previous engagements, but the changing political environment and Soviet invasion of Afghanistan diluted this impetus. The fourth phase of arms control covers the early to mid-1980s. It emphasized on the prospects of the space-based weapon systems which were further elaborated in Strategic Defense Initiative of the U.S. The final phase of this voyage began in the 2nd half of the 1980s and terminated with the collapse of the Soviet Union.¹⁰

William Epstein, in his book, *Last Chance: Nuclear Proliferation and Arms Control*, highlights various facets of arms control mechanism and threat of nuclear proliferation.¹¹ The author logically examines various factors which result into the failure of arms control treaties especially the non-proliferation regime and the Non-Proliferation Treaty. William talks about the central dangers to the global peace and stability, namely the vertical and horizontal proliferation. The vertical proliferation means the modernization, enhanced sophistication and the growing number of a nuclear weapons held by a nuclear state whereas the horizontal proliferation is all about the probable spread of nuclear weaponry to the non-nuclear states. William explicitly explains the basic and comprehensive history of nuclear proliferation and various efforts to control its spread since the Second World War. This book contains insightful analysis of the cold war power politics and the arms race which posed a severe threat to the world peace and security.

⁹ Croft, *Strategies of Arms Control*, 34-39.

¹⁰ Croft, *Strategies of Arms Control*, 205.

¹¹ Epstein, *Nuclear Proliferation and Arms Control*, 37-45.

Matthew Ambros, in his book, *The Control Agenda*, has briefly given a description of the history of arms control and the strategic talks held under the SALT-I and SALT-II. He highlights how the arms control talks were pursued in the Nixon and Ford era and saw a decline in the President Carter's regime. Matthew closely focuses the interplay of domestic politics, diplomacy and ultimate technological advancement during the cold war period. He underlines that the initiation of strategic arms limitation talks was the first step towards arms reduction and limitation process. While highlighting the importance of strategic arms limitation talks, Matthew argued that decision makers in the U.S. used the SALT mechanism to satisfy their public sentiments while exerting control to a greater extent in shaping the direction, structure and organization of arms control regime to better manage their nuclear stockpile.¹² The prolonged and untiring efforts in strategic engagements had a positive impact over the arms control regime and the future accords in this domain.

Carl Watts, in his research article "Arms Control" highlights the importance of INF treaty. He noted that the INF treaty and START-I were the most significant agreements in the arms control arena as they resulted into a sufficient reduction of nuclear weapons and had a legacy of concluding more detailed and verifiable agreements that ultimately strengthened the arms control regime.¹³

Tom Nichols in his research article "Mourning the INF Treaty" has discussed that the conclusion of INF Treaty was a great achievement of the time as this treaty was amongst those agreements which proved as an institution in their own right. The INF treaty served as the foundation stone for the denuclearization of most of the European continent. This treaty helped to abolish a complete category of nuclear delivery systems i.e. the ground based ballistic and cruise missiles with a range between 500 to 5500 kilometers. This treaty was a success story in the arms control history but violations to the terms of the treaty have led to its demise. Although Russian violations were provocative enough, but the U.S. could have tried to bring the Russians back to compliance through diplomatic and political means instead of a

¹² Matthew J. Ambrose, *The Control Agenda: A History of the Strategic Arms Limitation Talks* (Ithaca: Cornell University Press, 2018), 32-36.

¹³ Carl Watts, "Arms Control," Centre for Imperial and Postcolonial Studies, accessed August 16, 2020, https://www.academia.edu/1991833/Arms_Control

straight withdrawal. This decision of the U.S. may undermine the security of Europe and the U.S.¹⁴

Kingston Reif, in his article “As INF Treaty Falls, New START Teeters” has discussed possible motives behind the U.S. withdrawal from the INF treaty. The U.S. national security advisor John Bolton had played a leading role to terminate the INF treaty as he is well known due to his opposition to the arms control treaties, especially the INF treaty. John Bolton is of the view that the U.S. should get rid of the arms control restrictions which are hindering the U.S. path to pursue its global ambitions.¹⁵ The U.S. withdrawal from the INF treaty was immediately reciprocated by the Russia who announced that the Moscow would suspend INF treaty’s obligations too. The demise of the INF treaty would have a direct impact over the New Strategic Arms Reduction Treaty which would expire in February 2021 if not extended for another five years, as mentioned in the text of the treaty.

Steven Pifer in his research article “Nuclear Security, Arms Control and the U.S.-Russia Relationship” has thoroughly explained the consequences of an end to arms control regime. Pifer underscores that the demise of INF treaty would leave glaring affects over the fate of the New START. The New START consolidates the gains of all the arms control treaties and the strategic arms reductions talks over the last fifty years. At the moment there seems no political will or diplomatic initiative on either side to save the New START. On its current path the arms control regime may come to an end and that too at a time when the U.S. and Russia are pursuing expensive programs for nuclear modernization and enhanced sophistication to develop such arsenals which were never part of their inventories before. If the arms control regime between the U.S. and Russia survives no longer, then it may have long lasting impact on the global security. By disregarding the arms control system, the U.S. and Russia would not be able to monitor or regulate their nuclear arsenals. If they are no longer limiting or reducing their nuclear arms, they would lose credibility to push others to

¹⁴ Tom Nichols, “Mourning the INF Treaty,” *Foreign Affairs* (Foreign Affairs Magazine, March 11, 2019), <https://www.foreignaffairs.com/articles/2019-03-04/mourning-inf-treaty>

¹⁵ Kingston Reif, “Arms Control Today, As INF Treaty Falls, New START Teeters,” *Arms Control Association*, accessed February 3, 2020, <https://www.armscontrol.org/act/2019-03/news/inf-treaty-falls-new-start-teeters>

do so. If the U.S. and Russia do not pay respect to the history of arms control, they would no longer be able to include China in the future arms control mechanism. Hence the present course of action may lead to a less stable world.¹⁶

Eugene Rumer, in his research article “A Farewell to Arms Control” explains the possibility of future engagements between the U.S. and Russia in the backdrop of INF termination. Rumer argues that in the contemporary situation there is no political will on the U.S. or Russia’s side to pursue the arms control negotiations. The current standstill position can be settled through the technical solutions if Washington and Moscow desire so. But in view of the prevalent environment in both the capitals it is hard to hold the strategic talks to manage an unfolding arms race. However, the U.S. and Russia should pay attention to the broader dimensions of bilateral relationship and the role of military diplomacy instead of focusing the arms control regime.¹⁷

Jacob Stokes, in his research paper “China’s missile program and the U.S. withdrawal from INF Treaty” analyzes the post INF situation and Chinese strategic posture. President Trump administration has decided to terminate the INF treaty which was a success in the account of arms control. The U.S. has termed the Russia’s violations to the INF treaty as the main rationale behind this initiative, but the China’s growing military capabilities are the basic reason of the U.S. withdrawal from the INF treaty. Whereas China does not form part of the INF treaty, but the U.S. is continuously pushing Beijing to become part of the broader arms control treaty to limit its weaponry. China maintains that its nuclear stockpile is minutest as compared to the U.S. and Russia, and both of them should reduce their stockpile to China’s level if they want to include Beijing in any arms control limitation talks. Arms control experts believe that U.S. withdrawal from the INF treaty is representative of a more aggressive foreign policy approach followed by the U.S. under Trump administration. Besides this the foreign policy experts and scholars in China have proposed the

¹⁶ Steven Pifer, “Nuclear Security, Arms Control, and the U.S.-Russia Relationship,” *American Ambassadors Review*, Spring 2019, <https://www.americanambassadorslive.org/post/nuclear-security-arms-control-and-the-u-s-russiarelationship>

¹⁷ Eugene Rumer, “A Farewell to Arms Control,” *Carnegie Endowment for International Peace*, April 17, 2018, <https://carnegieendowment.org/2018/04/17/farewell-to-arms-.-.-control-pub-76088>

government to adopt an offensive posture to punish the U.S. allies in Asia Pacific if they volunteer to host the U.S. missiles on their territories.¹⁸

Admiral Michael Mullen in his article “Extend the New START to enhance the U.S. security” has stressed upon the need of extending the New START. The demise of INF treaty would leave glaring affects over the fate of the New START. The New START consolidates the gains of all the arms control treaties and the strategic arms reductions talks over the last fifty years. At the moment there seems no political will or diplomatic initiative on either side to save the New START. Mullen highlights that the termination of the New START without an appropriate alternative will leave the world with no arms control mechanism and the unfolding of a likely arms race and Asia and Europe. If the New STRAT lapses, then there would be no check on the U.S. and Russia’s strategic systems. World without the New START means nuclear free-for-all and there would be no restriction, limitation or verification regarding the strategic nuclear forces. If the U.S. wants to build on the nuclear arms control mechanism even, then the existence of the New START would serve as a foundation to this initiative. But if the New START is allowed to expire then there would be a trust deficit among the nuclear powers to conclude any arms control treaty. Mullen stresses the need to hold a strategic stability dialogue between the nuclear states to enhance the transparency of nuclear forces and serve as confidence building measure for future arms control agreements.¹⁹

Sarah Bidgood in her article “Four ways to ease U.S.-Russia tension” has emphasized upon the continued dialogue process between Russia and the U.S. She talks about the differences between the nuclear states to develop a unanimous narrative over the nuclear issues and the arms control mechanism. In January 2019, the P5 countries convened a session in Beijing where they identified various measures which can serve to bolster the arms control regime and develop a coordination mechanism to safeguard the arms control treaty but afterwards, they failed to endorse the Reagan and

¹⁸ Jacob Stokes, “China’s Missile Program and U.S. Withdrawal from the Intermediate-Range Nuclear Forces (INF) Treaty,” U.S.-China Economic and Security Review, February 4, 2019, https://www.uscc.gov/sites/default/files/Research/China%20and%20INF_0.pdf

¹⁹ Michael Mullen, “Extend New START to Enhance U.S. Security”, *Arms Control Association*, accessed February 3, 2020, <https://www.armscontrol.org/act/2020-01/features/remarks-extend-new-start-enhance-us-security>

Gorbachev motto established in 1985 that nuclear wars can never be won and hence must not be fought. They could have jointly delivered a statement to capture this sentiment but only China was ready to endorse this while the other states were reluctant to approve this.²⁰

1.3.1 Research Gap

Much has been written and discussed about the arms control but the demise of INF treaty is an important and new phenomenon which has taken place in a certain new context. This new phenomenon is a result of U.S. foreign policy towards emerging China and resurgent Russia. Earlier, Russia used to follow a policy of appeasement towards the U.S. but since 2010, it has shifted its policy and has started challenging the Washington's strategic interests. While China is also emerging as a new competitor for the US. Hence, the U.S. has adopted a policy of containment towards China and Russia. The INF collapse is a significant and unusual development at the international arena because a most important nuclear state has demonstrated an irresponsible behavior and terminated a historic arms control treaty which was working well since 1987. Hence, this research focuses on a new phenomenon in a new context of power politics between China, Russia and the U.S.

1.4 Core Argument

The U.S. under Trump Administration has demonstrated an aggressive foreign policy approach and disregarded the bilateral and multilateral treaties while destabilizing the existing international cooperation arrangements including arms control regime. Likewise, the collapse of INF treaty would potentially influence other arms control agreements and disturb strategic balance at global level leading to an instability. The ultimate outcome of this instability would be a security dilemma, resulting into escalation of tensions and a renewed nuclear arms race. The U.S. by withdrawing from the most important arms control accord, has set a negative precedence of disregarding the arms control agreements which may allow the other

²⁰ Sarah Bidgood, "Risky Business: Four Ways to Ease U.S.-Russian Nuclear Tension", *Arms Control Association*, accessed February 3, 2020, <https://www.armscontrol.org/act/2019-09/features/risky-business-four-ways-ease-us-russian-nuclear-tension>

nuclear states to openly violate the arms control commitments without fearing any consequences.

1.5 Research Questions

- Why has the U.S. withdrawn from the INF treaty?
- How will the demise of INF treaty affect the nuclear non-proliferation regime?
- How will the demise of INF treaty impact the New START?

1.6 Theoretical Framework

The theory of realism is an important paradigm of international relations. Neorealism combines the thoughts of E. H. Carr, Reinhold Niebuhr and Hans J. Morgenthau.²¹ Neorealism theory is further divided into the defensive and offensive school of thoughts. John Mearsheimer laid the foundation of the offensive realism by analyzing the structural conditions of the international system. He introduced the theory of offensive realism in 2001 in his book, *The Tragedy of Great Power Politics*. Mearsheimer has focused the limited capacity of states to determine the real intentions of other states that may resort to offensive actions against them. The anarchic nature of international system, uneven distribution of power and uncertainty of other states intentions create compelling incentives for the great powers to behave and act aggressively in pursuit of survival which is the ultimate objective of every state. This leads to a power competition which encourages the states to enhance their relative power in order to meet any challenges in future. Another important feature of the offensive realism theory is that it doesn't deal with all the states in the international system rather it focuses on the great powers only because the destinies of small nations are greatly determined by the actions and decisions of the powerful states.

²¹ S. Burchill, *Theories of International Relations*, (London: Palgrave MacMillan, 2005), 51-55.

1.6.1 Bedrock Assumptions of Offensive Realism

The basic purpose of this theory is to explain about the causes of war and power competition between the great powers of modern state system. John Mearsheimer contends that the structure of international political system is vital to comprehend this scenario. There are five core assumptions of the theory of offensive realism which characterize the essential traits of international politics.²²

The first assumption of offensive realism talks about the anarchic nature of international system. Anarchy doesn't mean that the system is chaotic or disordered but it is an ordering mechanism which says that the international system is full of independent units (states) and there is no central authority to govern this system. Sovereignty is inherited by the states as there is no government above the governments and no higher body in the system. The realism represents a world full of power competition and security dilemma where states are in a permanent quest to gain more and more power.²³

According to the second assumption of the offensive realism, every great power possesses some sort of offensive military capability which gives them the leverage to use it against their opponents to hurt them or cause damage. Mearsheimer says that all the states have a potential to cause damage to other states because of their military capability (determined by a specific weaponry on its disposal) and manpower, hence all state are potentially dangerous for each other to lesser or a greater extent.²⁴

Third assumption says that due to the systemic anarchy, no state can be certain about the intentions of the other states. In this age of power competition, no state can say that the other states would not be using their offensive power against the first one. States are not hostile against each other all the time, but the intentions can never be predicted with a hundred percent accuracy. It is possible that the intentions of a state are benign towards other states the one day and may turn hostile the other day as the

²² John J. Mearsheimer, *The Tragedy of Great Power Politics*, (London: W. W. Norton & Company, 2001), 30-33.

²³ Mearsheimer, *Tragedy of Great Power Politics*, 30.

²⁴ Mearsheimer, *Tragedy of Great Power Politics*, 30.

intentions can change quickly on the pretext of diverse reasons. This uncertainty of intentions cannot be avoided thereby the states cannot be sure about the intentions of the other states.²⁵

As per the fourth assumption of offensive realism, the principal goal of all the great powers is survival. So, in order to pursue this objective, all the states try to maintain the autonomy of their domestic political system and resist the foreign pressure as the survival dominates all other objectives and if for example a state is captured, it would not be able to pursue other objectives. Especially, the states try to keep their territorial integrity intact in order to get a leverage to achieve other goals.²⁶

According to the fifth assumption of the offensive realism, all the great powers act as rational actors, and they remain well aware of internal and external political environment. In view of the prevalent situation, they take strategic decisions to ensure their survival. Meanwhile, the great powers also take into account the likely behavior of the other states and the way their own conduct would affect the conduct of other states. Bearing in mind these behavior patterns the great powers formulate their strategies to ensure their survival. On the other hand, the states also focus the long-term objectives and the short-term consequences of their actions.²⁷

However, no single assumption dictates that the great powers should always adopt an aggressive posture. It is also possible that some states are having hostile intentions against the others but ensuring the survival is a primary goal which is common to all states, and it is harmless objective by itself. Nonetheless, when all the five assumptions of offensive realism are combined, they create strong incentives for the great states to behave and act aggressively against the other states. Once these assumptions are married together, they translate into fear, self-help and power maximization.²⁸ The accumulative effect of this situation is power competition among the great powers to increase their relative power and adopt an offensive attitude. Mearsheimer is of the view that power maximization and pursuit of hegemony are the

²⁵ Mearsheimer, *Tragedy of Great Power Politics*, 31.

²⁶ Mearsheimer, *Tragedy of Great Power Politics*, 31.

²⁷ Mearsheimer, *Tragedy of Great Power Politics*, 31.

²⁸ Mearsheimer, *Tragedy of Great Power Politics*, 29-32.

two best strategies for the great powers to ensure survival. Pursuit of global and regional hegemony by the great powers augment security competition and a potential for war. This scenario is called the Tragedy of Great Power Politics wherein the great powers engage in a possible conflict to ensure their survival and security.²⁹

Mearsheimer argues that an ascending power which is not yet able to dominate the region will always try to prevent the foreign powers to extend their influence in the former's home region or near vicinity. In contemporary scenario, China, an emerging power, is not yet able to dominate the home region while it is striving to prevent the external powers like the U.S. to extend influence in Beijing's near vicinity (South China Sea case in point). While pursuing the goal of regional hegemony, China is probably adopting a carrot and stick strategy to reward some of its neighbors (Pakistan and Central Asian states) and punish others (India). Historically, China has managed its territorial disputes since 1950s in accordance with these theoretical expectations. Over the time, it has been observed that China's foreign policy behavior has remained restraint and assertive to counter its rival powers. While on the other hand, the U.S. under the leadership of President Trump has demonstrated an aggressive foreign policy behavior to curb the rise of regional powers like China and Russia, through various formal and informal commitments. Quad, also known as QSD (Quadrilateral Security Dialogue) is an informal alliance between Australia, India, Japan and the U.S. which is maintained through information exchange, regular summits and joint military drills. The basic purpose of this alliance is to maintain U.S. hegemony in the Indo-Pacific region and contain the emerging China and resurgent Russia. Hence, the US foreign policy approach during Trump regime remained focused on power maximization and rolling back from the international commitments which were haunting the US strategic interests.

Offensive realism is all about the great powers' behavior which is particularly purposed at power maximization to become a dominant power in the international political system.³⁰ Mearsheimer argues a great power behaves as a revisionist state

²⁹ Mearsheimer, *Tragedy of Great Power Politics*, 30-35.

³⁰ John J. Mearsheimer, "The Gathering Storm: China's Challenge to U.S. Power in Asia", *The Chinese Journal of International Politics*, Volume 3, Issue 4, Winter 2010, 383-384, <https://doi.org/10.1093/cjip/poq016>

where it is dissatisfied with the prevailing balance of power. Hence it strives to change the status quo in its favor to become the most powerful state in the system. As per this logic, China, in the longer run, may act as a revisionist state to establish its regional hegemony but till now Beijing has not demonstrated revisionist behavior however Washington is playing proactively to counter an emerging threat (China) which may challenge the US interests at global stage. One of the key factors behind aggressive foreign policy approach of the US is the personality of President Donald Trump besides the presence of hawkish elements like John Bolton who has always been against the arms control regime. While it is also important to understand that regime and a state cannot be analyzed in isolation because regime comprises of elected representatives of a state thereby leading to transformation of individual egoism into state egoism.

The theory of offensive realism has been employed here to better understand the foreign policy behavior of great powers in pursuit of power maximization and hegemony. In the contemporary global politics, the rise of China has attracted special focus because of its deeper impact on international relations. The U.S. has withdrawn from INF treaty on the pretext of Russia's violations to the treaty whereas this decision is motivated by the U.S. strategic objective of countering the rising China which is a real threat to the former. The U.S. withdrawal from INF treaty highlights its aggressive foreign policy posture towards China and Russia to safeguard the status quo and maintain its hegemony. The offensive realism theory better explains the U.S. initiative of setting aside the INF treaty to undermine the emerging rival powers in pursuit of global hegemony, prestige and status quo.

Mearsheimer, in his book *The Tragedy of Great Power Politics*, has written comprehensively about the implications of rise of China on the contemporary international politics but has specifically written in his subsequent writings of 2005, 2006 and 2010. Mearsheimer contends that there can't be a distinction between the offensive and defensive military capabilities of a state, hence future course of action is difficult to predict accurately. He says that on the basis of past peaceful behavior of any state it cannot be guaranteed that it will follow the same behavioral pattern in the

times to come.³¹ Mearsheimer denies the probability of a peaceful rise of China and claims that it will inevitably go for regional hegemony and the U.S. along with its Quad allies will try to contain it.³²

Mearsheimer predicts that the emergence of China would eventually end up with an intense competition between the great powers in Asia which may lead to an armed conflict. According to Mearsheimer, China will attempt to establish regional hegemony which however will lead to more intense competition with the U.S. Furthermore, rising China will create a balancing coalition led by the U.S., like the one it created during Cold War. In 20th century, the U.S. succeeded in removing all potential hegemonic peer-competitors from the global scene (Germany, Japan, USSR), and it will try to deal with China accordingly.³³

Mearsheimer underpins that China is the real threat for the U.S. survival. Although still it is militarily weaker and economically inferior to the U.S. but China may rise to a level where it expels the U.S. from the Asia Pacific and become a regional hegemon. Mearsheimer suggests the U.S. to focus the Chinese emergence and try to slow down this process instead of augmenting it through accommodating economic policies.³⁴

1.7 Research Methodology

This research has followed a qualitative method of research. The technique of analytical reasoning has been used to logically explain various facets and dimensions of INF treaty's termination and its implication for the arms control regime.

Data has been collected from primary and secondary sources. The primary sources give first-hand evidence and raw information on the subject of research. This research has used official documents of treaties, various agreements of arms control regime, official statements of Russian and the U.S. Presidents and relevant stakeholders as

³¹Mearsheimer, "China's Challenge to U.S. Power in Asia", 395-396.

³² Mearsheimer, "China's Challenge to U.S. Power in Asia", 381-396.

³³ Mearsheimer, "China's Challenge to U.S. Power in Asia", 381-396.

³⁴ Zbigniew Brzezinski and John J. Mearsheimer, "Clash of the Titans," Foreign Policy, last modified October 22, 2009, <https://foreignpolicy.com/2009/10/22/clash-of-the-titans/>

primary source data. While the commentary from other writers and second-hand information is acquired through the secondary sources. The secondary sources serve to describe, interpret and synthesize the primary sources. This research has used scholarly books and research articles on arms control, international security, nonproliferation and nuclear power politics. Besides this, articles from Arms Control Association, International Security Affairs Magazine and Foreign Policy Magazine have been consulted for various outlooks on the chosen topic. Defense analysis reports of credible think-tanks including CSIS (Center for Strategic and International Studies), SIPRI (Stockholm International Peace Research Institute) and SASSI (South Asian Strategic Stability Institute) are cited and CIA factsheet has also been considered to investigate the phenomenon under this study.

Discourse analysis method has been employed to draw inferences from the sources including official documents of arms control treaties, official statements of the U.S., Chinese and Russian Presidents and relevant stakeholders in all three capitals along with available archived data on the subject, in order to answer the research questions. Discourse analysis is used to study the written or spoken language with regard to its social context.

1.8 Significance of the Study

The chosen research topic has been selected on the pretext of following important reasons.

Firstly, intention versus capabilities as criterion to predict state behavior is a contested discourse in the international relations domain. This research has thoroughly examined INF treaty's collapse and its implications for arms control regime while focusing on the foreign policy shift of the U.S. in the backdrop of an emerging power China, regarding whom there is an uncertainty in capabilities versus intentions perspective.

Secondly, it is important to study this topic because the U.S. has demonstrated a trend of disregarding the international treaties and arms control accords which would augment trust deficit among great powers, leading to a security dilemma and competition. The ultimate outcome of this security dilemma may be a nuclear arms

race and more frequent conflicts. Hence, there would be an increased instability in result of INF treaty's demise which may adversely affect the fate of humanity.

Thirdly, on its current path, the bilateral arms control mechanism between the U.S. and Russia would come to an end in 2021, if the New START is not renewed for another five years till 2026. The U.S. seems unwilling to extend the New START and adamant to include China in the arms control restrictions under the New START. Whereas China is not ready to become part of any new arms control agreement with the U.S. and Russia. This situation would lead to a stalemate among great powers where no party would be ready to reduce the nuclear stockpile, hence, there would be a competition and nuclear arms race which would further complicate an already tense relationship.

Finally, this research will be an addition in the strategic studies literature of international relations in an evolving strategic imbalance at global level. Scholars and students of social sciences may benefit from this study to enhance their understanding about the nuclear deterrence and the growing instability in result of INF treaty's demise. Moreover, this study is likely to provide policy options to the people at the helm of affairs and relevant stakeholders to readjust their policies in the light of this changing geopolitical and geostrategic environment.

1.9 Delimitations

This study is focused on the repercussions of INF treaty's collapse for the arms control regime especially the New START and NPT. It has first identified the reasons of the INF treaty's collapse, and then analyzed how the U.S. withdrawal from INF treaty will potentially weaken the arms control regime and its affiliated treaties. An offensive U.S. foreign policy behavior to contain emergence of China would be deliberated. The U.S.-Russia relationship in the backdrop of China's growing missile arsenals and its impact on the global strategic balance would be discussed in detail. The global strategic equation and a renewed arms race in the post-INF scenario would be analyzed. Time frame of this study would be from 2018 to 2020.

1.10 Organization of the Study

Chapter 1 consists of the introduction, statement of the problem, objectives of the study, research questions, literature review, research gap, core argument, theoretical framework, research methodology, significance of the study, delimitations and organization of the study.

Chapter 2 is about the historical background of the arms control arrangements. In this chapter the arms control initiatives of 20th and 21st centuries are discussed in detail.

Chapter 3 has delved into the reasons of U.S. withdrawal from the INF treaty; noting that China's speedy military modernization, Russia's military modernization and hypersonic missiles, U.S. aggressive posture under President Trump, Role of U.S. Military Industrial Complex, U.S. pursuit of military modernization to undermine China and Russia were the prime causes of the U.S. withdrawal from the INF treaty.

Chapter 4 has explained the ramifications of INF treaty's demise for arms control regime while highlighting the likelihood of an arms race in the nuclear weapons, hypersonic missile technology, outer space, and LAWS (Lethal Autonomous Weapon System). Moreover, there can be destabilizing trends in Asia and Europe.

Chapter 5 has comprehensively described the impact of INF treaty's collapse on NPT and New START.

At the end, post-script scenario is discussed, which is followed by the conclusion, findings and recommendation.

CHAPTER-2

HISTORICAL BACKGROUND OF ARMS CONTROL ARRANGEMENTS

Arms control agreements are effective tool to avoid expensive arms race and competition which could prove detrimental for the global peace and stability. These arrangements prove beneficial to counter the spread of various military weapons and technologies e.g. nuclear weapons and the missile technologies.³⁵ This is mostly done in returns of positive assurances to the countries, which are in the process of developing that specific weaponry, that they would not become target to that technology. Sometimes these agreements are negotiated to restrict the war destruction, if it happens. These arrangements also serve as an important instrument to avoid or limit a war and its expenditure. The war damages to the civilian population and the environment are the worst regardless of the fact that who wins the war. Arms control agreements reduce the high cost of developing and maintaining a particular weapon system which may prove helpful to uplift the deprived faction of society. Hence the arms control arrangements limit the quantity of weapons besides outlawing their various categories. They help to avoid war or reduce the expenses and damages of warfare if it happens.³⁶

Addressing security dilemma is also a purpose of arms control. Its basic objective is security, stability and mutual trust between the partners to curb an arms race. Cost reduction and damage limitation is the ultimate outcome of arms control besides strategic stability and mutual confidence. Arms control is different from disarmament where a drastic or complete abolition of armaments is required. Arms control seems a viable and more practical option as it allows the parties to retain the requisite number and type of weaponry for self-defense while limiting or eliminating the most lethal armaments. Nevertheless, the arms control strategy is defensive in nature because stability, equality and transparency can never be part of an offensive strategy.

³⁵ James Smith, *The first and last war*, (New York: Hamilton, 2003), 22-25.

³⁶ David Carlton, "International systemic features inhibiting disarmament and arms control," *Arms Control and Disarmament*, 2017, 153-160, https://doi.org/10.1007/978-3-319-62259-0_11

The development and use of very first nuclear weapons during Second World War changed the dynamics of warfare and proved a major turning point in the combat and warfare history. The nuclear weapons were presented as entirely a new breed of weaponry hence the great powers rushed to acquire this new technology. Shortly there were enough nuclear weapons to destroy the civilization and end the human existence. During the height of cold war, the world saw a gigantic stockpile of nuclear warheads and the world fell under the shadow of nuclear bombs. Hence needs for political and legal restraints were felt to reduce the nuclear stockpile of world atomic powers. The proceeding sections will highlight the history of arms control accords with special emphasis on post-World War-II era.

2.1 Pre 19th Century Arms Control Initiatives

The very first attempt in the arms control mechanism was made by the ancient Greece through the Amphictyonic League which set the rules of engagement and possibilities where war can be waged and how it would be fought. It also introduced a mechanism of punishment and penalties in the form of financial restrictions and severe violations were meant to be countered through war.

Numerous recorded attempts were made to introduce arms control mechanism between the era of ancient Greece and the Roman Catholic Church. During 8th and 9th centuries, Frankish swords and chain mail armor were highly demanded due to their lethality. Charlemagne (768-814) barred the sale of those chain mail armor and swords to the foreigners and declared it illegal and a punishable crime. This step helped to deny these lethal armaments to the enemies of Frankish empire namely the Vikings, the Moors and Slavs.³⁷

The Roman Catholic Church tried to curb the means of fighting while using its stature as a transnational entity. The Peace of God (989) and the Truce of God (1027) were two important agreements which resulted into violence reduction between Christians. The ruling of the Peace of God Treaty assured safety of economic and agrarian facilities and the church property besides protecting the noncombatants during a war. The Truce of God was an effort to check violence in the Christian community. In

³⁷ Croft, *Strategies of Arms Control*, 40-45.

1139, The Second Lateran Council introduced a mechanism to outlaw the usage of bows during a conflict between Christians. However, this council did not prohibit the use of crossbows against the non-Christians.

Invent and further modification of firearms resulted into an intensification of war destruction. This development forced the relevant stakeholders to formulate the laws of war as well as defining the rules of engagement incorporating the humane treatment with the wounded combatants, the prisoners of war and protection of noncombatants and their properties. The Strasbourg agreement, which was concluded between the Roman Empire and France in 1675, was the very first initiative at international level to ban chemical weapons' usage, the Poison bullets. Nevertheless, very limited arms control initiatives were taken until 19th century and those were only confined to hypothetical proposals or forced upon the defeated armies.

2.2 19th Century Arms Control Arrangements

The U.S. and the UK (United Kingdom) signed a landmark Rush-Bagot Treaty in 1817. It is considered an initial arms control treaty of the modern industrial age which led to the partial demilitarization of Lake Champlain (the U.S.) and the Great Lakes. Treaty of Washington, signed in 1871 was a follow up of Rush-Bagot Treaty, which ultimately led to a total demilitarization of the Great lakes.³⁸

The industrial revolution resulted into modernization of warfare. This also led to an enhanced mechanization of weapons and swift advancement in the field of firearms which gave a boost to the potential war devastations. Cognizant of these developments, the Tsar Nicholas-II convened 1st Hague Conference in 1899. He called upon the leaders of twenty-six nations together to ponder upon the conduct of warfare and the subsequent use of the advanced weapons. The establishment of the Permanent Court of Arbitration also became possible in result of the first Hague conference.³⁹

³⁸ Croft, *Strategies of Arms Control*, 50.

³⁹ Glenn P. Hastedt, *Encyclopedia of American Foreign Policy* (New York: Infobase Publishing, 2009), 10-14.

2.3 20th Century Arms Control Mechanism

2.3.1 The Hague Conferences

The first Hague conference was followed by Second Hague Conference in 1907 which was primarily aimed at introducing some additional protocols in the original agreement of 1899. The First and Second Hague conferences were aimed at negotiations regarding arms control, disarmament, war crimes and laws of war. On the pretext of the positive outcome of The Hague conferences, a 3rd Conference was planned in 1915 which could not materialize due to the outbreak of First World War.⁴⁰

2.3.2 Washington Naval Conference

After the termination of the First World War, the League of Nations was established in January 1920 to avoid such bloody wars in future. It also made an endeavor to reduce and limit various weapons, but it had a flawed enforcement mechanism which could not achieve desired results in the arms control regime. International Conference on Naval Limitation (Washington Naval Conference) was organized in 1921, where the U.S. invited major naval powers to discuss reductions in naval warships and their tonnage. France, Italy, Japan, UK and the U.S. attended these discussions besides the Netherlands, China, Portugal and Belgium, who were invited to discuss the ongoing situation in the Far East. Four Power Treaty, Five Power Treaty and Nine Power Treaty (three treaties) were signed in result of the discussions.

The Five Power Treaty contributed to halt the warship-building arms race. It also served to even reverse the ongoing trends in the warship-building industry. This treaty resulted into scrapping of 24 British, 16 Japanese and 26 American warships. The nations to the treaty also developed consensus to stop the warship building programs for 10 years. Until the mid-1930s The Naval Limitation Treaty remained intact, but it

⁴⁰ Christopher Barber and Annalise Higgins, *War, Peace and International Order: The Legacies of the Hague Conferences of 1899 and 1907* (London: Taylor & Francis, 2017), 23.

expired in 1936 when Japan terminated the treaty in pursuit of right's equality with the U.S. and Britain in regard to number and tonnage of warships.⁴¹

2.3.3 Geneva Protocol on Chemical and Biological Weapons

The Geneva conference was held in 1925, which resulted into prohibition of biological and chemical weapons usage in warfare. In 1925 this protocol was drafted and signed under the League of Nations' patronage whereas on February 8, 1928 it entered into force.

2.4 Arms Control Arrangements Since 1945

The World War II proved the most destructive and caused 70 to 80 million casualties and enormous damage to the economic infrastructure. The world also witnessed havoc in Japan after the first ever nuclear attack by the U.S. After the Second World War, the United Nations Organization was founded in 1945 as a transnational organization to avoid such bloodiest wars in future and promote harmony among the world community. Afterwards in 1946, the U.S. come up with the Baruch Plan which aimed to enforce strict control on the nuclear fuel cycle in order to avoid worldwide nuclear arms race. Soviet Union refused to accept this proposal and negotiations could not proceed further. Till 1950 the U.S. and Soviet Union were the two nuclear powers in the world, but many other states were in pursuit of acquiring the nuclear weapons. In 1953 the U.S. President during UNGA session proposed the idea of "Atoms for Peace" after which, in 1957, IAEA (International Atomic Energy Agency) came into being with a purpose of promoting peaceful use of nuclear energy and formulate protective mechanism where diversion of nuclear energy from peaceful usage to development of weapons can be avoided.

2.4.1 Antarctic Treaty

In December 1959, the Antarctic Treaty was negotiated and signed in Washington by the countries having researchers and scientists in Antarctica. It came into force in 1961 and later on many other countries also acceded to the treaty. In the

⁴¹ Francis M. Carroll, "Washington Naval Conference (1921-22)," *The Encyclopedia of Diplomacy*, 2018, doi:10.1002/9781118885154.dipl0503.

post-World War II scenario, it was the first arms control agreement which had a positive precedence for the future arms control accords. The Antarctic treaty resulted into the demilitarization of the Antarctic continent besides providing a cooperative environment for scientific exploration and assurance for peaceful use of the continent. It proved to be an example of world community's foresightedness where an environment of cooperation was developed before the emergence of a conflict. The treaty affirmed that the Antarctic continent shall not be used for any other purpose less the peaceful one. It prohibited the measures like establishing a military base or fortification on the continent besides restricting the nations to conduct military exercises or test nuclear / conventional weapons. This treaty also prohibited the nations to dispose of radioactive waste material in Antarctica.

2.4.2 Partial Test Ban Treaty (PTBT)

The U.S. and Soviet Union came eyeball to eyeball and at the verge of nuclear war in 1962, during Cuban Missile Crisis. The incident besides highlighting the deadly consequences of a nuclear war also necessitated for a greater cooperation between the U.S. and USSR to avoid such nuclear escalation in future. The episode of Cuban missile crisis served as an impetus to further the discussions on PTBT. The PTBT was negotiated, signed and entered into force in 1963. It prohibited the testing of nuclear weapon in outer space, atmosphere and underwater; however, it did not outlaw the underground nuclear tests. The U.S., Great Britain and USSR were the original parties to the PTBT. The parties to the treaty expressed their resolve to reach to an agreement on general disarmament according to the UN objectives. This initiative would halt the nuclear arms race while discouraging the development, testing and production of nuclear arms. The parties to the PTBT showed their determination to pursue negotiations for completely banning the nuclear arms tests in good faith and to preserve the environment from contamination by the radioactive elements.

The PTBT had a positive outcome and it resulted into reduction in radioactive fallout by prohibiting nuclear tests in the open atmosphere and underwater. Although it did little to limit the nuclear arms race between superpowers, but it did a lot to slow down the nuclear proliferation due to expensive nuclear weapons testing mechanism. A new

precedence of superpower's cooperation on nuclear arms control and proliferation paved way for Nuclear Nonproliferation Treaty (NPT) of 1968. PTBT / LTBT and NPT proved the most effective arrangements to prevent the nuclear proliferation.

2.4.3 The Outer Space Treaty

The outer space has become a competitive and contested field and there is an ever-increased interdependence of international community over the space-based technologies for civil, commercial and defense usage. So, in this context the outer space has emerged as a significant domain where the great powers are actively pursuing extensive research programs for civil and military purposes. Hence, there are growing concerns about the weaponization of the outer space. Space is an arena where international cooperation is possible because it is international common and can be protected easily. Global community started endeavors to define and regulate the use of space since the world powers ventured into the space. These efforts were intensified in 1966 at the forum of the prestigious United Nations (UN). Major Powers agreed to extend cooperation to use and regulate the activities in the space. These efforts resulted into signing of the Outer Space treaty on January 27, 1967 and the accord entered into force on October 10, 1967.⁴²

Article-I of the Outer Space treaty stresses upon the use of space for general benefit and utilization of all the states. Article-III of the treaty says that all the space related activities would be conducted according to the provisions of the international law, while the placement of WMDs or nuclear weapons in the outer space is prohibited under the Article-IV of the treaty. According to the Articles-VI and VII, the state launching an object in the space would be held responsible for any damages caused by the mission on the earth or in the space. The outer space treaty was the first agreement in the domain of the outer space which laid the basis of international cooperation in the space-based endeavors. It is important to highlight that the outer space treaty had only banned the placement of WMDs in the space as this type of arsenals were of great concern during the cold war period. The liabilities of damages caused in the

⁴² Annette Froehlich, *A Fresh View on the Outer Space Treaty* (Basingstoke: Springer, 2017), 25-26.

space were not clearly spelled out in the outer space treaty hence these were included in the Convention on International Liability for Damage Caused by Space Objects.⁴³

Outer Space Treaty was aimed to prohibit the placement of WMDs in the space. It also banned any military activities on the heavenly bodies and introduced some rules to govern the peaceful usage of the space. The outer space treaty has one hundred and five states parties to it whereas another twenty-six countries have already signed the treaty but did not ratify yet. This treaty prohibited the countries to deploy any kind of weapons including the nuclear, chemical and biological weapons in outer space. This treaty stresses upon the need for peaceful usage of space and heavenly bodies.

2.4.4 Nuclear Nonproliferation Treaty

The Nuclear Nonproliferation Treaty (NPT) was negotiated and signed in July 1968 while it entered into force in March 1970. The NPT was purposed to limit nuclear weapons' spread and halt global arms race. The NPT was based on three key elements: namely, the nuclear nonproliferation, nuclear disarmament and finally the peaceful usage of nuclear energy. It was a bargain between the nuclear and nonnuclear weapon states. The treaty affirmed that the nonnuclear states would not get nuclear arms and their technical know-how while the states already possessing the nuclear weapons would pursue a gradual disarmament. Finally, the nuclear states would assist nonnuclear states to acquire nuclear energy for peace purposes under the safeguards and safety measures introduced by IAEA.

The aim of NPT was to prevent the nuclear proliferation, extend assistance for peaceful usage of nuclear energy and finally to ensure the pursuit of nuclear disarmament. In 1995, after 25 years of enforcement, the member states assembled to review the progress on the treaty and developed a consensus to extend the NPT for an indefinite period.⁴⁴ The NPT couldn't achieve the desired results in the form of nuclear nonproliferation and disarmament because there are more nuclear weapon

⁴³ Paweł Bernat, "The Inevitability of Militarization of Outer Space," *ResearchGate*, accessed December 23, 2019, https://www.researchgate.net/publication/338484362_The_Inevitability_of_Militarization_of_Outer_Space

⁴⁴ P. S. Morris, "Is Zero Disarmament Possible? Multilateralism and Nuclear Arms Control Treaties," 72, no. 6 (March 2017), doi:10.31228/osf.io/4kx9c.

states now as compared to five nuclear powers back in 1968. On the other hand, there have been no serious efforts to implement upon the commitment of nuclear weapon states to go for disarmament and assist other states for peaceful use of nuclear energy. But the treaty led to create an environment of cooperation and mutual trust at the height of cold war which resulted into strategic arms limitation talks and conclusion of various agreements to reduce the nuclear stockpiles.

2.4.5 Strategic Arms Limitation Talks (SALT-I)

The earlier arms control arrangements were multilateral and could not accrue appropriate outcome. In January 1964, the U.S. suggested a verifiable standstill in the number and categories of strategic nuclear offensive and defensive vehicles possessed by the U.S. and the USSR. This proposal was meant to be implemented bilaterally between the Soviet Union and the U.S. but the former rejected this offer on the base of disparity between the nuclear weapons held by the then two superpowers.

Strategic arms limitation talks were the two rounds of conferences organized between Washington and Moscow. These rounds of talks resulted into signing of SALT-I and SALT-II treaties. SALT-I negotiations were initiated on November 6, 1969 and concluded in May 1972 while Nixon and Brezhnev signed the SALT-I agreement on May 26, 1972, after comprehensive negotiations. The SALT-I negotiations resulted into Anti-Ballistic Missile Treaty and an interim agreement to limit strategic offensive arms. SALT-I was first-ever bilateral agreement between the then two superpowers that placed limits and restraints on their nuclear weapons.⁴⁵

An interim agreement was also signed in result of SALT-I which capped the intercontinental ballistic missiles (ICBM) and submarine-launched ballistic missile (SLBM) of the U.S. and Soviet Union. Both the sides promised that they would not construct new silos for ICBMs while the existing silos would not be extended in number and size. The agreement also restricted the size and number of SLBM. The agreement did not take into account the strategic bombers and number of nuclear warheads, which allowed them to freely deploy multiple warheads in the form of MIRVs (Multiple Independent Reentry Vehicle) onto their ICBMs and SLBMs. The

⁴⁵ Ambrose, *The Control Agenda*, 42-46.

agreement limited the U.S. to have 656 SLBM launch tubes and 1054 ICBM silos whereas the USSR was allowed to have 740 SLBM launch tubes and 1607 ICBM silos.

2.4.6 Anti-Ballistic Missile (ABM) Treaty

This treaty was signed in result of SALT-I negotiations, and it came into force in October 1972. It prohibited the two member states from deploying nationwide defense against the possible threat of strategic ballistic missiles. The Washington and Moscow agreed that ABM defense of few assets of national importance would curb the nuclear arms race especially in terms of strategic offensive weapons. ABM treaty allowed the U.S. and Soviet Union to deploy two fixed ABM sites with 100 interceptors each. The one site could be used to defend the national capital, while the other to safeguard an intercontinental ballistic missile (ICBM) site.

In a protocol signed on July 3, 1974, the member states agreed to decrease the number of permitted defense sites to half. The U.S. opted to field its allowed missile interceptor to protect its ICBM site near Grand Forks while the USSR preferred to protect its national capital, Moscow. The ABM Treaty was signed to curb the nuclear arms race as restricting the defensive systems reduces the possibility of developing a more lethal weapon to overcome any defense. Despite its successes to limit the arms race between the two superpowers, the U.S. opted to withdraw from ABM treaty on June 13, 2002 which led to the demise of the treaty.⁴⁶

2.4.7 Strategic Arms Limitation Talks (SALT-II)

In the wake of successful SALT-I agreement, both Washington and Moscow decided to continue the pace of strategic arms limitation talks. The SALT-I agreement did not limit the parties to deploy MIRVs onto the SLBMs and ICBMs, hence the SALT-II focused to limit and reduce the number of MIRVs. Hence, President Carter and Soviet General Secretary Brezhnev on June 18, 1979 signed the SALT-II agreement and decided to limit the SLBM, ICBM and strategic bombers to 2250 delivery vehicles. The agreement imposed various limitations on the strategic nuclear

⁴⁶ Ambrose, *The Control Agenda*, 60-63.

forces in the deployed condition. The Soviet Union reduced 270 delivery vehicles whereas the U.S. possessed a smaller number of delivery vehicles which could have been increased in fact.⁴⁷

However, President Jimmy Carter, in 1979 after the Soviet invasion of Afghanistan, conveyed the U.S. Senate that it should not consider the SALT-II negotiations for his advice. So, the treaty was never considered again for ratification hence it did not come into force. Although SALT-II was never ratified but the U.S. and the USSR honored the agreement.

2.4.8 Biological Weapons Convention

This convention was a legal binding upon the states in pursuit of outlawing the biological weapons. On April 10, 1972, after detailed negotiations in the UN disarmament forum, the BWC was declared open for signature and it entered into force in March 1975. Currently it has one hundred and eighty-two states-parties, while only ten states namely Comoros, Chad, Eritrea, Djibouti, Kiribati, Israel, Namibia, Sudan, Micronesia and Tuvalu have not signed the BWC.⁴⁸

The BWC has outlawed the production, acquisition and retention of a quantity of biological agents which is not justified for peaceful purposes. This convention also limits the equipment, weapons and delivery vehicles which are designed to use these toxins or agents in an armed conflict or unpeaceful purposes. The BWC necessitated the states-parties to regularize the possession of such weapons, delivery vehicles, toxins and agents for peaceful purposes within nine months' time period after the BWC entered into force in March 1975.

2.4.9 Threshold Test Ban Treaty (TTBT)

Soviet Union and the U.S. negotiated Threshold Test Ban Treaty to establish a threshold level for nuclear tests. This treaty was signed in July 1974 and came into force in December 1990. Both the U.S. and the USSR agreed to set a threshold level of 150 kilotons for all types of nuclear explosions. The TTBT prevented the testing of

⁴⁷ Croft, *Strategies of Arms Control*, 77-79.

⁴⁸ Ambrose, *The Control Agenda*, 62-64.

existing or new nuclear weapons exceeding the described threshold limits. The U.S. and Soviet Union are subject to provisions of TTBT verification regime. The verifications can be ensured through on-site inspections, hydrodynamic yield measurements and the seismic monitoring.⁴⁹

2.4.10 Strategic Arms Reduction Treaty (START-I)

President Ronald Reagan initially proposed this agreement in 1980s while it was signed in July 1991. The treaty necessitated the states parties to reduce the deployed strategic offensive weapons to 1600 delivery vehicles and 6000 nuclear warheads as counted according to the agreement's terms. The abolition of excessive delivery vehicles and warheads was required in the light of START-I treaty.

A comprehensive verification regime was mandated to ensure the compliance to the terms of treaty through on-site inspections and information exchange program besides the use of satellites etc. START-I could not enter into force on the pretext of the USSR's collapse. The U.S. and the four successor states of the USSR (Russia, Kazakhstan, Belarus and Ukraine) signed Lisbon Protocol to join the START-I. In December 1994 the START-I entered into force, when the member states exchanged the instrument of ratification in Budapest. The parties successfully met the implementation deadline of the treaty on December 5, 2001. The START-I expired on December 5, 2009.⁵⁰

2.4.11 Open Skies Treaty

The Open Skies Treaty (OST) was signed in March 1992 and it entered into force in January 2002. This treaty has 34 member states whereas Kyrgyzstan has also signed the OST, but it has yet to submit the instrument of ratification. The OST allows each member state to undertake short-noticed reconnaissance to collect data of each other's deployed forces and military activities. The reconnaissance aircrafts are required to be fitted with authorized sensors and equipment to undertake the mission. The basic purpose of this treaty is to promote confidence among the member states

⁴⁹ Croft, *Strategies of Arms Control*, 102-109.

⁵⁰ Croft, *Strategies of Arms Control*, 108.

and know each other's deployed weapons, artillery guns and fighter aircrafts. The OST is meant to build mutual confidence, transparency and enhance understanding regarding military forces and activities.

According to the OST treaty provisions the territories of all the member states are open to be overflown and no area can be declared as no fly zone by the host state. The observing state has to forward a formal request to the host state minimum 72 hours in advance whereas the host state gets 24 hours to respond the request. Besides that, the host state has a right to change the flight path on the pretext of flight safety and administrative reasons.

The OST has also set some standards for the reconnaissance aircraft to be used for observation purpose. Four types of sensors namely, video cameras having real-time display, infra-red line-scanning devices, optical panoramic devices and framing cameras, and sideways-looking radar are allowed to be used for observation. The observing party is supposed to provide a copy of collected data to the host state while the other state-parties can purchase this data on requirement basis.⁵¹

The first ever observation flight was undertaken by Russia in August 2002 whereas, the U.S. did in December 2002. Five hundred over flights were completed by the member states in 2008. Afterward, more than 1500 observation flights were flown between the years 2002 and 2019. Now the U.S. has announced to withdraw from this landmark treaty as Russia had denied full access to member states for reconnaissance flights over its entire territory.

2.4.12 Strategic Arms Reduction Treaty (START-II)

The Strategic Arms Reduction Treaty (START-II) was a follow-on accord to the START-I. The START-II was negotiated in June 1992 by Boris Yeltsin and H. W. Bush. In January 1993 this agreement was signed wherein both the states agreed to reduce the number of deployed strategic nuclear weapons to 3000-3500 warheads besides prohibiting the deployment of ground launched ballistic missiles carrying multiple warheads. The START-II had a warhead counting mechanism similar to that

⁵¹ Ambrose, *The Control Agenda*, 62-64.

of the START-I. The treaty also required the annihilation of the nuclear delivery vehicles instead of nuclear warheads. January 2003 was the actual deadline for agreement's implementation, but a new protocol was added in the START-II in 1997 which resulted into moving the implementation deadline to December 2007. Senate and Duma approved the START-II, but it was not ratified by the U.S. Senate as it refused to ratify the additional protocol of 1997.⁵²

2.4.13 Comprehensive Nuclear-Test-Ban Treaty

The Comprehensive Nuclear-Test-Ban Treaty (CTBT) prohibits member states from conducting any nuclear test explosion for any purpose anywhere in the world. In September 1996, CTBT was opened for signature while it is signed by 184 states and it has been ratified by 168. CTBT requires ratification from a unique group of 44 states who are believed to be having the nuclear technology. Out of these 44 nations, eight have yet to ratify the treaty. These states are the U.S., China, Israel, India, Iran, Egypt Pakistan and North Korea. The preamble of the CTBT stresses upon the need to continuously reduce the nuclear weapons with an ultimate objective of total elimination. It also acknowledges that CTBT will be an effective mechanism to pursue non-proliferation and nuclear disarmament as it will constrain production and qualitative upgradation of nuclear arsenals while halting advancement in new types of nuclear weapons.

Article-I determines that states-parties are banned to conduct testing explosions of the nuclear weapons for civil or military purposes. Article-II of the CTBT establishes a CTBT Organization which is aimed at ensuring the treaty's implementation. It also provides a platform to the member states to hold consultations and cooperation. Article-III necessitates all the state-parties to take necessary actions for the implementation of treaty obligations. Article-IV establishes the verification regime of the treaty, which comprises of International Monitoring System (IMS), consultation and clarification mechanism, on-site inspections, and confidence building measures (CBMs). The verification regime cannot be enforced until treaty's entry into force.

⁵² Ambrose, *The Control Agenda*, 88-91.

Article-V is meant to ensure treaty's compliance and empowers the conference to invalidate the membership of a state-party or advise other punitive measures in the form of sanctions. Article-VI describes the dispute settlement mechanism regarding treaty's interpretation or application. Under this Article the state-parties get a right to suggest any amendment in the treaty, after it enters into force. Under the Article-VIII of the treaty, a special conference is proposed to be held after every ten years, once the treaty enters into force. This conference has a mandate to review implementation provisions. According to the Article-XI of the treaty, CTBT is open for signature to all states. Article-XII gives right to each signing state to pursue the ratification process according to constitutional framework of the treaty. Article-XIV is the main obstacle in the treaty's entry into force as it necessitates the 44 states to ratify the CTBT.

The U.S. Senate in October 1999 voted against the ratification of the CTBT. In 2009 President Obama announced to get Senate's reassessment to ratify the treaty, but later he never pursued the initiative. Trump administration in 2018 Nuclear Posture Review (NPR) stated that CTBT would not be ratified by the U.S., however it will continue to support the Treaty Organization Preparatory Committee. It also underscored that the U.S. would not return to nuclear tests except on the requirement of ensuring effectiveness and safety of Washington's nuclear inventory. The 2018 NPR also emphasized that the nuclear weapon states should announce a standstill on nuclear explosion tests.

2.4.14 Strategic Offensive Reductions Treaty (SORT)

American and Russian leaders participated in a summit held in St. Petersburg and Moscow on 24-26 May 2002 in order to develop consensus on the reduction of strategic nuclear weapons. Various understandings were reached on the issues of arms control and cooperation in energy, information, economy and technology. The most significant development in this summit was the signing of SORT. Both the parties agreed to pursue a drastic reduction in their strategic offensive nuclear weapons to a level of 1700-2200 nuclear warheads. It was decided that the reduction in nuclear warheads would be ensured till December 31, 2012. Moscow and Washington decided to keep the START-I enforced and its terms would be adhered to while a

bilateral implementation commission was established to review the implementation progress at least twice a year.

President George W. Bush and President Vladimir Putin signed the SORT in May 2002 and agreed to reduce their nuclear warheads to 1700-2200 each. Both the parties met the treaty implementation deadline of December 31, 2012.

2.4.15 New-Strategic Arms Reduction Treaty

Washington and Moscow in April 2010 signed the New-Strategic Arms Reduction Treaty (New START) in which both the states reached to a commitment to reduce their nuclear warheads and delivery systems. They agreed that each side will limit the strategic nuclear warheads to 1550 which can be deployed on 700 delivery vehicles. Total number of strategic delivery systems, deployed and non-deployed, was limited to 800. The New START limits for warheads were thirty percent lower as compared to the 2200 warheads which was the upper limit of SORT. On the other hand, the limit of delivery vehicles was set fifty percent lower in comparison to that of START-I, which was 1600. This treaty introduced a comprehensive verification regime which combined the existing verification regime as well. These verification measures include the mechanism of onsite inspections, frequent data exchanges and use of national technical means. The New START was ratified by the U.S. on December 22, 2010 while Russia finalized the ratification process on January 26, 2011. The treaty was entered into force on February 5, 2011 and it will expire on the February 5, 2026 unless extended further.

2.4.16 Treaty on the Prohibition of Nuclear Weapons (TPNW)

United Nations General Assembly (UNGA) in 2017 through its resolution 71/258 decided to convene a conference to discuss the possibility of a legal binding to prohibit the nuclear arms and pursue the goal of global nuclear disarmament. All the member states of the UN were encouraged by the assembly to participate in this Conference. So, the member states along with the representatives of civil society and international organizations participated in the conferences convened in New York. Subsequently, on July 7, 2017, the TPNW was adopted at the UNGA by 122 States in favor and one against the treaty. The treaty was opened for signature in September

2017. After the submission of 50th ratification instrument the treaty entered into force on January 22, 2021.

The member states under the TPNW pledge that they will not take part in the development, production, stockpiling or using the nuclear weapons. The TPNW also declares that member-states would not allow any nuclear power to deploy its nuclear weapons on their territories and they will also not become part of any prohibited activity under the treaty. The treaty obliges the states-parties to extend help to the affectees of the usage or testing of a nuclear weapon. The state parties also undertake to initiate appropriate steps to protect the environment from nuclear contamination.

To conclude this chapter, it is accentuated that arms control regime between Moscow and Washington played a pivotal role for more than half a century to moderate their bilateral relationship. Arms control negotiations, throughout the Cold War, played a distinctly important role to manage the nuclear competition and served as a platform for mutual communication.⁵³ In addition to being a barometer of relations between the U.S. and Russia, the arms control arrangements ensured global security and stability. It is noted that arms control acted as a surrogate for the U.S.-Soviet relationship during stress and strains. The arms control regime prospered during good times between the U.S. and Soviet Union while it suffered when their relations deteriorated. Currently, the U.S. has withdrawn from the INF treaty due to Russia's violation to the treaty but on the other hand Washington has demonstrated a negative trend of disregarding the international commitments and arms control agreements. The U.S. has adopted an aggressive foreign policy approach and terminated its commitments under the Joint Comprehensive Plan of Action, Trans-pacific partnership and Open Skies Treaty, which is perilous for the arms control regime. The next chapter will discuss the reasons of U.S. withdrawal from the INF treaty.

⁵³ Robert E. Williams and Paul R. Viotti, *Arms Control: History, Theory, and Policy* (Santa Barbara: ABC-CLIO, 2012), 15-17.

CHAPTER-3

REASONS OF U.S. WITHDRAWAL FROM THE INF TREATY

Soviet Union in late 1970s deployed SS-20 intermediate range ballistic missiles in Europe which received a strong response from the U.S. and other NATO members. The SS-20 ballistic missiles were deployed by Soviet Union to replace the aging SS-4 and SS-5 missiles. The newly developed SS-20 missiles were qualitatively an improved variant of the SS-4 and SS-5 missiles which had single warhead and a shorter range. Hence the SS-20 missiles, with multiple warheads and extended range, were a better alternative to the older missiles deployed in the European theater. Washington responded to Moscow's missile deployment with the deployment of its intermediate range nuclear armed ground launched cruise missiles to offset the SS-20 missile in Europe. The NATO foreign ministers, in 1979 resorted to dual track strategy to simultaneously push the Soviet Union for arms control talks and deployment of Washington's nuclear armed ballistic and cruise missiles. This process of negotiations continued and faltered many times whereas the deployment of Soviet and the U.S. missiles continued throughout the 1980s.⁵⁴

This negotiation process continued and had a breakthrough in March 1985 when Mikhail Gorbachev assumed as Soviet general secretary. In the same year, Moscow proposed Washington a plan to strike balance between the Soviet and U.S. missiles deployed in Europe. The proposal was well received in the U.S. and it expressed its interest to devise some mechanism for pursuit of negotiations. In 1986, in the backdrop of interest shown by the U.S. and USSR, the scope of negotiation process was extended to include all the intermediate range cruise and ballistic missiles deployed worldwide. These continued negotiations between Ronald Reagan and Gorbachev administration resulted into signing of a comprehensive agreement in December 1987, namely the INF treaty which entered into force in June 1988.

Moscow and Washington under the INF treaty pledged to eliminate an entire category of unconventional and conventional ground based ballistic and cruise missiles with a range between 500 to 5500 kilometers. The INF treaty led to elimination of 430 U.S.

⁵⁴ Heywood, *Global Politics*, 56-57.

INF class missiles and 979 that of the Soviet Union which were not deployed. The treaty also resulted into prevention of 208 ground launched cruise missiles which were planned to be installed in Britain, Belgium, Italy, Germany and the Netherlands. Few other missiles like the Pershing IA, not formally covered under the INF treaty, were also eliminated by the U.S. and European states. It was a big breakthrough in arms control' history when two superpowers of that time agreed to reduce their nuclear stockpile and employ onsite inspection regime to verify the implementation to the treaty. The U.S. and USSR collectively destroyed a total of 2692 INF class missiles till June 1991, the treaty's implementation deadline.⁵⁵

In the compliance report of July 2014, the U.S. alleged Russia of INF treaty's violation and these allegations were repeated in the subsequent assessment reports of the State Department. Washington claimed that Moscow was violating the INF treaty through the production of the 9M729 cruise missile, capable of travelling into prohibited range of INF treaty. Russia rejected these allegations and alleged the U.S. of violating the INF treaty. The trump administration in December 2017, issued a document in order to highlight Russia's violations to the INF treaty, and refute the Russian claim regarding U.S. development of a mobile intermediate range missile system.

President Donald Trump, in October 2018, expressed that the U.S. would terminate the INF treaty in the wake of Russian violations to the treaty and China's modernization of nuclear arsenals.⁵⁶ Mike Pompeo, the U.S. Secretary of State, on December 4, 2018, announced that his country has found the Russians in violation to INF treaty and Washington would suspend treaty obligations within two months if Moscow does not return to compliance by eliminating the 9M729 cruise missile system.

In February 2019, President Trump announced that Russia has not returned to the INF treaty's compliance by eliminating the missile system in question hence the U.S. would withdraw from the treaty in next six months in accordance with the treaty's provisions. Russian President Putin responded that he would mirror the developments

⁵⁵ Shannon Bugos, "U.S. Completes INF Treaty Withdrawal," *Arms Control Association*, accessed May 16, 2020, <https://www.armscontrol.org/act/2019-09/news/us-completes-inf-treaty-withdrawal>

⁵⁶ Kingston Reif, "Trump to Withdraw U.S. From INF Treaty," *Arms Control Association*, accessed June 26, 2020, <https://www.armscontrol.org/act/2018-11/news/trump-withdraw-us-inf-treaty>

happening in the U.S. by terminating the INF treaty. Consequently, the U.S. formally withdrew from the INF treaty on August 2, 2019, and Russia also announced that it will no longer adhere to the INF treaty's provisions.

Although Russia cannot be given clear credit in reference to the INF treaty's collapse but conversely the U.S. has not shown any interest to save the treaty which means that Washington has no interest to halt its nuclear modernization and at the same time it has no respect to the history of arms control. It is likely that the withdrawal of the U.S. from the INF treaty will augment the trust deficit further leading to an arms race which may increase tension and deteriorate global strategic balance.⁵⁷

3.1 Importance of INF Treaty

The restrictions of intermediate range missiles were actually meant for Moscow and Washington but with the Soviet Union's collapse, its nuclear assets were inherited by the successor states. Hence in 1991, the treaty membership was expanded to include Ukraine, Kazakhstan and Belarus, which were having nuclear facilities at the time of dissolution of Soviet Union. Other central Asian states like Uzbekistan and Turkmenistan also had SS-23 missile bases on their territories but they skipped the consultation process with the other parties' consent.

Specific missiles required to be eliminated by the state parties were mentioned in the INF treaty's subsequent protocols. The USSR committed to eliminate SS-4, SS-5, SS-12, SS-20 and SS-23 ground launched ballistic missiles besides the SSC-X4 cruise missiles. Whereas the U.S. had to destroy its Pershing IA, Pershing IB and Pershing II ground launched ballistic missiles and the BGM109G ground launched cruise missiles. Moreover, the state parties were also required to eliminate the missile launchers and training equipment. Although there were only five active state parties to the INF treaty, but few other European states also took initiative to destroy their intermediate range nuclear missiles on high moral grounds. Czech Republic, Hungary, Poland and Germany dismantled their INF class missiles in the early 1990s while Slovakia destroyed its intermediate range missiles in October 2000 due to extensive U.S. pressure. Bulgaria was the last European country having the intermediate range

⁵⁷ John Steinbruner, "Arms Control: Crisis or Compromise," *Foreign Affairs* 63, no. 5 (1985), doi:10.2307/20042368.

ballistic missiles and it signed an agreement with the U.S. on May 31, 2002, to eliminate all its INF class missiles. Hence it completed the missile destruction process in a five month's duration while acquiring the required funds from the U.S.⁵⁸

The inspection protocol of the INF treaty had a comprehensive mechanism wherein the member states were required to inspect and record the number of each country's INF missiles within 30-90 days after the treaty entered into force. These inspections were termed as the baseline inspections and paved way for the missile elimination process in future. The INF treaty permitted the member states to conduct 20 onsite inspections per year on a very short notice to ensure that no state was violating the treaty provisions. The state parties were also allowed to inspect and monitor specific missile production sites to confirm that new missiles were not produced.⁵⁹

A special verification commission was established under the INF treaty to monitor the verification process and address the complaints of the member states regarding the missile elimination process. The use of national technical means like the satellite observation and photoreconnaissance was allowed to monitor each party's efforts to eliminate the intermediate range ballistic and cruise missiles. The observation and verification protocol clearly stated that neither there would be any interruption in photoreconnaissance process, nor the missile sites would be concealed to interfere in verification activities. The state parties were permitted to inspect each other's missile production facilities in Belgium, Czechoslovakia, Italy, the UK, West Germany and the Netherlands. The permission of carrying out the onsite inspection to the state parties terminated on May 31, 2001 but even then, they were allowed to collect data through the surveillance satellites.⁶⁰

3.2 U.S. Perspective on INF Treaty's Demise

On October 25, 2007, the U.S. and Russia in a joint statement at UNGA reiterated their resolve to support the INF treaty and proposed the other nuclear armed states to join the process of intermediate range missiles' elimination. Later, in 2013

⁵⁸ "Intermediate-Range Nuclear Forces Treaty (INF Treaty)," U.S. Department of State, accessed July 28, 2020, <https://2009-2017.state.gov/t/avc/trty/102360.htm#narrative>

⁵⁹ Bugos, "U.S. Completes INF Treaty Withdrawal."

⁶⁰ Reif, "Trump to Withdraw U.S. From INF Treaty."

the U.S. first alleged Russia of INF treaty's violation and claimed that it was developing and flight testing a ground launched cruise missile whose range falls under the prohibited range of INF treaty. The U.S. repeated these allegations in the subsequent assessment reports of the state department. In August 2014, Russia refuted the U.S. claims regarding the development and flight testing of any such ground launched cruise missile. Since then both the states alleged each other of violating the treaty obligations by developing the INF class missile systems.

In 2016, the U.S. officials expressed their concerns publicly while claiming that the said cruise missiles system has been deployed. Later, in October 2016, a report published in the New York Times mentioned that the Russian cruise missile was successfully flight tested and the country is in the process of manufacturing more lethal missiles. In February 2017, the U.S. officials acknowledged in the New York Times that an operational unit of the 9M729 treaty noncompliant cruise missile has been deployed by the Russians. In March 2017, General Paul Selva, U.S. Joint Chiefs of Staff, officially announced about the deployment of Russian ground launched cruise missile named 9M729 or SSC-8 which according to the General was in violation to the INF treaty.

The Trump administration in December 2017, issued a document in order to highlight Russia's violations to the INF treaty, and refute the Russian claim regarding U.S. development of a mobile intermediate range missile system. President Donald Trump, in October 2018, expressed that the U.S. would terminate the INF treaty in the wake of Russian violations to the treaty and China's modernization of nuclear arsenals. Daniel Coats, director of U.S. national intelligence, on November 30, 2018, gave further details of Russia's violations to the INF treaty. He said that Russia has cheated the U.S. by conducting flight tests of 9M729 cruise missile. Coats maintained that these flight tests could have been made legal through missile deployment on fighter aircraft or a warship. Coats underscored that the development of a ground launched cruise missile by Russia was clearly prohibited under the INF treaty.

Mike Pompeo on December 4, 2018, announced that his country has found the Russians in violation to the INF treaty and the U.S. would suspend its obligations under the said treaty within two months if Moscow does not return to compliance by eliminating the 9M729 cruise missile system. In February 2019, President Trump announced that Russia has not returned to the INF treaty's compliance by eliminating

the missile system in question hence the U.S. would withdraw from the treaty in next six months in accordance with the treaty provisions. Russian President Putin responded that he would mirror the developments taking place in the U.S. by terminating the INF treaty. Consequently, the U.S. formally withdrew from the INF treaty on August 2, 2019, and Russia also announced that it will no longer adhere to the INF treaty's provisions.

3.3 Russia's Perspective on INF Treaty's Collapse

After a repeated denial about the existence of a ground launched cruise missile, named the 9M729, Moscow acknowledged that it possesses such cruise missile but that cannot fly in the INF treaty's prohibited range. While deny about the breach of treaty, Russia claimed that the U.S. has also violated the INF treaty through the development of a road mobile cruise missile system. Moscow maintained that the U.S. BMD system deployed in Europe can also launch the cruise missile whereas the targets used for testing the BMD were also prohibited by the INF treaty. Finally, the use of UCAV by the U.S. is also equivalent to the ground launched cruise missiles outlawed by the INF treaty. Russian officials are of the view that the U.S. is pursuing a destructive policy regarding arms control regime and particularly with respect to the New START. Moscow contends that over the past few years, America has met with Russian diplomatic representatives around 30 times to discuss the issue, initially trying to use the open-ended treaty to unjustifiably force Moscow to get rid of its R-500 cruise missile and two intercontinental ballistic missiles – the Topol-M and the Rubezh, but none of these weapons fell under the range restrictions of the treaty.

Washington started to make similar demands regarding Russia's latest development, the Avangard hypersonic glide vehicle, as well as its 9M729 cruise missile, which cannot be restricted by the treaty. Russia, meanwhile, has serious grounds for claiming that Washington has actually violated the INF treaty. "Perspectives of the 1987 INF Treaty", an English-language white paper published in Russia at the start of 2018, cited the number of such violations for the first time. According to the publication, the U.S. violated the treaty 92 times. It is important to clarify that this

number does not include tests carried out to check the interception accuracy of U.S. Patriot air defence systems.⁶¹

Russia claims that till January 2019, over the last 17 years, the total number of U.S. violations to the INF Treaty had reached to 95. The last of these took place in the Pacific Ocean on October 26, 2018, when an intermediate-range missile was successfully intercepted by a U.S. Navy missile defence system. All this information is cited in publicly available press releases of Pentagon's Missile Defense Agency, which, since 2001, has been regularly testing the interceptors of its missile defence system using such ballistic and cruise missiles which are prohibited under the INF Treaty.

Washington's Aegis-class destroyer launched a Standard Missile-3 Block IA during exercise Stellar Avenger. The U.S. frequently tests the efficacy of its anti-missile defence shield and so will continue to violate the 1987 treaty. With a considerable list of INF Treaty violations, America is still insisting on misleading its NATO allies and the global community. At the same time, it is trying to destroy the INF Treaty while heaping all the blame on Russia.

Washington also needs to give Moscow and its NATO partners a direct, honest answer to the following questions: did the U.S. destroy 846 short & intermediate range ballistic and cruise missiles according to the INF treaty; and, if these were all actually destroyed, has the U.S. created new missiles of these two classes? In addition, it seems that Washington not only wants to tear up its 1987 treaty with Moscow, but the New START Treaty, another important bilateral agreement is also in danger.

3.4 Structural Reasons of U.S. Withdrawal from the INF Treaty

John Mearsheimer, in his book the tragedy of great power politics has coined the theory of offensive realism. He explains that the U.S. is threatened of growing military and economic capabilities of China. In the similar context, the U.S. has withdrawn from the INF treaty although it has declared the Russia's noncompliance as the main driving force behind this step. Multiple reasons and motives which led the U.S. to terminate the INF Treaty are discussed in the subsequent sections.

⁶¹ Steinbruner, "Arms Control: Crisis or Compromise," 6-9.

3.4.1 China's Speedy Military Modernization Fuels U.S. Apprehensions

Mearsheimer argues that capabilities of great powers matter instead of their intentions as the intentions can't be predicted with 100 percent accuracy. Similarly, defensive capabilities can be converted into offensive at any time. The U.S. has maintained its military preponderance over the world for a large period of time to which China is catching rapidly now. The U.S. has adopted an aggressive foreign policy posture and took a withdrawal from the INF treaty to avoid legal implication of bilateral and multilateral arms control treaties in order to create a disturbing balance in its favor.

The main rationale behind the U.S. termination of INF treaty is the increasing number of Chinese nuclear arsenals although it has blamed Russia for the non-compliance to the treaty. China does not form part of any arms control accords hence the U.S. has withdrawn from INF treaty to make some arrangements to include China, an emerging power, into the arms control mechanism. The U.S. withdrawal from the INF treaty is stimulated by the mounting challenges of China to former's supremacy in Asia Pacific. The U.S. is really concerned about growing influence of China and its sophisticated nuclear arsenal besides its military modernization plans in future.⁶²

Both China and Russia have developed hypersonic missiles and the U.S. is far behind in this regard due to INF treaty's limitations. As the INF treaty's limitations do not affect China, hence it has developed a significant number of short, medium, intermediate and long-range missiles. Moreover, the INF treaty has hindered the U.S. to get strategic advantage over China and Russia, who are continuously pursuing weapon modernization programs and threatening the former's interests in Asia and Europe.

President Trump on May 3, 2019, discussed with his Russian counterpart the proposal of a broader trilateral arms control arrangement with the inclusion of China. Discussing the possibility of such an accord Sarah Sanders, Press Secretary argued

⁶² Elbridge A. Colby and A. Wess Mitchell, "The Age of Great-Power Competition" *Foreign Policy*, Volume 99, Number 1, January/February 2020, <https://www.foreignaffairs.com/articles/2019-12-10/age-great-power-competition>

that China may be included in the existing New START or completely a new agreement can be signed to manage the strategic arsenals of Beijing, Moscow and Washington. However, the strategic experts believe that both the choices are impractical due to a massive difference between the nuclear arsenals of above-mentioned states. Besides this the conclusion of a totally new arms control agreement between the three states with the exclusion of other nuclear states, who possess a small but deadly nuclear stockpile, would be unfeasible. Moreover, in the aftermath of INF treaty's termination, the U.S. has lost its credibility to push other nuclear armed nations to pursue arms control negotiations for deeper cuts to their inventories.

Russia has condemned the idea of President Trump to elaborate a new trilateral arms control accord without considering the nuclear arsenals of other nuclear states. Russian Deputy Foreign Minister, Sergei Ryabkov termed the proposal of Donald Trump as non-serious effort to pursue disarmament. He underscored that Moscow would respond to the U.S. proposal according to its nature and future steps towards disarmament require various prerequisites like BMD, cyber security and UCAVs, having direct bearing on overall strategic stability. Sergei also stressed the need to extend New START before conclusion of a new arms control agreement.⁶³

China has articulated its stance on the U.S. offer to set up a three-dimensional limited nuclear-free world. Chinese officials reiterate that Beijing can consider the option to become part of a trilateral accord if Moscow and Washington reduce their nuclear stockpile to Beijing's level which is around 300 warheads. It is obvious that the civilian and military leadership of the U.S. is very much concerned about the growing missile capabilities of China, which is almost half of its nuclear forces and delivery systems. This is evidently why China has replaced Russia as "enemy number one" in the military and strategic policies approved during Donald Trump's presidency.

Surely no-one is going to trust Washington after its unilateral withdrawal from the INF Treaty while simultaneously proposing a broader multilateral treaty. Nuclear arms expert John Wolfsthal, former Special Assistant to President Barack Obama has

⁶³ Thomas Graham and Damien Lavera, *Cornerstones of Security: Arms Control Treaties in the Nuclear Era* (Seattle: University of Washington Press, 2011), 32-35.

argued that the proposal of President Donald Trump to negotiate a broader arms control treaty seems a deception.

Hence, rise and military modernization of China is an important issue in today's global politics due to its deeper impact on the international relations.⁶⁴ Although the U.S. has withdrawn from the INF treaty due to Russian non-compliance, but this decision is motivated to counter the Chinese emergence. U.S. withdrawal from INF treaty highlights its aggressive foreign policy towards China and intentions to keep the status quo intact while maintaining its hegemony. The offensive realism theory better explains the U.S. initiative of setting aside the INF treaty to undermine the emerging rival powers in pursuit of global hegemony, prestige and status quo.

3.4.2 Russia's Military Modernization and Hypersonic Missiles

Mearsheimer argues that great powers' capabilities shape a systemic behavior. The U.S. sees Russian foreign policy behavior over the last decade as aggressive and irresponsible. Washington has alleged Russia for INF treaty's repeated violations to justify its withdrawal from the treaty but there are diverse reasons for U.S. departure. The U.S. claims that in view of the INF treaty it did not pursue missile modernization programs including the development of hypersonic missiles which China and Russia have commissioned in their nuclear forces. The U.S. justifies its withdrawal from the treaty while saying that Russians have developed and deployed the hypersonic missiles but the U.S. is far behind in this regard and the treaty did not give any leverage to the U.S. over its rivals in strategic terms. Hence, as per Mearsheimer's argument the great powers care more about relative gains and always feel insecure from adversary's military capabilities.

Russian President Vladimir Putin, in March 2018 revealed that his country is having hypersonic missiles, which give leverage to Russia over the U.S. Putin also revealed that Moscow is in the process of developing Sarmat ballistic missile which has an ability to deliver upto 24 warheads of 150-300 kilotons each. The hypersonic Sarmat

⁶⁴ Tong Zhao, "Why China is Worried about the End of the INF Treaty." *Carnegie-Tsinghua Center*, Last modified November 7, 2018, <https://carnegietsinghua.org/2018/11/07/why-china-is-worried-about-end-of-inf-treaty-pub-77669>

ballistic missile can hit targets at a distance of seventeen-thousand kilometers with 10 meters probable error. Putin also announced the development of Kinzhal missile, which can carry a nuclear or conventional warhead to more than 2000 kilometers. Nuclear experts view the Russian development of new missiles with a strategic dimension of complementing the existing missile defence with a greater mobility, difficult detection and reduced time to target, facilitating surprise attack.⁶⁵

Hypersonic missiles enable a state to deliver a (conventional or nuclear) warhead on the enemy's territory in a matter of minutes. These missiles maintain a low trajectory during flight to the target besides having advanced maneuverability and very high speed, to avoid detection and tracking by the enemy anti-missile defense system. These features allow them to travel much further and more stealthily to strike deeper enemy targets. The U.S. has terminated the INF treaty due to the emerging threat of hypersonic missile technology while it is already pursuing secret programs to develop these missiles.

To develop these missiles the U.S. has increased funds for the research and development of hypersonic missiles. The U.S. allocated \$85.8 million in 2017, \$108.6 million in 2018, \$256.7 million in 2019 and \$306.2 million in 2020. The U.S. spending in hypersonic missile technology has seen a progressive increase which means that Washington has taken the Russian threat seriously and it is likely to engage in an arms race to reduce the technological gap with Moscow.⁶⁶ The U.S. after abrogating the INF treaty will surely develop new weapon systems to strengthen its military muscle to outclass China and Russia. However, termination of historic INF treaty will impact negatively over the global nuclear equation.

Hence, the development of ever new weapon systems will most likely lead to arms race and hypersonic missile technology. The development of hypersonic weaponry will ultimately change strategic relationship between the rivals. Consequently, the development of hypersonic weaponry may not ensure deterrence, but it will encourage the states to develop their offensive capabilities. Termination of INF treaty

⁶⁵ Samuel Charap, "What the Demise of the INF Could Mean for Russia-China Relations," *RAND Corporation*, accessed July 20, 2020, <https://www.rand.org/pubs/testimonies/CT507.html>

⁶⁶ Bugos, "U.S. Completes INF Treaty Withdrawal."

would lead to arms race besides implicating other arms control treaties, like the New START. The likely vanishing of New START would accelerate the collapse of arms control regime.⁶⁷

3.4.3 U.S. Aggressive Posture under President Trump / Role of U.S. Military Industrial Complex

Mearsheimer argues that great powers act aggressively to maintain their position in the system. The U.S. is the superpower by all means; it dominates the Western hemisphere while it tries that no single power dominates the Eastern hemisphere. As China and Russia are the two main challengers and dominating powers in the Eastern hemisphere so the U.S., through aggressive foreign policy, has engaged the both to avoid their dominance in the Indo-Pacific region. Therefore, the U.S. has taken this aggressive step while terming INF treaty as a hurdle in its military modernization and weapons' sophistication. The establishment of Quad is also a part of broader U.S. strategy to contain emerging China and resurgent Russia. The ongoing trade war between the U.S. and China is also an example of hurting Beijing's economic interests in order to halt its unrestrained growth which would ultimately affect China's hard power and military modernization programs.

It is evident that President Donald Trump while following isolationist policies took a unilateral withdrawal from international commitments under Joint Comprehensive Plan of Action, Trans-Pacific Partnership, Open Skies treaty and Paris agreement. His foreign policy initiatives proved destructive and created distrust among the U.S. allies such as NATO and EU partners. Experts believe that President Trump lacks political skills and diplomatic ethics which resulted into U.S. estrangement at international level. The U.S. could have saved the INF treaty through constructive diplomatic dialogue, but President Trump adopted aggressive posture to deal with the issue. He

⁶⁷ Alexei Arbatov, "The INF Treaty and beyond: Where does arms control go from here?" Carnegie Endowment for International Peace, accessed March 9, 2020, <https://carnegieendowment.org/files/13-armscontrol240315wintro-formatted.pdf>

could have engaged the relevant stakeholders to fix the INF treaty instead of a unilateral withdrawal.⁶⁸

Another important factor in scrapping of INF treaty is the role of U.S. Military Industrial Complex which plays an influential part in the domestic politics and decision-making process of the U.S. Defense industries in the U.S. actively participate in the election campaign to support their favorite politician to influence the decision-making process. It is believed that military industrial complex of U.S. played an important role to get the Donald Trump elected as the president of the country. The decision of President Trump to abolish INF treaty has obviously benefited the U.S. Military Industrial Complex. Besides getting massive contracts the military industrial complex has tried to expand the international market by outnumbering the Russian defense industry. The U.S. is in pursuit of weakening Russian economy to slow down latter's resurgence therefore it has adopted various measures to halt Moscow's industrial growth and upgrading of armed forces.

3.4.4 U.S. Military Modernization to Undermine China and Russia

Mearsheimer's offensive realism highlights the limited capacity of states to determine the real intentions of other states that may resort to use force or take offensive actions against them in future. The anarchic nature of international system, uneven distribution of power and uncertainty of other states intentions create powerful incentives for the great powers to behave and act aggressively in pursuit of survival which is the ultimate objective of every state. This leads to a power competition which encourages the states to enhance their relative power in order to meet any challenges in future.

The U.S. is pursuing military modernization to undo the benefits China and Russia accrue through their technological sophistication. The U.S. strategic forces have been upgraded over the past two years. It has unilaterally excluded its 14 nuclear powered ballistic missile carrier submarines and 41 B-52 bombers from the aggregate numbers

⁶⁸ Rizwana Abbasi, "Arms Control in Crisis," EastWest Institute, accessed August 15, 2020, <https://www.eastwest.ngo/idea/arms-control-crisis>

of New START.⁶⁹ Through such actions, the U.S. would get an opportunity to multiply its strategic offensive weapons. Moreover, the Trump administration in 2019 continued to obliterate arms control regime and international commitments besides allocating enormous funds to strengthen its armed forces.

Meanwhile, the U.S. State Department officials had been claiming that Washington's termination of INF treaty is driven by Russian violations whereas several U.S. agencies including the President Trump had been saying that China was the real threat for the U.S. supremacy.⁷⁰ Hence in this background, the U.S. wants a free hand to use an unlimited variety of weapons and military hardware to exert a pressure on key rivals in the strategically important regions of the world. Asia Pacific region keeps special importance for the U.S. decision makers while Washington had been facing difficulties to protect its national interest in the region.⁷¹

In this backdrop, it has been observed that the U.S. has readjusted its nuclear doctrine in the changing geostrategic environment to counter the emerging challenges. It has also approved the creation of a sea launched nuclear cruise missile to react to Russia. However, defense analysts believe that the U.S. is undertaking modernization of military hardware and technology to challenge China which has taken place as enemy number one in the U.S. foreign policy. Hence the collapse of INF treaty would complicate the situation in strategically important regions like the Asia Pacific and Europe.⁷²

3.4.5 U.S. Wants to Dilute China-Russia Nexus as Military Competitor

Another reason why the U.S. wants new countries to join the INF Treaty, which is not being openly spoken about by senior U.S. officials, is to drive a wedge between Moscow and Beijing. America is relying on the fact that Russia wants to preserve the treaty, so will put political pressure on its Chinese friends to curb their

⁶⁹ Charap, "Demise of the INF."

⁷⁰ Bugos, "U.S. Completes INF Treaty Withdrawal."

⁷¹ Vladimir Dvorkin, "INF Treaty Set to Collapse," *Current Digest of the Russian Press*, 71, no. 005 (March 2019), 3-6, doi:10.21557/dsp.52919714.

⁷² Arbatov, "The INF Treaty and beyond."

country's intermediate-range and shorter-range missile program. Should China refuse, then the arms control accords between U.S. and Russia will cease to exist and relations between Russia and China will be compromised.⁷³

It is no coincidence that John Bolton is trying to scare Russia by saying that Chinese missiles are threatening the heart of Russia. But he is clearly being more than a little dishonest, to put it mildly. It is not Chinese missiles, but the numerous U.S. nuclear missiles under the cover of a global anti-missile shield that are simultaneously threatening China and Russia. It is worth noting that Beijing and Moscow have signed an agreement on July 16, 2001 to not endanger the security of each other by deploying nuclear weapons and meanwhile adhere to the principle of peaceful coexistence. Moscow and Beijing fully comply with their mutual obligations under the bilateral Good Neighborly Treaty of Friendship and Cooperation not to use force against each other.

In March 2013, Russia and China signed a joint statement on mutually beneficial cooperation and building a comprehensive strategic partnership. Among other things, it stipulates that the two countries will resolutely support each other on issues that affect their key interests, including the safeguarding of their sovereignty, territorial integrity and security. Moscow and Beijing actively oppose America's plans to strengthen its strategic and tactical nuclear capabilities, enhance the strike components of its global missile defence system and turn space into an arena of military confrontation. As is well known, however, Washington sees all these issues completely differently.

3.4.6 Global Prestige and Status Quo Through Military Preponderance

Offensive neorealists believe that Washington's unilateral withdrawal from the INF treaty is meant to prove that there is no power on the face of the earth which can challenge the U.S. supremacy. Washington through military preponderance wants to establish its hegemony besides maintaining global prestige and status quo. The U.S. seems to have abrogated the INF treaty as a part of propaganda campaign to accuse Russia of INF treaty's violation to pressurize Moscow. The U.S. has opted this

⁷³ Charap, "Demise of the INF."

strategy to demonize Russia and China meanwhile getting the support of European partners. This episode of INF treaty's collapse shows that the U.S. has no respect for the arms control regime, and it will scrape any international agreement or arms control treaty which does not suit to its national interest. The U.S. since 2014 has been pushing its Western allies to prepare a military response to the Russian violations to the treaty but none of the states paid heed to the U.S. proposal. The option to expand nuclear deterrence is also part of proposal which may receive a matching response from Russia.⁷⁴

President Trump has unilaterally withdrawn from INF treaty with a possible plan to push Asia and Europe in a renewed arms race of conventional and non-conventional intermediate range ballistic and cruise missiles which it has decided to develop a long ago.⁷⁵ Many countries around the world understand this perfectly. By deciding to terminate the INF Treaty, which previous U.S. administrations have referred to as “a cornerstone of global stability”, America has clearly set itself two main objectives.

First, to significantly increase the level of America's nuclear missile capabilities in global terms by creating a completely new strategic nuclear triad and modernizing the country's tactical nuclear weapons, the use of which in the first nuclear strike is indicated in a number of provisions amended by Donald Trump in the country's nuclear strategy. Second, to install its new ground based intermediate range nuclear missiles in Japan and South Korea, which have been covered well in advance by America's anti-missile shield.

In any case, it is impossible not to see that the massive and combined military threat, including nuclear, being deliberately created by America is hanging over the world like the sword of Damocles. In addition to gaining strategic advantage over Russia and China there is another reason which has prompted the U.S. to take a withdrawal from INF treaty. This reason includes the unwillingness on the part of the U.S. to discuss arms control and disarmament issues on the basis of equality and mutual

⁷⁴ Dvorkin, “INF Treaty Set to Collapse,” 5.

⁷⁵ Bugos, “U.S. Completes INF Treaty Withdrawal.”

respect to settle the legitimate concerns of other states. Unluckily, there is no political will or diplomatic effort on either side to save the arms control regime.⁷⁶

⁷⁶ Charap, “Demise of the INF.”

CHAPTER-4

RAMIFICATIONS OF INF TREATY'S DEMISE FOR ARMS CONTROL REGIME

After an exceptional era of arms control, now the U.S. and Russia are not engaged in strategic dialogue, rather they are eager to dismantle the already existing arms control mechanism. The landmark INF Treaty was officially terminated by the U.S. in August 2019, and now the New START, the only remaining bilateral arms control accord between Washington and Moscow, which consolidates the gains of all arms limitation talks. This political estrangement along with new military technologies would most likely undermine global strategic equation, leading to an arms race having severe consequences for nuclear nonproliferation, disarmament, and global stability. None of the nuclear weapon state possesses any strategy to further the arms control dialogue or disarmament rather they are engaged in expensive weapon modernization programs and sophistication of strategic arsenals. An all-encompassing approach is compulsory to pursue the objective of nuclear arms reduction, but the U.S. did not put an effort to save the INF treaty rather it seemed to be involved in a blame game without providing any solid evidence to return the Russians to compliance.⁷⁷

The INF treaty was signed after a prolonged negotiation process of seven years and helped to end The Cold War arms race. On December 8, 1987, Ronald Reagan and Mikhail Gorbachev signed INF treaty to materialize the idea that “a nuclear war can’t be won and must not be fought”. This treaty outlawed the testing and production of ground based ballistic and cruise missile with a range of 500-5500 Kilometers. The INF treaty proved a historic agreement as it resulted into elimination of a whole category of weapons that the U.S. and USSR could deploy against each other. In addition to this, the INF treaty introduced a verification mechanism which was also

⁷⁷ William Moon, “Beyond Arms Control: Cooperative Nuclear Weapons Reductions – A New Paradigm to Roll Back Nuclear Weapons and Increase Security and Stability,” *Journal for Peace and Nuclear Disarmament*, 2, 2, 2019, 54-57, Accessed February 26, 2020, <https://www.tandfonline.com/doi/abs/10.1080/25751654.2020.1732516>

useful for the future arms control agreement and halted an arms race. The INF treaty entered into force on June 1, 1988 and eliminated 859 U.S. and 1752 Soviet missiles.

The U.S. President Donald Trump on October 20, 2018 announced his intention to withdraw from the INF accord. Later, Mike Pompeo, the U.S. Secretary of State rendered confirmation to this effect. President Trump, on August 2, 2019 during his State of the Union address reaffirmed his resolve to withdraw from this historic agreement. Russia also followed the footprints of the U.S. and took a decision of abolishing the treaty. Currently Russia intends to produce a newer category of land based hypersonic missiles whereas the U.S. has also allocated massive funds to carryout tests and trails of such missiles. The INF Treaty was bilateral between the U.S. and USSR on the basis of the Cold War nuclear politics architecture. John Bolton, in his 2011 writing as an independent citizen, acknowledged that the INF agreement had succeeded to address a serious threat to U.S. interests at that time. And that serious threat according to John Bolton was a surprise nuclear attack by the Soviets in Europe while using the intermediate range ballistic missiles.

The arms control architecture started to decay once the U.S. President George W. Bush opted to withdraw from the ABM Treaty in 2001. The ABM treaty was signed in 1972 to counter the strategic ballistic missiles, like the ICBMs (intercontinental ballistic missiles) which are most destructive for the global peace and stability. The INF treaty is dead now while the New START, which was a significant arms control treaty is about to expire in 2021. With the termination of the New START, there would be no restriction over the strategic arsenals of the two major nuclear powers.

4.1 Power Politics in Arms Control Mechanism

There are multiple dimensions of the INF treaty's demise and the analysts of defense and strategic see these developments from different angles. The U.S. based experts believe that the INF treaty's demise is not a result of just Russia's violations to the treaty but this step has been taken in response to growing military capability of China and its increasing influence in the region. This outcome highlights an impulsive decision of President Trump and the biasedness of John Bolton, who has always been an opponent of arms control. Besides this, it also shows prevalent concerns in Washington about the way INF treaty had constrained the U.S. war fighting capacity

and ability to counter rapidly growing missile forces of China in the Asia Pacific.⁷⁸ Now, the U.S. has conveyed a loud message to China that the former has no respect for arms control agreements, and it is fully committed to indulge in a strategic rivalry with China. The security community in China is threatened by the U.S. intentions to rapidly grow and extensively deploy its intermediate range missiles in the Asia Pacific region. After the deployment of such missiles, even if the U.S. decides to install the conventional warheads, it will sufficiently alter the regional balance of power meanwhile threatening the Beijing's overall security architecture.

Military strategists in Beijing also believe that Washington's missiles deployment would seriously challenge the Chinese survivability of nuclear arsenals, ultimately pushing China to undertake radical steps to beef up its nuclear capabilities.⁷⁹ The U.S. would require working in collaboration with the regional allies in order to search for adequate deployment sites for intermediate range ballistic missiles in the Asia Pacific region which it doesn't have right now. Security experts in China believe that the U.S. has intentionally exaggerated the China threat to muster support from its allies in Asia Pacific and encourage the regional states to host the U.S. intermediate range ballistic missiles. China links the establishment of Quadrilateral Security Dialogue (QSD / Quad) as an effort to heighten the tensions and encircle it through this anti-China.⁸⁰

The termination of the INF treaty has also led to removal of hindrances for the U.S. to produce and deploy medium and intermediate range missiles, few of which having trajectory shaping vehicle. These trajectory shaping vehicles are cheaper, less complicated and best to neutralize the enemy defenses. The U.S. had already been on the way to produce the long-range precision guided missiles even before the INF treaty's collapse. In this scenario, there are chances that of Chinese doubling down the military capabilities to counter the U.S. to develop latest technologies and counter measures. This would lead to broader arms buildup competition which may have spillover effect to other fields than the traditional ballistic and cruise missiles. The

⁷⁸ Gotz Neuneck, "The Deep Crisis of Nuclear Arms Control and Disarmament: The State of Play and the Challenges," *Journal for Peace and Nuclear Disarmament*, 2, Issue 2, 431-452, DOI: 10.1080/25751654.2019.1701796

⁷⁹ Heywood, *Global Politics*, 70-74.

⁸⁰ Zhao, "Why China is Worried."

U.S. withdrawal from the INF treaty may augment the prevailing rifts in the Asia Pacific region. China, due to its geography and missile system placed in East Asia, is confident that it may have the capacity to compete the U.S. in the longer run. In this context, the view of Chinese officials is enforced that Washington has adopted a strategy to encircle Beijing through military buildup on the coasts of China.

Some officials in Washington believe that the U.S. requires new missile technologies to counter the emerging threat from Beijing which may create a self-perpetuating sequence. China, in response to growing military capabilities of the U.S. may react antagonistically to counter the perceived aggression from Washington. Some American analysts have even endorsed a plan to use INF class to threaten China meanwhile forcing the Beijing to allocate additional resources to defend its territory. Military experts in China believe that such a policy would be a deliberate offensive from the U.S. which is likely to receive counter measures from China, further complicating an already tense environment. In this context, both Washington and Beijing are about to indulge in a major power competition. Hence the stakeholders in both the capitals need to take immediate steps to find a mechanism for perception management to avoid the tensions turning into crisis. Beijing is satisfied with its military capabilities and missile programs which are sufficient to defend its territorial boundaries and avert any aggression from the U.S. or foreign powers near Chinese coasts. On the other hand, the U.S. is concerned about growing military capabilities of China and Washington's vulnerabilities in forward-bases. In this sense, both the U.S. and China are entangled in a spiral of action reaction dynamics and their problems can be better resolved through political engagements and diplomatic means.

It is important to highlight that rigid stance of political leadership and aggressive military posturing, besides technological sophistication, only add negativity and misunderstanding about each other's intentions. None of the states would win a costly arms race which would most likely not restrict to the U.S. and China only.⁸¹ So in order to improve military stability and correct predictability of each other's intentions, new and broader security cooperation is required which would be helpful to dampen a newer arms race and strategic competition. But there is an uncertainty in Beijing

⁸¹ Zhao, "Why China is Worried."

about the arms control, which is also shared by some of the experts in Washington. It is common perception in China that the major powers have no regard for the arms control agreements and commitments and they only pay lip service to motivate the other states to abide by the arms control commitments. Chinese believe that in case of INF treaty's demise, the U.S. and Russia have discretely developed the prohibited missiles while they were involved in blame game to draw leverage and let down each other. Military experts and strategists in China contend that the arms control mechanism is all about power politics and it has nothing to do with managing the strategic competition between great powers. Hence, this distrustful environment proves to be a basic hurdle toward future arms control negotiations and efforts to conclude a multilateral agreement with inclusion of China as a member state.⁸²

Henceforth, the U.S. officials are required to reconsider the pros and cons of taking a withdrawal from the INF treaty. The U.S. decision to extend the New START for another five years would certainly impact the threat perception and counter strategy of China. The decisions of relevant stakeholders in the U.S., China and Russia would either slow down or intensify the strategic competition at the global level. Earlier, arms control accords were mainly concluded between the U.S. and USSR/ Russia but in contemporary world China cannot be excluded from the arms control treaties due to its growing military capabilities. China's emergence as a top tier military power will face resistance and pressure from the great powers due to its fast-growing force projection capabilities. Now China should think strategically and devise a mechanism to defend its long-term security interests. China, an emerging power is aspirant to shape international norms; it cannot follow other powers and now it has to set standards which it desires others to follow.

4.2 IMPLICATIONS OF INF TREATY'S DEMISE FOR ARMS CONTROL REGIME

4.2.1 Hypersonic / Nuclear Arms Race

The U.S. has repeatedly been giving justifications of its withdrawal from the INF treaty and holds Russia responsible for this damage to arms control regime. But

⁸² Moon, "Beyond Arms Control," 55.

on the other hand, Washington is worried of growing military capabilities and technological sophistication of nuclear arsenals by the rival powers. So, it is no secret to anyone that the U.S. has abrogated the INF treaty due to growing military capabilities of Russia and China although it has been alleging Russia for the INF treaty's violation. Russia could have been compelled to follow the INF treaty's terms but the U.S. did not put any effort at diplomatic or political level to save the treaty. Hence, the U.S. was inspired by few other reasons which led to the demise of INF treaty. The U.S. believes that the INF treaty was a restriction in its way to develop the short and intermediate range missiles whereas Russia and China have already developed such missiles with technological sophistication in the field of hypersonic technology.⁸³

In Beijing's specific case, it was never restricted by the limitations of INF treaty hence it remained successful to develop a significant number of INF prohibited ballistic and cruise missiles. One such example is the development of aircraft carrier killer created by Chinese nuclear scientists which has enabled Beijing to destroy the U.S. aircraft carriers. The development of aircraft carrier killer has given leverage to China to broaden its military strategy to challenge the rival powers in Asia Pacific. On the Russia's part, it has also developed an intermediate range missile system which uses hypersonic technology to strike enemy targets in depth with greater precision and very less early warning. It has taken Russia much ahead of the U.S. in terms of hypersonic missile technology. Therefore, the INF accord was considered as an obstacle in the way of the U.S. to develop matching weaponry with Russia and China. Washington considers that the INF treaty was not giving much leverage to the U.S. over Beijing and Moscow, which has led it to take a withdrawal from the agreement.

With this context, it is also important to know the strategic advantage and working mechanism of hypersonic weapons. The hypersonic missiles fly with a speed greater than five times the speed of sound and can travel at a very low altitude as compared to the conventional ballistic missiles. The hypersonic missiles give advantage to launch

⁸³ Francisco Herrera, "The INF treaty and the new hypersonic revolution," Instituto Español De Estudios Estratégicos, last modified March 8, 2019, https://www.ieee.es/en/Galerias/fichero/docs_opinion/2019/DIEEEEO20_2019MANHER-nuclear-ENG.pdf

an attack in a very short span of time and inflict irreparable damages to the enemy. These missiles maintain a low flight trajectory which allows stealth travelling at a farther range while inflight maneuverability mechanism allows dodging anti-missile defense shield. Detection and demolition of hypersonic missiles is much difficult due to their ability to evade the radar system of ballistic missile defense (BMD) system. The hypersonic missiles do not work on the logic of deterrence but the logic of power maximization through amassing of this weaponry. All these features increase the chances of miscalculation and make the conflicts hard to avoid. The main victim of the hypersonic missile technology is the BMD system. The hypersonic missiles draw the attention towards BMD capabilities of the systems deployed in Romania and Poland. The BMD systems would most likely be installed with the offensive weaponry if they remain unsuccessful to engage the hypersonic missiles. Resultantly, the development of hypersonic missiles would not ensure deterrence, but it will encourage acquiring the offensive capabilities through the conventional missiles.

The hypersonic arms race is looming over the world and Russia has proven to be the pioneer in this regard. Russian President Putin has already initiated this arms race during March 2018 Federal Assembly session through a picturesque presentation on new hypersonic arsenals of Russian army. President Putin changed the arms race dynamics by putting Moscow ahead of Washington and Beijing. In the same presentation, Putin also declared the development of Sarmat RS-28 ballistic missile which would be capable of carrying upto twenty-four hypersonic glide vehicle (HGV) nuclear warheads of 150-300 kilotons. The Sarmat ballistic missile would have the ability to hit targets at a distance of seventeen thousand kilometers with a possible error of ten meters. Putin also made an ambitious claim about development of the Kinzhal nuclear capable air-launched ballistic missiles which has the ability to carry conventional or non-conventional warheads upto a range of two thousand kilometers.

The development and production of these new missiles by Russia would strengthen its strategic force capability. These missiles are better in terms of mobility and come with greater stealth capabilities. All the above-mentioned features enable the Putin's country to launch a surprise attack against enemy vital assets and strategic locations. The U.S. has taken a withdrawal from the INF accord in the face of Russian hypersonic weaponry's threat, to evade the restrictions of the treaty which were

hindering its path to develop this type of missiles. Military experts believe that the U.S. has also initiated the development of hypersonic missiles like the Tactical Boost Glide and Hypersonic Air breathing Weapon Concept to reduce the gap with Russia and China.⁸⁴

Hence, the U.S. initiative to terminate the INF treaty is well justified through Washington's necessity to fill the technological gap with Russia while developing hypersonic weapons, instead of Moscow's violations to the terms of INF accord. Although Russia, since long had been persuading the U.S. to eliminate the INF restrictions as this treaty constrains them to acquire the latest technologies but the former U.S. administrations did not pay heed to Russian proposals. Now the political elite in Russia got a perfect excuse in the form of President Trump to terminate the INF treaty. Whereas after the development of hypersonic missiles by Moscow it had become an imperative for Washington to get rid of INF treaty and prepare advanced technologies similar to Russia thereby reducing the technological gap.

In this regard, Washington has already enhanced its funds for the research and development of strategic forces. As per the figures provided by DARPA (Defense Advanced Research Projects Agency), the U.S. has increased its spending for hypersonic weaponry from \$85.8 million to \$256.7 million during last four years till 2020. There has been a progressive hike in the area of hypersonic weapons which means that Moscow has taken the hypersonic threat seriously and now it has indulged in hypersonic arms race in order to reduce this gap with Moscow. The U.S., after abrogating INF treaty has officially detached itself from legal implications. Now Washington is undertaking numerous missile development programs to bolster its military capabilities. Beijing in the Asia Pacific may continue to reinforce its military infrastructure in order to challenge the potential missile deployments of the U.S. in the region. Russia, on the similar pattern would carry on its missile sophistication programs and allocate additional resources to buildup hypersonic missiles.

Nonetheless, the INF treaty was a historic agreement, and its demise would have severe global repercussions. All the above-mentioned developments may potentially

⁸⁴ Zhao, "Why China is Worried."

lead to hypersonic missile proliferation, nuclear arms race and worsening of relationship between the great powers. The ultimate outcome of this fraught environment would be a hypersonic arms race. The hypersonic arms race would prove devastating because of its potential of replacing the defensive weapons with the offensive ones.⁸⁵

4.2.2 Undermining European Security

The U.S. during President Obama's regime started accusing Russia of the deployment of SSC-8 nuclear capable ground launched cruise missiles in the European continent. The said missile has a range of two thousand kilometers which was contrary to the obligations under the INF treaty. It has been noted that the decision of U.S. withdrawal from the INF treaty was taken without consulting NATO (North Atlantic Treaty Organization) members which is likely to deepen the strains in the alliance system. The pro-U.S. countries in the Baltic region demand robust military and diplomatic countermeasures against Russia for the treaty's violations. The UK has also held Russia responsible for the termination of the INF treaty and strongly supported the U.S. stance. Whereas the foreign minister of Germany suggested the U.S. to take into account the negative fallout of the treaty's abolition for the European security infrastructure and its impact on the nuclear nonproliferation regime. Federica Mogherini, the foreign policy chief of European Union contended that the INF treaty had a positive contribution towards Cold War termination while it is also considered as a key pillar in the security architecture of Europe. Military experts believe that Russia has much less to lose from the termination of INF treaty than NATO. They argue that Russia can swiftly move forward with latest missile production and deployment, but the U.S. would have hard time to pursue European allies to host the INF prohibited missiles on their territories.⁸⁶

The demise of INF treaty has provoked apprehensions among the European states for initiating a crisis like situation for their security architecture. The U.S. decision to abrogate the INF treaty has not taken the European leaders by surprise because they

⁸⁵ Caplan, "Nuclear Stability in a Post-Arms Control World."

⁸⁶ Tommi Koivula, "Arms Control in Europe: Regimes, Trends and Threats," National Defence University Helsinki, accessed August 22, 2020, <https://www.doria.fi/handle/10024/73990>

were already aware of the INF treaty's fate. The Russians were also annoyed of the restrictions imposed by the INF treaty but the U.S. has voluntarily accepted the burden of treaty's abrogation. Neither Barak Obama nor Donald Trump tried to convince the international community over the Russia's non-compliance to the INF treaty. Besides this no serious efforts were made to deliberate over the post-INF treaty scenario. So much so the U.S. even did not bother to consult the NATO members regarding its decision of abandoning the treaty.

The European Union members and the other continental states reacted immediately over the INF treaty's elimination. Majority of the European governments expressed their concerns about a possible arms race in Europe in the backdrop of INF treaty's demise and indicated about historical success of the agreement in the arms control arena. The demise of the INF treaty has also impacted the general perception of European people as they believe that after the INF crisis of 1980s now the Europeans would stand between the intermediate range missiles of Washington and Moscow. This situation is likely to head towards a high-profile nuclear arms race in Europe meanwhile undermining the security of Europe.⁸⁷

Heiko Maas, the foreign minister of Germany has also refuted the U.S. decision of abrogating the INF treaty. This situation will deteriorate further after Russia's deployment of intermediate range ballistic and cruise missiles on its western border and face the counter deployments from the U.S. in Europe. There are all the chances that the European states like Germany would oppose the U.S. deployment of INF class missiles on their territory due to the fact that Berlin will stop using nuclear energy by 2022 and because of a robust anti-nuclear drive in the country. But on the other hand, few countries like Romania, Poland and other Baltic States are likely to host the U.S. intermediate range ballistic and cruise missiles if they are guaranteed additional presence of the U.S. troops on their territories. Nevertheless, the Europeans believe that the U.S. did not put sincere efforts to safeguard the INF treaty or some alternative to this. They also believe that John Bolton has a permanent opposition for the arms control mechanism and he has played a negative role to abrogate the INF treaty. Bolton considers the arms control regime as an unnecessary restriction which

⁸⁷ Koivula, "Arms Control in Europe."

the U.S. has imposed against itself, is limiting its role as the leader of the contemporary world. The European governments also believe that the U.S. has endangered the security of Europe in the face of China's growing capabilities and for the Asia Pacific strategy of the U.S.

Now for the European security, main consequences of the INF treaty's demise are: Firstly, Moscow and Washington would be unconstrained to produce and deploy intermediate range ballistic and cruise missiles in Europe. Secondly, there would be no mechanism to halt the deployment of intermediate range ballistic and cruise missiles or pressurize the U.S. and Russia over the usage of such weaponry if we don't have a treaty to prohibit such arsenals. Co-Chairman of European Council on foreign relations, Mr. Carl Bildt highlights that the demise of historic INF treaty may allow Moscow to continue with the deployment of ground launched Kalibr cruise missiles having a range of fifteen hundred kilometers. The deployment of Kalibr cruise missiles would immediately cover the European continent with an excessive danger. Thirdly, few European states want to capitalize the U.S. deployment of intermediate range cruise missiles, which could increase division among NATO states. Russia would try to exploit the differences of NATO members as Kremlin always wants to provoke discontent amongst the NATO allies through disinformation and propaganda. This division among the NATO members may result into split in the EU members who are not in tune with Washington. Simultaneously, the European states would not be in a position to effectively handle another missile crisis in the continent. Moscow based analysts including Pavel Felgenhauer have contended that technological sophistication of missile systems capable of evading ballistic missile defense system may lead the situation to a dangerous level where chances of a nuclear war increase manifold.⁸⁸

Briefly, the European states and NATO members would require formulating a strategy in response to the Moscow's hypersonic missile systems. They have also calculated possible diplomatic and military responses including the deployment of cruise missiles at the NATO's ballistic missile defense sites. The options of NATO's dual task aircrafts and deployment of conventional intermediate range cruise and

⁸⁸ Neuneck, "The Deep Crisis of Nuclear Arms Control," 452.

ballistic missiles can also be utilized. However, any of the above-mentioned response involving the missile deployments and arms competition will deteriorate the relationship between Russia and NATO members. Russians may also get a feeling of being besieged, thereby demanding counter measures leading to escalation of tensions.

A unilateral withdrawal of the U.S. from INF treaty may result into division, dissatisfaction and mistrust among the EU members. This situation is likely going to reduce the role of the U.S. as a frontline state to regulate the global nuclear order and encourage the other inspiring nations to acquire nuclear weapons. The arms buildup by Russia and its development of hypersonic missile systems may receive a strong response from NATO states and new deployments by the European states. These potential deployments of intermediate range ballistic missiles may result into likely face off between the U.S. and Russia thereby implicating the broader European security. It is underscored that the collapse of the INF treaty would not spontaneously rollout into a full fledged war or a military standoff between NATO and Russia, but it is likely to enhance misunderstandings among the great powers. Likewise, the fewer number of arms control accords may result into unforeseen crisis or military confrontation.

4.2.3 Destabilizing Trends in Asia

It is widely accepted that the U.S. withdrawal from the INF treaty is not a result of solely Russia's violations to the treaty, but it is done in response of growing military capability of China and its increasing influence in the Asia Pacific region. This outcome highlights prevalent concerns in Washington about the way INF treaty had constrained the U.S. war fighting capacity and ability to counter rapidly growing missile forces of China in the Asia Pacific.⁸⁹ Now, the U.S. has conveyed a clear message to China that the former has no respect for arms control agreements, and it is fully committed to indulge in a strategic rivalry with China. The security community in China is threatened by the U.S. intentions to rapidly grow and extensively deploy

⁸⁹ Gotz Neuneck, "The Deep Crisis of Nuclear Arms Control and Disarmament: The State of Play and the Challenges," *Journal for Peace and Nuclear Disarmament*, 2, Issue 2, 431-452, DOI: 10.1080/25751654.2019.1701796.

its intermediate range missiles in the Asia Pacific region. After the deployment of such missiles, even if the U.S. decides to install the conventional warheads, it will sufficiently alter the regional balance of power meanwhile threatening the Beijing's overall security architecture.

Military strategists in Beijing also believe that Washington's missiles deployment may seriously challenge the Chinese survivability of nuclear arsenals, ultimately pushing China to undertake radical steps to beef up its nuclear capabilities.⁹⁰ The U.S. would require working in collaboration with the regional allies in order to search for adequate deployment sites for intermediate range ballistic missiles in the Asia Pacific region which it doesn't have right now. Security experts in China believe that the U.S. has intentionally exaggerated the China threat to muster support from its allies in Asia Pacific and encourage the regional states to host the U.S. intermediate range ballistic missiles. China links the establishment of Quadrilateral Security Dialogue (QSD / Quad) as an effort to heighten the tensions and encircle it through this anti-China.⁹¹

The INF treaty's termination may push the Asian continent to a strategic competition and unfold an arms race in the region. Although China has a modest nuclear stockpile as compared to gigantic nuclear stockpile of Russia and the U.S., but it has sufficiently strengthened its missile systems which really threatens the U.S. interests. It is evident that China has deliberately exercised a restraint policy regarding nuclear warhead production and stockpiling, although it has substantial amount of resources on its disposal to compete with the U.S. and Russia. The U.S. after abrogating the INF treaty has got a free hand to develop intermediate range ballistic and cruise missiles and deploy in the Asia Pacific region. China, in the face of missile deployment threat will be compelled to divert its resources for defense construction thereby slowing down the process of its economic growth rate. The recent trade war between the U.S. and China is also taken in this context where Washington is adamant to obstruct Beijing's exports to hamper latter's economy.

⁹⁰ Heywood, *Global Politics*, 70-74.

⁹¹ Zhao, "Why China is Worried."

The INF treaty's downfall and the potential deployment of the U.S. missiles against China may push Beijing to formulate counter response. China may decide to swiftly expand its nuclear stockpile and delivery vehicles to protect its territory against any surprise attack. In 2020 the U.S. was engaged in a diplomatic process to persuade North Korea to terminate its nuclear program. But after this episode of INF treaty's demise, the U.S. has lost its moral authority to push any state to denuclearize or follow the arms control commitments. Consequently, Pyongyang will go for technological sophistication of its nuclear weapons and delivery systems. Besides North Korea, Iran, Japan and South Korea may consider developing nuclear weapons to enhance their relative power and to acquire an assertive role in Middle East and Asia respectably.⁹²

Meanwhile, the potential strategic competition between Washington and Beijing, and Delhi's rivalry against Beijing may result into a vicious cycle of power and security competition between Delhi and Islamabad. So, the demise of the INF treaty may create a security dilemma which would result into a series of action-reaction based arms buildup in Asian region. A worst scenario can lead to a situation where India, China and Pakistan rush to maintain parity with the U.S. They may rapidly expand their nuclear warheads and delivery forces, or even move forward to keep certain number of nuclear warheads in a state of high alert similar to that of the U.S. and Russia.

To conclude, the INF treaty's scrapping may unleash a dangerous arms race and force many states to increase their defense spending and acquire more lethal weapons and equipment. This would severely impact the global strategic stability and increase the chances of misunderstanding, miscalculation and an accidental war. To avoid this situation the U.S. and Russia should extend cooperation to address the concerns about the INF treaty. They should imitate a constructive dialogue process to strengthen the arms control regime. After the extension of New START, the horizon of strategic dialogues can be extended to include China and other nuclear powers in a broader multilateral arms control mechanism. But for China the cost of joining the existing

⁹² Caplan, "Nuclear Stability in a Post-Arms Control World."

bilateral arms control treaty between the U.S. and Russia is too high at this stage but the momentum can be built after the extension of the New START.

4.2.4 Outer Space Arms Race

The outer space has become a competitive and contested field and there is an ever-increased interdependence of international community over the space-based technologies for civil, commercial and defense usage. So, in this context the outer space has emerged as a significant domain where the great powers are actively pursuing extensive research programs for civil and military purposes. Hence, there are growing concerns about the weaponization of the outer space. Space is an arena where international cooperation is possible because it is international common and can be protected easily. Global community started endeavors to define and regulate the use of space since the world powers ventured into the space. These efforts were intensified in 1966 at the forum of the prestigious United Nations (UN). Major Powers agreed to extend cooperation to use and regulate the activities in the space. These efforts resulted into signing of the Outer Space treaty on January 27, 1967 and the accord entered into force on October 10, 1967.

Article-I of Outer Space treaty stresses upon the space usage for overall benefit and utilization of all the states. Article-III of the treaty says that all the space related activities would be conducted in accordance with international law. Placement of WMDs including the chemical, nuclear, and biological weapons is prohibited in Article-IV of the treaty. According to the Articles-VI and VII, the state launching an object in the space would be held responsible for any damages caused by the mission on the earth or in the space. Outer Space Treaty was the first initiative which laid the basis of global cooperation for space-based endeavors. It is important to highlight that the outer space treaty had only banned the placement of WMDs in the space as this type of arsenals were of great concern during the cold war period. The liabilities of damages caused in the space were not clearly spelled out in the outer space treaty

hence these were included in the Convention on International Liability for Damage Caused by Space Objects.⁹³

Beijing and Moscow in 2008, submitted a draft treaty to UN Conference on Disarmament to prevent the stationing of weapons in the space and any offensive action against the objects placed in the outer Space. This draft treaty was an attempt to define the proliferation of arms in the space and was an endeavor to provide a comprehensive definition of prohibited armaments. According to this proposal, a weapon in the outer space was defined as any instrument delivered to the space, following the physical principles, having ability to disrupt, damage or fully destroy the routine working of objects in the space or atmosphere, or to eliminate a part of or entire population of biosphere having a special importance for human existence. In the same year, Washington rejected this proposal, but Beijing and Moscow remained consistent over the proposed treaty.⁹⁴

Besides this, the PAROS (Prevention of Arms Race in the Outer Space) is another UN resolution which seeks ban on space weaponization. PAROS was proposed in 1980s by the adhoc committee of CD (Conference on Disarmament). This proposal is reintroduced on annual basis, but it is opposed only by the U.S. European Union in 2008 also suggested a code of conduct for the outer space which was a set of rules to be adopted on the voluntary basis. These rules were related to the operation of satellites and crafts, and the space debris. This proposal was not accepted mainly by the significant space nations like the U.S., Russia, China and India. All these proposals have been rejected in the pretext of numerous reasons by the states having active space programs but the real reasons are difficult to ascertain. However, it is noted that the states do not want to unnecessarily limit themselves regarding new technologies.

Now with the new technological advancements and weapon modernization, a new arms race in the outer space is likely to unfold. This time the arms race would not be

⁹³ Paweł Bernat, "The Inevitability of Militarization of Outer Space," *ResearchGate*, accessed December 23, 2019, https://www.researchgate.net/publication/338484362_The_Inevitability_of_Militarization_of_Outer_Space

⁹⁴ Neuneck, "The Deep Crisis of Nuclear Arms Control," 454.

bipolar as it was during the cold war era but now many new actors the U.S., China, Russia, India, UK and France that have joined this club. In 2018, the U.S. President also announced that Washington has established its space force. In July 2019, French President approved establishing the space command to bolster the defense of his country. India also decided to create military space agency in 2019. Whereas, Russia and China have already established their space forces in 2015 named Russian Space Forces, and Strategic Support Force, respectively.

On March 27, 2019, Prime Minister of India Narendra Modi announced the successful anti-satellite trial of a Prithvi Mark-II delivery vehicle. The kinetic kill vehicle completed an intercept of an Indian Microsat-R satellite at an altitude of 282 kilometers. Indian space agency in September 2019 launched Chandrayaan-II space mission but at the final stage of landing the contact was lost between ground control station and the landing spacecraft.

The first committee of the UNGA on November 5, 2019, backed to adopt three resolutions which were purposed at preventing militarization of the space. The proposed resolutions were to enhance transparency and CMBs in the outer space, to prevent arms race in the outer space, and finally no first placement of Weapons in Space. Russia's space agency in April 2020, conducted a successful test of anti-satellite missile system meant to intercept the satellites revolving in low orbit of the earth. In response to this, representatives of the U.S. Space Command made a statement that Russia's space developments represent an ever-increasing threat to U.S. interests. While analysts were unable to conclude whether Russia attempted to intercept an object or merely test a delivery vehicle, this is thought to be the 10th attempt to test this platform.⁹⁵

However, with an ever-growing pace of technological development the people's reliance on space-based navigation, orbital communication, and security systems has increased manifold. Various navigation satellite systems have been launched at regional and global level. Examples of these systems are GPS of the U.S., BeiDou navigation system of China, Galileo of Europe, and GLONASS of Russia. However,

⁹⁵ Bernat, "The Inevitability of Militarization of Outer Space."

two other states Japan and India are also developing navigation systems namely QZSS and IRNSS respectively. These navigation systems are being used for national security and civil safety (communication, logistics and transportation). Technological sophistication has brought natural consequences along. An ever-increasing number of satellites are being sent to space every year for navigation, security, reconnaissance and communication purposes. Besides this, the threat of anti-satellite missile systems is growing rapidly. Currently, China, India, Russia and the U.S. are in possession of anti-satellite (ASAT) weapons while many other states are in the process of acquiring this technology.⁹⁶

It is pertinent to mention that new technologies have resulted into creation of defensive and offensive systems for the satellite and other objects in the space. It has generated the construction of counter measures like the development of weapons capable of neutralizing the newly developed systems by the rival powers. Hence, space has emerged as a new arena of military confrontation and a likely theatre for military operations. Although this process is still in its early stages, but there should be no doubts that it has already started.

In this scenario of growing competition among the great powers, the outer space will prove to be an arena of increased conflict and military confrontation. The demise of INF treaty in the given environment would add fuel to fire and set a trend of disregarding the international obligations and treaties resulting into suspicion and distrust. An ever-growing competition and simmering distrust would lead to an outer space arms race while violating the Outer Space treaty's terms without any consequences. The states would go impulsively to strengthen their military muscle while hiding the WMDs on various celestial bodies or in the orbit of terrestrial objects to deter the adversaries through military superiority. It would make it possible to launch a nuclear strike against the selected enemy targets without or very short early warning. The deployment of offensive weapons against satellites would further

⁹⁶ Caplan, "Nuclear Stability in a Post-Arms Control World."

complicate this situation which may result into misunderstanding / misjudgment, further leading to a big catastrophe.⁹⁷

4.2.5 Arms Race in LAWS and Artificial Intelligence

The development and production of Lethal Autonomous Weapons Systems (LAWS) is the result of technological advancement and innovation in military weaponry. The LAWS are those weapons which come with the ability to select and attack targets automatically without human interference. These weapons are also called killer robots or the robotic weapons. LAWS have an ability to sniff out the intentions of enemy and thus can take critical decisions of life and death. This feature makes the LAWS the weapons of future warfare and there could be a serious arms race between the great powers to develop and acquire this new weaponry. Hence the threat of their development and deployment cannot be overlooked. The autonomous weapons can be broadly categorized into semi-autonomous weapon systems and fully autonomous weapon systems.

The UCAVs (Unmanned Combat Aerial Vehicles) are often considered as the autonomous weapons but in fact these are the semi-autonomous weapons because of human involvement to operate and control their functioning. In case of the autonomous weapons, they are considered as out of the loop systems due to no human involvement in their operation. The LAWS are programmed with decision making capacity so they can complete the assigned task independently and the operator goes out of loop after deploying the weapon system. The semi-autonomous weapons are possessed by many states as part of their arsenals. However, the UCAVs are not categorized as lethal autonomous weapon systems due to their remote control by a human.

A rapid development of dual use technologies the prospects of deployment of LAWS have increased manifold. Positive usage of Artificial Intelligence (AI) is prominent in the fields of medicine, education and law enforcement; however, it is accompanied by its legal, ethical and technical concerns in the civilian and military domains. There is no formal definition of autonomous weapons however, ICRC (International

⁹⁷ Caplan, "Nuclear Stability in a Post-Arms Control World."

Committee of Red Cross) has interpreted the autonomous weapons as the ones having autonomy in their critical decision-making functions like the selection of a target (searching, detection, identification, tracking) and striking down enemy targets without human intervention.⁹⁸

Instability and conflicts can be reduced through deterrence; hence the acquisition of new weaponry has been justified by the states to promote peace and stability. However, the technological advancement has increased the lethality of weapons which result into irreparable losses. Global community has remained unsuccessful to stop the spread of such lethal weaponry like the LAWS, which states use to pursue their national interest and at the cost of reduced global security. Military experts are of the view that new weapon systems which use artificial intelligence in their operation, including the LAWS will adversely affect the global balance of power thereby leading to an arms race in the field of LAWS. With the induction of LAWS in armed forces the states would have the alternative deployment option in the hazardous regions. Besides this, with the deployment of LAWS, the damages in terms of human life and material would also diminish as there would be a machine with decision making capacity, fighting in place of a soldier.

In recent times there is a growing desire among the great powers to shift their inventory to semi and fully autonomous weapons as the chances of miscalculation and human error could be minimized. There are likely chances that in future there would be a growing competition and arms race to develop or acquire enormous autonomous weapons. There are concerns about of ethical use of the LAWS and they would have the capacity to escalate a conflict or complicate the situation. In case of a damage cause by the LAWS, there would be no one who could be held accountable for that loss. In other words, as machine can't realize the value of human life and can't be trusted completely. The LAWS provide an active protection to the designated areas and potential enemy targets. These systems include Israel's Trophy and Iron Dome,

⁹⁸ Anashwara Ashok, "Emerging Technologies: Lethal Autonomous Weapons Systems," Center for Land Warfare Studies, Accessed February 10, 2020. <https://www.claws.in/emerging-technologies-lethal-autonomous-weapons-systems/>

the U.S. made CIWS (Phalanx Close-in Weapon System), Russian Arena, and the German AMAP Active Defense System.

It is also noted that the number of conflicts increase if there are few lives at stake. The U.S. drone strikes in Afghanistan and tribal areas of Pakistan are the cases in point. Therefore, the development and deployment of LAWS should permanently be banned as machines can't have empathy which human beings possess. But in contrast, the major powers are engaged in a competition to develop and deploy these lethal weapons meanwhile there is an increased tendency among the great powers to disregard the arms control commitments. These autonomous weapons, due to the reduced number of military casualties have a potential to escalate the warfare and foster an arms race.⁹⁹ Another concern attached with the LAWS is that they can be acquired by non-state actors including terrorist entities. Unlike the nuclear weapons, the manufacturing of LAWS is not difficult as it requires no specific hardware or materials for their production. So, on the basis of easy access the LAWS can become common weaponry in the coming future.

Hence, the introduction of Lethal Autonomous Weapons Systems has revolutionized the warfare and rules of war in the 21st century. The modernization and sophistication of LAWS has led to an ever-increasing competition between the Great powers. This arms race will be further augmented by the demise of INF treaty and an enhanced trend of disregarding the international treaties in the arms control arena. The ability of LAWS to inflict massive casualties in a short span of time and reduced damage to armed forces personnel will increase the chances and intensity of a conflict. The decision-making capacity of LAWS, due to the use of artificial intelligence, without taking human direction in loop, would lead to miscalculation, misunderstanding and misjudgment of adversaries' intentions resulting into incurable losses.

4.2.6 Technological Sophistication

Currently, the world is entering into a new and more complex global nuclear order and there are political and normative drives of this shift. Arguably, the most

⁹⁹ Gulshan Bibi, "Implications of Lethal Autonomous Weapon Systems," *Islamabad Policy Research Institute*, Accessed March 13, 2020. <https://www.ipripak.org/wp-content/uploads/2018/01/art2gbj22.pdf>

important factor is the development, deployment and spread of a wider range of potentially destabilizing weapons and newly developed technologies. Many of these technologies are reaching fruition and at the same time, many are dual use and interlinked with each other. The development of these technologies is creating deterrence challenges, escalation challenges, proliferation challenges, stability challenges, crisis management challenges and of course the arms control challenges.¹⁰⁰

Numerous, challenges have emerged in the backdrop of new technologies which have been deliberated in the preceding paras. The challenge number one is the threat to secure nuclear second-strike capabilities. This is based on the notion that advancements in sensing, tracking, processing and precision strike to target nuclear armed submarines or mobile missiles. As the undersea acoustics and other sensors are getting better which could involve the use of uninhabited underwater vehicles of different guises and both of these could exacerbate the problems of geographical choke points. Secondly, the use of intelligent surveillance reconnaissance and imaging satellites, uninhabited aerial vehicles, hacked communications and possibly non-nuclear precision strike potentially make it easier to target and destroy mobile nuclear missiles and submarines. It is also important to note the possible challenge to secure second-strike capability. The systems used for sensing, tracking and engaging might be vulnerable to enemy attack. So, they need to have good endurance particularly anything underwater has to be in the right place at the right time with the right capability to intercept or destroy the submarine or missiles.

Next challenge is of the development of hypersonic missiles that might impact arms control mechanism. There are two types of hypersonic missiles, namely the hypersonic glide vehicles (HGVs) and hypersonic cruise missiles. Both of the systems are quite different although they travel at similar speeds. The HGVs are probably easier to construct and deploy than hypersonic cruise missiles due to the technologies involved in HGVs are much more similar to ballistic missiles whereas hypersonic cruise missiles rely on different means of propulsion. But both potentially

¹⁰⁰ William Caplan, "Nuclear Stability in a Post-Arms Control World," *Center for Strategic and International Studies*, accessed May 19, 2020, <https://www.csis.org/npfp/nuclear-stability-post-arms-control-world>

offer greater speed, maneuverability, surprise and the ability to defeat mid-course defenses. The hypersonic missiles also have a mixture of strategic, tactical nuclear and non-nuclear applications. However, what matters is that they do have the potential to be more destabilizing and this has been noted in the literature that target destination and especially warhead ambiguity all arise from the dual use nature of hypersonic missiles.

Challenge number three is computer network operations or what is often labeled as cyber and the rise of full spectrum missile defense. So, the idea of full spectrum missile defense is essentially the incorporation of new technologies into the missile defense mission. There are two parts of this challenge; the first is the right of launch missile system which is the traditional missile defense designed to shoot down or destroy missiles after they have been launched. Right of launch missile technology is getting better still not perfect and second perhaps more worrying is the emergence of this idea of left of launch missile defense and that is systems are designed to prevent missiles from being fired using computer network operations or other non-kinetic methods.

The fourth challenge is about the non-kinetic left of launch systems which may have lower barriers to injury and easier to build cyber computer network operation capabilities than in ballistic missile defense systems especially for national defense. This type of system would have a capability to sneak into the nuclear command and control system of the hostile country to prevent the launching of a missile. At the moment it is only the U.S. that is developing such systems. But there is a considerable risk of setting a precedent that others would follow and that means there is a need to act now in the arms control space to prevent the development of something more destabilizing.

The fifth and final challenge is of artificial intelligence and automation. It is important to note that artificial intelligence and automation have also been used in early warning systems and in certain conventional weapons including in cruise missiles. But there are many potential applications of artificial intelligence in autonomy some may be more marginal some more worrying than others. First, there are clear applications in supporting decision making, data collection, analysis, targeting war plans which are

potentially good. The systems with artificial intelligence can provide an increased accuracy and enhanced guidance of weapons so with smart nuclear weapons or indeed non-nuclear weapons they can accurately engage the enemy targets. But the use of artificial intelligence in the fully autonomous weapons is dangerous too where these weapons can lead to an escalation of crisis leading to a big catastrophe.

CHAPTER- 5

IMPACT OF INF TREATY'S COLLAPSE ON NPT AND NEW START

Historically the policy makers have embraced arms control subject and negotiations to reduce the risk of war, moderate security dilemma, build mutual trust and cooperation to achieve shared peace and stability. Amid evolving conflicting trends and acute military competition, the U.S. and Soviet Union had some interests in common; for example, during the cold war they found out that war was a costly business and winning war in a sense of defeating the other armies became unappealing theme at that time. The strategic thinkers then focused their efforts to extend cooperation for the prevention or settlements of the conflicts. In this backdrop, the then two superpowers moved forward of an era of confrontation to détente. Thus, the arms control mechanism served as a toolkit to regulate the strategic competition between Moscow and Washington.

Soviet Union and the U.S. engaged in a number of arms control agreements which were concluded to limit various weapons at specific locations, and in terms of type, amount and readiness of military forces thereby reducing the risk of war. Hence, the arms control negotiation yielded into positive outcomes and enhanced the avenues of cooperation. These arrangements also resulted into trust building and improved strategic stability between the then two superpowers. Later, the arms control regime proved to be a foundation stone of European security architecture. It also set a normative trend at the global level to control vertical and horizontal proliferation.

In the military arena cooperation and conflict are so closely interlinked that it is hard to assess one without paying attention to the other. Correlating to this theme leads to another argument that arms control and security policy are not opposed to each other but are connected to each other. Thomas C. Schelling, in *Strategy and Arms Control*, has noted that arms control if properly conceived is not necessarily hostile to or incompatible with or an alternative to a military policy of a state. Contrary to the above notion currently the global security order is undergoing a transition where great power competition has resurfaced and intensified the global conflicts where

asymmetries are at rise. States reliance on deterrence, force modernization and new technologies has increased that's why their focus on cooperation and arms control mechanism has decreased.

Arguably, the strategic competition between the U.S. and China has encouraged Washington to exit from contemporary arms control agreements, mainly the INF treaty. There is a prevalent thinking in the strategic circle of the U.S. that INF treaty was an obstacle in the way of Washington to develop and deploy more intermediate range ballistic and cruise missiles in Asia in order to deter Beijing's military interests in the region. So, in the wake of the INF treaty's demise, broader arms control culture will be impacted severely. The fraying infrastructure of the existing arms control mechanism may lead to a security dilemma resulting into a spiral of action-reaction arms buildup across the globe. There is a greater risk of a renewed arms race in terms of intermediate range ballistic and cruise missiles between the U.S., Russia and China in Europe and Asia-pacific region respectively. Nonetheless, the demise of INF treaty is likely to have a destabilizing impact on the broader non-proliferation regime. It may result into increased proliferation risks where the virtual nuclear states would pursue their nuclear programs to develop nuclear weapons. It may also reduce the role of the U.S. to act as a leader of world community to regulate the global nuclear order and enhanced proliferation of nuclear weapons.

In this backdrop the newly developed technologies such as the artificial intelligence, cyber and hypersonic techniques, robotic machines and automation systems have not only challenged the notion of nuclear deterrence but also complicated the warfare domain. Subsequently, the demise of the INF treaty and deterioration of broader arms control culture will lead to further complications in regulating an environment where new technologies are playing a distinct role. On the other hand, the NPT has also remained paralyzed over a time as it is not consistent with the current realities and it does not cover the new technologies as well. So, the arms control culture can revive through bilateral arrangements between the U.S. and Russia.

5.1 Implications of INF Treaty's Collapse for the NPT

After the Second World War, when the U.S. dropped nuclear bombs in Japanese cities namely Hiroshima and Nagasaki, the nuclear power became synonymous with national pride and state identity. Major Powers rushed to acquire the nuclear technology and produced astonishing level of nuclear stockpile in a short span of time. But simultaneously, needs were felt to control or eliminate these weapons and major powers concluded various arms control agreements to manage their bloated strategic arsenals. One similar arms control endeavor was the conclusion of the NPT (Nuclear Non-Proliferation Treaty). The NPT was signed on July 1, 1968 and it came into force on March 5, 1970. This treaty was purposed at limiting the global spread of nuclear weapons and to stop nuclear arms race. The NPT was based on three key elements: 1) Nuclear non-proliferation, 2) Nuclear disarmament, 3) and finally the peaceful usage of nuclear energy. The NPT was a sort of bargain between the then nuclear states (China, France, Soviet Union, the U.S., United Kingdom) and non-nuclear states. The non-nuclear states agreed not to develop nuclear arms and their technical know-how while the states already possessing the nuclear weapons would pursue a gradual disarmament, and finally the nuclear states would assist the non-nuclear states to acquire nuclear energy for peace purposes under the safeguards and safety measures introduced by IAEA (International Atomic Energy Agency).¹⁰¹

The NPT was aimed to halt the global spread of nuclear weaponry and its technology. It was also meant to foster cooperation between the nuclear states and non-nuclear states for the peaceful usage of nuclear energy. The nuclear states promised to gradually reduce and ultimately eliminate their nuclear weapons to pursue overall nuclear disarmament. This treaty could not achieve desired results in the form of nuclear nonproliferation and disarmament because there are more nuclear weapon states now as compared to five nuclear powers back in 1968. Neither any serious efforts have been made regarding nuclear disarmament, nor any help has been extended to non-nuclear states for provision of nuclear energy for peaceful usage. But the treaty led to create an environment of cooperation and mutual trust which resulted

¹⁰¹ "Treaty on the Non-Proliferation of Nuclear Weapons," The United Nations Office for Disarmament Affairs, accessed August 16, 2020, <https://www.un.org/disarmament/wmd/nuclear/npt/>

into strategic arms limitation talks and conclusion of various agreements to reduce the nuclear stockpiles.

Article-VI of the NPT says that the five declared nuclear weapons states should engage in nuclear disarmament, but this aspect cannot be enforced as there is no deadline to accomplish the goal of disarmament. The nuclear-armed states are required to have negotiations in good faith to cease the global nuclear arms race at an early stage, further leading to nuclear disarmament. Paradoxically, the nuclear weapon states always express their resolve to implement the Article-VI of the NPT but they do not give any time frame for nuclear disarmament. Consequently, the NPT has not been able to accomplish its primary objective, which is the nuclear disarmament.

Today, the promise of nuclear disarmament remains greatly unfulfilled. The disarmament commitments under the NPT have not been realistically achieved. There is a legitimate question that why the non-nuclear weapon states should abide by the NPT provisions whereas the nuclear weapon states are totally ignorant of their responsibilities under the agreement. There is a growing frustration amongst the non-nuclear weapon states over the slow pace of nuclear disarmament. Besides this split between the nuclear states and non-nuclear states, there are various other proliferation arenas which cause serious challenges to nuclear security and safety. These challenges are mainly due to the extensive spread of nuclear energy for peaceful usage, the advancements in artificial intelligence, potential risks in nuclear command and control apparatus and nuclear proliferation through other irregular parties.¹⁰²

The bilateral relationship between Moscow and Washington is considered as an important barometer to check nuclear non-proliferation and disarmament perspectives. This is said on the basis of massive nuclear stockpile on the disposal of the U.S. and Russia, a sufficient amount of which is in a state of high alert. Currently, the arms control regime is directly dependent on the bilateral relationship between Moscow and Washington. Any positive initiative by these powers can promote multilateralism and work as confidence building measures. Besides this these states

¹⁰² Daryl Kimball, "Fulfilling the Promise of the NPT," *Arms Control Association*, accessed July 22, 2020, https://www.armscontrol.org/about/Daryl_Kimball

can jointly work out a strategy to strengthen the existing arms control regimes.¹⁰³ Whereas, negative steps and blame game can add tensions between the U.S. and Russia troubling an already fraught relationship.

It is underscored that an increase in tensions between the U.S. and Russia directly impact the military activities in Eastern Europe and Baltic region besides translating into heightened military incidents. The real responsibility to save the arms control regime rests with the great powers but the other European states could have also played their role to safeguard the INF treaty. Majority of the states in Europe are the U.S. umbrella states, in whose defense Washington's nuclear guarantee plays important role which is against the spirit of NPT and its ultimate goal of nuclear disarmament. Besides this, there is a sufficient number of nuclear warheads deployed in Europe which enhances the threat of a nuclear detonation. In 2014, a study was conducted to calculate the impact of a two-hundred kilotons nuclear explosion at military base Aviano. Based on this historical weather patterns and geographical landscape, the study highlighted that such nuclear explosion could lead to radioactive fallout over the large part of Europe within few days.

The world has yet to know the negative impact of the demise of INF Treaty for nonproliferation regime and arms control. Here an analogy can be drawn between the scraping of INF treaty and ABM treaty, which proved detrimental for strategic stability and respect for international commitments. Besides undermining strategic equation at global level, the demise of INF Treaty may augment trust deficit among the nuclear armed states. It may severely impact the nonproliferation regime where potential nuclear states may undertake expansive programs to turn into actual nuclear armed states. It may result into a negative domino effect thereby complicating the arms control regime.¹⁰⁴

Now after the INF treaty's demise, it is mainly dependent on the future course of action of the U.S. regarding the arms control regime. If the U.S. refuses extension of New START, no bilateral arms control treaty will exist between Washington and

¹⁰³ Neuneck, "The Deep Crisis of Nuclear Arms Control," 455.

¹⁰⁴ Kimball, "Fulfilling the Promise of the NPT."

Moscow, the largest nuclear stockpile holders. On the other hand, if Washington deploys newly developed missile systems in Europe and Asia Pacific, the start of a high-profile arms race and strategic competition would become inevitable. Moscow in the face of possible deployments of Washington, would find it hard to remain silent so it may also take counter measures to safeguard the interests of Moscow and its allies. Nonetheless, if this pattern of deployment materializes, it would give the U.S. an additional capability to strike targets deep inside Russian territory. For Russia, the nature of this threat would be strategic, and it will try to avoid taking the situation to a next level where new missile deployments are unavoidable. However, Russia declares itself open to have strategic dialogue with the U.S., if it reconsiders its destructive policies and becomes ready for a substantive and constructive dialogue to settle grievances over the demise of the INF Treaty.

No doubt the INF treaty had partially lost its relevance in the contemporary world as there are many more nuclear powers as they were in the 1980s when the treaty was signed, but its legacy can be preserved. Russia has declared itself open to work with other major powers over any mutual beneficial proposals to strengthen the arms control mechanism but there is slackness on the U.S. side to rescue the arms control regime. This situation would lead to credibility crisis for the U.S. as it has adopted a negative trend of disregarding the international obligations and commitments. The credibility of Washington would be harmed further if it decides not to extend the New START for another term according to the treaty provisions. It would also obstruct the way of any system wide discussion to solve the prevalent strategic issues.¹⁰⁵

5.2 Implications of INF Treaty's Demise for the New START

The New START is considered as the most significant arms control treaty between the U.S. and Russia because it consolidates the gains of all the strategic arms limitation talks held between them from 1970 to 2010. This treaty resulted into limiting the number of strategic delivery vehicles and nuclear warheads of both the U.S. and Russia. Opinion regarding New START also varies within the U.S. administration. President Trump was of the view that the treaty is preventing America

¹⁰⁵ Kimball, "Fulfilling the Promise of the NPT."

from both modernizing its strategic offensive nuclear weapons and from creating a new strategic nuclear triad. In support of this position, Republican senator Tom Cotton and Republican congresswoman Liz Cheney have introduced a bill that restricts the treaty from being extended for a further five years after its expiration in 2021.

Washington was clearly preparing the ground for the collapse of the New START Treaty. In this context, the statement of Joseph Dunford, Chairman Joint Chiefs of Staff of the U.S., has endorsed viewpoint of arms control experts that the U.S. would not desire New START's extension for another five years. Dunford said that Russia's violations to INF treaty have endangered possible extension of New START. On the other hand, Heather Nauert, Spokesperson for the U.S. State Department gave a positive assessment of New START, noting that it makes relations with Russia more stable and improves the security of America and its allies.

Washington was also divided when it comes to the article stressing both sides to limit nuclear warheads' number to 1550 and delivery vehicles (deployed and non-deployed) to a number of 800. Meanwhile, it should be noted that, in order to comply with the quantities determined by the New START, America spent two years re-equipping part of its strategic nuclear weapons and unilaterally excluded these from the treaty. This means that the U.S. can quickly increase the number of its warheads thereby augmenting its strategic nuclear forces' capabilities.

It is important to highlight that no strategy has been envisaged by the U.S. to tackle the situation emerging in result of the INF treaty's abrogation. The U.S. in the absence of INF treaty would not be able to have any check on the development and production of the intermediate range ballistic and cruise missiles by Russia. Washington's decision of abrogating the INF treaty would not compel Moscow to return to compliance of the treaty.

However, this situation may lead to unleashing of a dangerous arms race between the U.S. and Russia. It may also implicate the other arms control agreements. After the INF treaty's termination, Moscow has no obstruction on its way to continue with the development and deployment of the intermediate range nuclear missiles. The U.S. did not put any effort to return the Russians to abide by the INF treaty's provisions, but it

augmented the deterioration process of arms control regime. The course of developing and fielding the INF prohibited ballistic and cruise missiles may result into a high-profile arms race between the great powers further leading to an instability in Asia and Europe. Washington while maintaining its nuclear assets in Europe continues the violation of NPT's Article I. Moreover, the U.S. has allocated extensive funds for the development of precision guided free fall nuclear bombs namely, B-61-12.¹⁰⁶ Besides modernizing its nuclear arsenals and delivery systems the U.S. has also refurbished the space command which may materialize the launching of a nuclear strike from the remote space station without any early warning. Such a situation may lead to two parallel arms races: the outer space arms race and missile defense arms race. This unfortunate scenario would be the result of Washington's irresponsible steps.

Nonetheless, the U.S. was playing a shady game regarding the New START treaty that could have dire consequences for the arms control regime. Russia on the other hand, was ruling out the possibility of discussing the conditions to extend New START. There are apprehensions among the international community over this potential arms race having regional and global repercussions. This arms race may be at multiple levels of technological and numerical superiority. With these consequences the INF treaty can accelerate the process of arms control erosion. Besides eroding the arms control regime, it would also have negative impact over the nonproliferation architecture.

Furthermore, the U.S. has refused to ratify some important agreements including the Comprehensive Test Ban Treaty. Likewise, the Nuclear Posture Review of 2018 has allowed resuming the nuclear tests at Nevada (a nuclear testing site). Earlier, Washington also stopped ratification of Arms Trade Treaty which was meant to control conventional arms' trade at international level. The U.S. under President Trump continues to show a disregard towards arms control regime while dismantling important agreements like Open Skies Treaty, Paris agreement, Joint Comprehensive Plan of Actions.

¹⁰⁶ Caplan, "Nuclear Stability in a Post-Arms Control World."

Similarly, Washington seems in no hurry to dispose off chemical weapons as per global obligations under the chemical weapons convention. Trump administration also rejected holding discussions on two important treaties, namely The Treaty on European security and an agreement to prevent weapons' deployment in outer space. President Trump's approved nuclear strategy has lowered down threshold to use nuclear weapons while adding more justifications for their use. Earlier there were six recorded instances to use nuclear weapons but now they have been enhanced to fourteen. Current nuclear strategy of the U.S. also allows the use low yield nuclear weapons for the de-escalation or escalation purpose. President Trump irrespective of reservations by senior politicians retained the right of unilateral use of nuclear weapons.

In February 2020, Izumi Nakamitsu, the high representative for disarmament affairs during Security Council's session on nuclear weapons issues warned that relations between nuclear powers are fractured. She highlighted that an unrestrained nuclear competition is looming over the world and few regional conflicts with nuclear dimension are aggravating.¹⁰⁷ The U.S. took the world away from this crisis while considering the offer of Russia to extend the New START, the only remaining bilateral treaty between Moscow and Washington. The extension of the New START for five years will provide sufficient time to conclude a comprehensive and broader arms control treaty between the nuclear powers to strengthen the arms control regime.

If the New START had been allowed to expire, then the start of a costly arms race was guaranteed and there would have been no limits on the strategic nuclear arsenals of the U.S. and Russia for the first time after the 1972 when the SALT-I treaty was concluded. In the absence of the New START, the U.S. or Russia had a chance to deploy additional warheads and delivery vehicles thereby initiating a dangerous arms race. Without the New START there had been no verification / monitoring mechanism to have a check on the nuclear stockpile of the two major possessors of nuclear weapons namely the U.S. and Russia. The relationship between Moscow and Washington which is already tense, would have deteriorated further in the presence of

¹⁰⁷ Caplan, "Nuclear Stability in a Post-Arms Control World."

growing nuclear competition and arms race. This destabilizing and costly nuclear arms race has no winner rather the global peace and stability comes at stake.

The INF treaty's demise would have long-lasting impact on the arms control regime with severe implications for the global security. It would also implicate nuclear security of European states where the U.S. and Russia are very much active to enhance their influence. This setback to arms control regime is meant to raise security concerns among the European states which would result into security dilemma and arms race thereby increasing the probability of armed conflicts. The collapse of INF treaty would also augment trust deficit between Russia and the U.S. which would peril other arms control accords especially the NPT and New START.

The collapse of INF treaty has put the arms control treaties, especially the NPT and New START, at stake due to increased mistrust and uncertainty of each other's intentions. Now after the extension of the New START, the presidents of the U.S. and Russia should develop consensus to hold constructive arms control dialogue to enhance strategic stability. The new administration in the U.S. understands the sensitivity of arms control and President Joe Biden is expected to take necessary steps to bolster strategic stability and curb nuclear arms race.

To conclude this chapter, it is underscored that both Moscow and Washington can open ways for follow on talks to include Beijing and other nuclear states in arms control mechanism after the extension of New START. The nuclear weapon states should use the New START as a forum to develop unanimity on a comprehensive agreement to reinforce the arms control regime. Extension of New START could also rejuvenate the spirit of the nuclear nonproliferation regime to avoid spread of most dangerous nuclear arms race.¹⁰⁸ The nuclear states can reaffirm Gorbachev-Reagan declaration that a nuclear war cannot be won, hence never be fought. This sort of commitment by the nuclear weapon states can make a difference. Such declaration by all nuclear weapon states would accentuate that they are well familiar of their responsibilities and ready to pursue the goal of nuclear disarmament to prevent nuclear catastrophe and establish an enduring peace.

¹⁰⁸ Kimball, "Fulfilling the Promise of the NPT."

POST-SCRIPT SCENARIO

President Joe Biden, after taking over as 46th president of the U.S. is confronted with a major challenge of rescuing the arms control regime, besides other foreign policy issues. Currently tensions are rising between the nuclear states, risk of nuclear use is growing, billions are being spent for nuclear modernization and weapons sophistication; while in this scenario the key arms control agreements which have kept a check on most destabilizing weapons, are in serious jeopardy. These complications have emerged in the aftermath of President Donald Trump's aggressive foreign policy approach. During his tenure in president office, Trump resorted to haphazard decision-making process without considering the sensitivity of the issues and their implications in the longer run. Besides this the presence of hawkish elements in the Trump administration and role of the U.S. Military Industrial Complex has further deteriorated the situation, especially in the arms control domain.

President Joe Biden has a distinguished background of realizing the sensitivity of nuclear weapons and issues pertaining to the global security. Contrasting with his predecessor, President Biden has a firm commitment to establish effective nuclear arms control mechanism and nonproliferation regime which has been manifested in his maiden address during his oath taking ceremony on January 20, 2021. His commitment to arms control and disarmament dates back to his tenure as vice president in Obama administration and his early days in the U.S. Senate. President Joe Biden during his election campaign and after his win has been continuously advocating for an effective arms control mechanism with Russia and other nuclear states. Nuclear experts are of the view that currently Biden administration is facing five most important challenges related to the nuclear weapons policy which need immediate attention to address the prevalent strategic issues. The five challenges include the revision and advancement of the nuclear arms control negotiations including the extension of the New START, developing a consensus to reduce nuclear weapons at the global level (especially that of the U.S. and Russia), and reinstate the Joint Comprehensive Plan of Action (JCPOA). Besides this the issue of North Korea's nuclear program is also due for settlement. Finally, President Biden has to restore the role of the U.S. as a leader of multilateral nonproliferation and disarmament.

In the post-script scenario, there are two important developments in the arms control domain. Firstly, President Biden has agreed to extend the New START for another five years till 2026, without any preconditions or amendments to the treaty. Secondly, the Treaty on the Prohibition of Nuclear Weapons (TPNW) has entered into force on January 22, 2021. Moreover, Biden administration has also declared to reconsider the U.S. commitment under JCPOA. These are the positive initiatives by the new administration in Washington which would significantly improve the global strategic security and make the world safer from nuclear weapons' threat. These initial steps would also put the administration in a better position to pursue more lasting and far-reaching nuclear risk reduction and elimination initiatives over the next four years.

Extension of New START; a Win for Global Security

The New START is considered as an anchor of strategic stability between Washington and Moscow. Moreover, it is a foundation stone in the arms control infrastructure as it limits the number of strategic forces of both Russia and the U.S. The New START keeps special significance as it consolidates the gains of all the strategic talks held between Moscow and Washington from 1970s to 2010, to reduce the size of their nuclear inventory. Recently, President Joe Biden has offered Russia to extend the New START for another five years till February 5, 2026. Earlier, Russia had also expressed its desire to extend the New START treaty, but the conditions proposed by the Trump administration for treaty's extension were rejected by Moscow. It is noted that Biden understands the value of effective arms control arrangements as earlier he said the pursuit of arms control negotiations is not a symbol of weakness or luxury but a great obligation and national necessity.

The U.S. allies in Europe have applauded the decision of President Biden as it is reflective of his strong commitment to pursue arms control negotiations. Jens Stoltenberg, the Secretary General of NATO had also stressed Washington and Moscow to extend the New START without any amendments and broaden it later to include other nuclear armed states into arms control mechanism. He stated that the great powers should not lead to a scenario where there are no limitations on strategic warheads and nuclear delivery systems. There was a prevalent thinking in the Trump administration that China must be included in the future arms control treaties

irrespective the size of its nuclear forces. Hence, after the extension of New START there would be sufficient time to hold follow-on talks to regularize newly developed missile technologies. Moreover, it would enhance the U.S. leverage to include China and other nuclear states in a broader arms control mechanism.¹⁰⁹

In this backdrop, President Joe Biden should hold a bilateral strategic stability dialogue with Beijing to address the nuclear matters. The follow-on negotiations must also address the issues of nonstrategic nuclear weapons, offensive nuclear weapons and BMD, and dual-capable conventional missiles. The extension of New START should be taken by the U.S. and Russia as a start of their nuclear reduction strategy. Presidents of the U.S. and Russia should quickly move ahead to negotiate a follow-on agreement to reduce their nuclear stockpiles and engage other nuclear states to enhance global strategic stability. It is also suggested that Biden administration should follow a suit to rejoin the Open Skies Treaty (OST) while putting diplomatic pressure on Russia to adhere to the provisions of the OST. Nonetheless, the extension of New START for next five years would help to restore the image of the U.S. as global leader to regulate the nuclear weapons and arms control arrangements, besides reestablishing the credibility of U.S. on arms control issues. Moreover, it will improve strategic stability and global security, curtailing the likelihood of a dangerous nuclear arms race.

TPNW; a Normative Arrangement for Nuclear Disarmament

In July 2017, the TPNW (Treaty on the Prohibition of Nuclear Weapons) was adopted at the UNGA by 122 States in favor and one against the treaty. The treaty was opened for signature by the Secretary General of UNGA on September 20, 2017. After the deposit of 50th instrument of ratification with the Secretary General of UNGA on October 24, 2020 the treaty entered into force on January 22, 2021. The member states under the TPNW pledge that they will not take part in the development, testing, production, stockpiling, usage or threaten to use the nuclear weapons. The treaty also declares that the member states would not allow any nuclear

¹⁰⁹ Daryl G. Kimball, "Agreement to Extend New START a Win for Global Security," Arms Control Association, accessed January 27, 2021, <https://www.armscontrol.org/pressroom/2021-01/agreement-extend-new-start-win-global-security>

power to deploy its nuclear weapons on their territories and they will also not become part of any prohibited activity under the treaty. The Treaty also obliges the member states to extend help to the affectees of the usage or testing of a nuclear weapon. The state parties also undertake to initiate appropriate steps to protect the environment from nuclear contamination. Now, international community has successfully outlawed the possession and use of nuclear weapons under the TPNW prohibiting the WMDs (nuclear, biological, and chemical weapons), cluster munitions and land mines. The nuclear weapon states have rejected the TPNW, but they have failed to stop the treaty becoming a reality. Earlier, there was no legal prohibition on these weapons at international level, thus TPNW is the very first agreement to ban the nuclear weapons.

The TPNW would prove to be milestone in the history of arms control and to promote awareness about the humanitarian consequences of nuclear weapons usage. This treaty has comprehensively delegitimized and stigmatized nuclear weapons. It has endeavored to outlaw the nuclear weapons' role for war planning and discouraged the practice of nuclear deterrence. Although the treaty is based on the principle of nuclear disarmament, but it has not laid down any plan or mechanism to decommission the nuclear weapons. Moreover, the treaty has international obligations for the member states only whereas no nuclear power has signed the treaty.¹¹⁰

Practically, the TPNW would not abolish a single nuclear warhead because it has not been supported by any nuclear-armed state or their allies, which makes the nuclear disarmament an aspiring dream. The U.S. has successfully discouraged its allies to sign the TPNW as it would have challenged Washington's positive assurances to the countries like Japan, South Korea, and NATO members. If in future these states sign the treaty, they would automatically lose the extended nuclear deterrence commitments of the U.S. In conclusion, the TPNW is a utopian accomplishment as no nuclear weapons state would sign this treaty. Moreover, all the nuclear powers are undertaking expensive weapon modernization programs to upgrade their nuclear

¹¹⁰ Zafar N. Jaspal, "The Nuclear Ban Treaty Will Have No Nuclear Disarmament Outcome," Arab News PK, Accessed on January 30, 2021, <https://www.arabnews.pk/node/1799401>

inventory. This unconstrained vertical proliferation of WMDs will continue to trivialize any effort to abolish these lethal weapons from the world.¹¹¹

¹¹¹ Jaspal, “The Nuclear Ban Treaty Will Have No Nuclear Disarmament Outcome.”

CONCLUSION AND RECOMMENDATIONS

Conclusion

Historically the policy makers have embraced arms control subject and negotiations to reduce the risk of war, moderate security dilemma, build mutual trust and cooperation to achieve shared peace and stability. Amid evolving conflicting trends and acute military competition, the U.S. and Soviet Union had some interests in common; for example, during the cold war they found out that war was a costly business and winning war in a sense of defeating the other armies became unappealing theme at that time. The strategic thinkers then focused their efforts to extend cooperation for the prevention or settlements of the conflicts. In this backdrop, the then two superpowers moved forward of an era of confrontation to détente. Thus, the arms control mechanism served as a toolkit to regulate the strategic competition between the U.S. and Soviet Union.

The U.S. and Soviet Union engaged in a number of arms control agreements which were concluded to limit various weapons at specific locations, and in terms of type, amount and readiness of military forces thereby reducing the risk of war. Hence, the arms control negotiation yielded into positive outcomes and enhanced the avenues of cooperation. These arrangements also resulted into trust building and improved strategic stability between the then two superpowers. Later, the arms control regime proved to be a foundation stone of European security architecture. It also set a normative trend at the global level to control vertical and horizontal proliferation.

The INF Treaty was a comprehensive and most successful arms reduction treaty in the history of arms control. This treaty resulted into confirmed elimination of 2692 Soviet and U.S. missiles deployed in Europe and helped to halt a growing nuclear arms race. It also paved a way for future agreements to reduce an overwhelming size of their strategic nuclear weapons. The INF treaty proved to be an important regulator for other destabilizing nuclear weapons. The INF treaty was among the most successful arms control accords resulting into elimination of an entire category of weapons and contributed towards enhanced global security and strategic stability. The introduction of verification mechanism was a breakthrough in the INF treaty as it involved an unprecedented level of intrusiveness.

The INF treaty was the first agreement in the arms control domain where the two superpowers of that time extended cooperation to reduce their nuclear weapons and eliminated a whole category of weapons i.e. ground based ballistic and cruise missiles with a range between 500-5500 kilometers. This agreement helped to end the nuclear arms race at the peak of cold war and resulted into future arms reductions agreements. The INF treaty proved to be instrumental to halt the deployment of numerous other nuclear weapon systems. This treaty was a major breakthrough due to its contribution for the future arms control accords and outlawing the use of INF missiles as they can hit the enemy targets and strategic positions deep inside its territory. The lethality of INF missiles increases due to their short travelling time and minimum exposure to BMD radar system which multiplies the chances of miscalculation during a crisis.

Although the INF accord proved the most successful agreement in the history of arms control but a dispute has been intensified gradually since 2014 over Russia's noncompliance to the terms of the treaty. Initially the U.S. alleged Russia for treaty's violation in 2014 and the situation deteriorated further in 2017 when Russia test fired the 9M729 cruise missile. The 9M729 is a ground launched cruise missile while its range falls within the 500-5500 kilometers which is prohibited according to the INF treaty. President Donald Trump administration formally withdrew from the INF treaty on August 2, 2019 on the pretext of Russia's non-compliance and hinted to conclude a broader multilateral arms control accord with the inclusion of China which is not party to any arms reduction / limitation treaty. Consequently, on August 5, 2019 Russia also withdrew from the INF treaty.

The formal demise of the INF treaty accrued a mixed response from the international stakeholders. The North Atlantic Treaty Organization (NATO) responded that such a situation is not sustainable whereby the U.S. fully abides by the terms of the INF treaty and Russia does not. Few countries like Germany and United Kingdom repented over the U.S. and Russia's attitude and expressed that the treaty could have been saved. The collapse of the INF Treaty raises important new questions about the fate of arms control regime and conclusion of a broader multilateral arms control accord. Currently, there are sufficient nuclear weapons to destroy the world many times and the debate over the future of arms control is mandatory as it affects the fate of humanity in real sense.

The INF treaty's demise would have enduring impact on the arms control regime with severe implications for the global security. It would also implicate nuclear security of European states where the U.S. and Russia are very much active to enhance their influence. This setback to arms control regime is meant to raise security concerns among the European states which would result into security dilemma and an arms race thereby increasing the probability of armed conflicts. The collapse of INF treaty would also augment trust deficit between Russia and the U.S. which would peril other arms control accords.

Recently on December 22, 2020 the U.S. has also withdrawn from Open Skies Treaty (OST), a major accord that permits unarmed aerial surveillance flights over 34-member states to enhance transparency and mutual understanding vis-à-vis military forces and activities. Earlier the U.S. has also opted to withdraw from Paris Agreement, Trans Pacific Partnership and Joint Comprehensive Plan of Action (JCOPA). Currently, New START is the only remaining bilateral arms control agreement between U.S. and Russia which consolidates the gains of all the strategic arms limitation talks held between them from 1970 to 2010.

The U.S. foreign policy under Trump administration has resulted in a dangerous trend of disregarding the arms control accords. The U.S. withdrawal from bilateral and multilateral treaties is destabilizing for the existing global world order and arms control regime. This situation would lead to no respect for international treaties and obligations besides raising questions on the credibility of the U.S. The fate of the INF treaty and OST indicates that bilateral arms control mechanism between U.S. and Russia may deteriorate further, severely impacting the global strategic equation. This means that the collapse of INF treaty would eventually influence other arms control agreements, while disturbing the strategic balance at the global level leading to an instability. The ultimate outcome of this instability would be a security dilemma, which may result into global nuclear arms race and more frequent conflicts.

New START keeps special importance for the stakeholders in Russian and West because it is a cohesive vision in regard to arms control regime. This vision guarantees equal security, strategic stability and imposes matching limitations on strategic arsenals. This treaty does not give leverage to Russia or the U.S. to launch a

first strike because it maintains parity between the nuclear assets of each side. Although the majority of arms control experts believe that New START should be extended to safeguard the arms control regime but still there is no certainty about the fate of this treaty.

Irrespective of INF treaty's demise, its normative character and geographical framework can be adjusted for future arms control agreements. Although a new multilateral treaty can be concluded between the nuclear powers to address the issues of newly developed weapon systems such as hypersonic missiles, unmanned combat aerial vehicles (UCAVs) and lethal autonomous weapon systems (LAWS), and this initiative is possible after the extension of New START.

Findings

1. Arms control arrangements are helpful to avoid expensive arms race and competition which could prove detrimental for the future peace and global stability. These arrangements prove beneficial to counter the spread of various military weapons and technologies. Sometimes arms control treaties are concluded to limit the destruction of a war, if it happens. These arrangements are also seen by the peace proponents as an important tool to avoid or limit a war and its expenditure. Arms control agreements reduce the high cost of developing and maintaining a particular weapon system which may be used to uplift the deprived faction of society. Hence the arms control arrangements limit the quantity of weapons besides outlawing their various categories. Moderating security dilemma is also an objective of arms control arrangements. It enhances security, stability and mutual trust between the partners to curb an arms race. Cost reduction and damage limitation are the ultimate outcome of arms control treaties besides strategic stability and mutual confidence. Arms control mechanism seems a viable and more practical option as it allows the parties to retain the requisite number and type of weaponry for self-defense while limiting or eliminating the most lethal armaments.

2. The INF treaty was the first agreement in the arms control domain where the two superpowers of that time extended cooperation to reduce their nuclear weapons and eliminated a whole category of weapons i.e. ground based ballistic and cruise missiles with a range between 500-5500 kilometers. This agreement helped to end the nuclear arms race at the peak of cold war and resulted into future arms reduction

agreements. The INF treaty proved to be instrumental to halt the deployment of numerous nuclear weapon systems. This treaty was a major breakthrough due to its contribution for the future arms control accords and outlawing the use of INF missiles as they can hit the enemy targets and strategic positions deep inside its territory.

3. Russia cannot be given clean chit in reference to the INF treaty's collapse but on the other hand the U.S. has not shown any interest to save the treaty which means that Washington has no interest to halt its nuclear modernization and at the same time it has no respect to the history of arms control. It is likely that the U.S. withdrawal from the INF treaty will augment the trust deficit further leading to an arms race which may increase tension and deteriorate global strategic balance.

4. Rise and military modernization of China is an important issue in today's global politics due to its deeper impact on the international relations. Although the U.S. has withdrawn from the INF treaty due to Russian non-compliance, but this decision is motivated to counter the Chinese emergence. The U.S. withdrawal from INF treaty highlights its aggressive foreign policy towards China and intensions to keep the status quo intact while maintaining its dominance. This outcome highlights an impulsive decision of President Trump and the biasedness of John Bolton, who has always been an opponent of arms control. Meanwhile, the U.S. withdrawal from the INF treaty is stimulated by the mounting challenges of China to former's supremacy in Asia Pacific. The U.S. is really concerned about growing influence of China and its sophisticated nuclear arsenal besides its military modernization plans.

5. The U.S. justifies its withdrawal from the treaty while saying that Russians have developed and deployed the hypersonic missiles but the U.S. is far behind in this regard and the treaty did not give any leverage to the U.S. over its rivals in strategic terms. Hence the development of ever new weapon systems will most likely lead to arms race in hypersonic missile technology. The development of hypersonic weaponry will ultimately change strategic relationship between the rivals. Consequently, the development of hypersonic weaponry may not ensure deterrence, but it will encourage the states to development their offensive capabilities. Termination of INF treaty would lead to arms race besides implicating other arms control treaties.

6. It is evident that President Donald Trump while following isolationist policies took a unilateral withdrawal from international commitments under Joint

Comprehensive Plan of Action, Trans-Pacific Partnership, INF treaty, Open Skies treaty and Paris agreement. His foreign policy initiatives proved destructive and created distrust among the U.S. allies such as NATO and EU partners. Experts believe that President Trump lacks political skills and diplomatic ethics which resulted into U.S. estrangement at international level. The U.S. could have saved the INF treaty through constructive diplomatic dialogue but President Trump adopted an aggressive posture to deal with the issue. He could have engaged the relevant stakeholders to fix the INF treaty instead of a unilateral withdrawal.

7. Another important factor in scrapping of INF treaty is the role of U.S. Military Industrial Complex which plays an influential part in the domestic politics and decision-making process of the U.S. Defense industries in the U.S. actively participate in the election campaign to support their favorite politician to influence the decision-making process. It is believed that military industrial complex of U.S. played an important role to get the Donald Trump elected as the president of the country. President Trump's decision to scrape the INF treaty has obviously benefited the U.S. Military Industrial Complex. Besides getting massive contracts the military industrial complex has tried to expand the international market by outnumbering the Russian defense industry. The U.S. is in pursuit of weakening Russian economy to slow down latter's resurgence therefore it has adopted various measures to halt Moscow's industrial growth and upgrading of armed forces.

8. Washington through military preponderance and unilateral withdrawal from the INF treaty wants to prove that there is no power which can challenge the U.S. supremacy. It seems to have abrogated the INF treaty as a part of propaganda campaign to accuse Russia of INF treaty's violation to pressurize Moscow. The U.S. has opted this strategy to demonize Russia and China meanwhile getting the support of European partners. This episode of INF treaty's collapse shows that the U.S. has no respect for the arms control regime, and it will scrape any international agreement or arms control treaty which does not suit to its national interest.

9. The U.S. initiative to terminate the INF treaty is well justified through Washington's necessity to fill the technological gap with Russia while developing hypersonic weapons, instead of Moscow's violations to the terms of INF accord. Although Russia, since long had been persuading the U.S. to eliminate the INF restrictions as this treaty constrains them to acquire the latest technologies but the

former U.S. administrations did not pay heed to Russian proposals. Later, the political elite in Russia got a perfect excuse in the form of President Trump to terminate the INF treaty. Whereas after the development of hypersonic missiles by Moscow it had become an imperative for Washington to get rid of INF treaty and prepare advanced technologies similar to Russia thereby reducing the technological gap.

10. European states and NATO members would require formulating a strategy in response to the Moscow's hypersonic missile systems. They have also calculated possible diplomatic and military responses including the deployment of cruise missiles at the NATO's ballistic missile defense sites. The options of NATO's dual task aircrafts and deployment of conventional intermediate range cruise and ballistic missiles can also be utilized. However, any of the above-mentioned response involving the missile deployments and arms competition will deteriorate the relationship between Russia and NATO members. Russians may also get a feeling of being besieged, thereby demanding counter measures leading to escalation of tensions. It is underscored that the collapse of the INF treaty would not spontaneously rollout into a full fledged war or a military standoff between NATO and Russia, but it is likely to enhance misunderstandings among the great powers. Likewise, the fewer number of arms control accords may result into unforeseen crisis or military confrontation.

11. Potential strategic competition between Washington and Beijing, and Delhi's rivalry against Beijing may result into a vicious cycle of power and security competition between Delhi and Islamabad. So, the demise of the INF treaty may create a security dilemma which would result into a series of action-reaction based arms buildup in Asian region. A worst scenario can lead to a situation where India, China and Pakistan rush to maintain parity with the U.S. They may rapidly expand their nuclear warheads and delivery forces, or even move forward to keep certain number of nuclear warheads in a state of high alert similar to that of the U.S. and Russia.

12. In this scenario of growing competition among the great powers, the outer space will prove to be an arena of increased conflict and military confrontation. The demise of INF treaty in the given environment would add fuel to fire and set a trend of disregarding the international obligations and treaties resulting into suspicion and distrust. An ever-growing competition and simmering distrust would lead to an outer

space arms race while violating the Outer Space treaty's terms without any consequences. The states may go impulsively to strengthen their military muscle while hiding the WMDs on various celestial bodies or in the orbit of terrestrial objects to deter the adversaries through military superiority. It would make it possible to launch a nuclear strike against the selected enemy targets without or very short early warning. The deployment of offensive weapons against satellites would further complicate this situation which may result into misunderstanding / misjudgment, further leading to a big catastrophe.

13. The introduction of Lethal Autonomous Weapons Systems (LAWS) has revolutionized the warfare and rules of war in the 21st century. The modernization and sophistication of LAWS has led to an ever-increasing competition between the Great powers. This arms race will be further augmented by the demise of INF treaty and an enhanced trend of disregarding the international treaties in the arms control arena. The ability of LAWS to inflict massive casualties in a short span of time and reduced damage to armed forces personnel will increase the chances and intensity of a conflict. The decision-making capacity of LAWS, because of the artificial intelligence, without taking human direction in loop, would lead to miscalculation, misunderstanding and misjudgment of adversaries' intentions resulting into incurable losses.

14. Now after the demise of INF treaty, it is mainly dependent on future course of action of the U.S. regarding the arms control regime. Currently, New START is the only remaining bilateral arms control treaty between the U.S. and Russia, the largest nuclear stockpile holders in the world. The demise of INF treaty may lead to an arms race in Europe and Asia. If the U.S. decides to deploy newly developed missile systems in Europe and Asia Pacific, the start of a high-profile arms race and strategic competition would become inevitable. Russia in the face of potential deployments by the U.S. would find it hard to remain silent so it will also take counter measures to safeguard the interests of Moscow and its allies.

Recommendations / Possible Solutions to Arms Control Crisis

- A structured dialogue on nuclear arms control has long been due while currently the U.S. and Russia are not engaged in any such talks. So, in order to address the mutual accusations and avoid global and regional arms race it is

imperative that the nuclear armed states must pursue arms control negotiations in good faith to improve strategic stability and global security. This cooperation is only possible if Washington and Moscow decide to preserve the framework of INF treaty and try to formulate a broader arms control agreement with the inclusion of all the nuclear powers.

- The extension of New START would provide a favorable environment for arms control dialogues to include China in the arms control mechanism. There is a large disproportion in the nuclear arsenals of Beijing with respect to that of Moscow and Washington which makes trilateral arms control negotiations difficult. Hence, extension of New START was the only plausible option while this platform should be used by the other states for the development of consensus on further agreements to strengthen the non-proliferation mechanism and arms control regime to promote strategic stability and avert a possible nuclear arms race.
- The issues of new technological advancements and artificial intelligence like the hypersonic missile systems, LAWS, UCAVs and anti-satellite weapons should be addressed after the extension of New START. Beijing, Moscow and Washington should hold separate negotiations on the future issues of above-mentioned weaponry to bolster strategic stability and national security. Furthermore, Russia and NATO should undertake strategic stability dialogues to diminish the threat of dangerous military activities. NATO and Russia should also agree not to deploy the newly developed hypersonic and the INF-class missiles in Europe.
- The nuclear armed states should develop consensus to move ahead of mutual assured destruction (MAD) regime to a mutually assured stability model to promote mutual trust thereby promising that military escalations would not prevail based on preemptions while in case of a crisis there would be sufficient time for negotiation and settlement.
- All the nuclear weapon states should declare the no-first-use policy which would promote strategic stability and global peace besides having a disarmament-initiating effect. The announcement of no-first-use policy would have a positive impact on global security mechanism and will reduce the threat of a nuclear first strike. By doing so the possibility of a nuclear counter strike in response of a

conventional attack would be reduced. In the prevailing environment, such initiative seems impossible, but it is very much possible if there is any political will to do so. However, a declared restraint either by the U.S. or Russia to intentionally limit the number of new launchers and ballistic missile defense system would have a confidence building effect besides reducing the risk of military confrontations in future.

- Finally, all the nuclear weapon states should fulfill their commitment under the provisions of the nuclear nonproliferation treaty and pursue the goal of nuclear disarmament although that is an unaccomplished promise under the NPT. The goal of partial and general disarmament seems unrealistic because no nuclear-armed state would agree to abandon its nuclear program. Hence, the two major nuclear arms holder states, namely the U.S. and Russia should agree to reduce their nuclear warheads and the strategic delivery vehicles. The nuclear weapon states with lower number of warheads should also pledge not to increase the size of their nuclear forces. Moreover, there is also a requirement to enhance transparency regarding nuclear weapons, delivery vehicles, categories and doctrines.

The INF treaty is dead and arms control experts believe that although Russia was in violations to the terms of the treaty but the main concern in the U.S. was Chinese increasing influence and its fast-growing military capabilities. This outcome is reflective of President Trump's impulsive decision to withdraw from the INF treaty and John Bolton's efforts to slash the treaty as he always proved anti- arms control and played a leading role to abolish the ABM treaty. Most importantly, the demise of INF treaty reflects a longstanding concern in the U.S. that the arms control mechanism constrains the Washington's war fighting capacity and the weapons modernization process, which restricts the options for it to effectively counter the rapidly growing missile forces of Beijing.

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