

Essay

Challenges to the Nuclear order

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In January 2020, the Science and Security Board of the Bulletin of Atomic Scientists decided to move the minute hand of the symbolic 'doomsday clock' to 100 seconds to midnight. This action reflected their assessment of the prevailing fragile security situation in the world on account of threats from WMD, proliferation, climate change and disruptive technologies. The Board assessed that the situation is "dire" because the international political infrastructure to manage the threats had eroded. The Board, whose members consist of noble laureates and experts from different disciplines, noted that: "In the nuclear realm, national leaders have ended or undermined several major arms control treaties and negotiations during the last year, creating an environment conducive to a renewed nuclear arms race, to the proliferation of nuclear weapons, and to lowered barriers to nuclear war."¹

In 2019, the geopolitical tensions were on the rise. The situation in the Middle-East deteriorated. Russia-US relations were marked by deep mutual distrust. An acute broad-based rivalry between China and the US broke out. To make matters worse, the coronavirus outbreak threatened to become endemic, and began to have a serious impact on the global economy. Meanwhile, the global nuclear order has come under a great deal of stress due to setbacks to arms control agreements, nuclear Non-proliferation Treaty (NNPT), and disarmament efforts. The risk to nuclear stability has increased manifold due to the rise of new technologies such as artificial intelligence, killer drones and hypersonic glide vehicles.

Arms Control

The demise of the Intermediate-Range Nuclear Forces (INF) treaty was the most important development in the context of arms control. Signed in 1987 by the US and the USSR, it obligated both parties to eliminate their nuclear and conventional ground-launched

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ballistic and cruise missiles within the ranges of 500 to 5,500 kilometres. Accordingly, both sides destroyed or reduced an entire class of 2,692 nuclear-capable short, medium, and intermediate-range missiles by the agreed deadline of June 1, 1991. However, the INF treaty has not survived the geopolitical changes of the last three decades. The US formally withdrew from the INF treaty on 2 August 2019, citing Russia's repeated violations. Russia followed suit shortly thereafter blaming the US for treaty violations. The US Congress has been urging the US administration to come up with an assertive response to Russia's treaty violations. The US Secretary of Defence Mark Esper said that he was in favour of deploying conventional ground-launched, intermediate-range missiles in Asia "sooner rather than later." The deployment of US intermediate-range missiles in Asia will change the global security environment considerably as China would feel threatened.

In the absence of the INF, Russia and the US are now free to test and deploy a variety of missiles in various parts of the world. The US Defence Department got additional money in 2018 for the development of conventional, road-mobile, ground-launched cruise missiles that would have otherwise contravened the INF. The US has a \$ 1 trillion, 30-year plan for the modernization of its nuclear arsenal.

Russia is aware of the possibility that the end of the INF can lead to the deployment of US missiles in Europe, which would threaten Russia. It has promised an asymmetric response to US deployments. Putin has warned that in response to the US deployments in Europe, Russia would deploy hypersonic missiles on ships and submarines outside U.S. territorial waters. One can expect a rise in US-Russia tensions, which would further complicate the global security environment.

The only arms-control agreement still in force is the New Start treaty which was signed by Russia and the US in April 2010. New Start has contributed to the reduction of the nuclear arsenal of both sides to 14,400 from about 30,000. It was hailed as a major contribution to nuclear stability. By and large, both sides had followed its stipulations. The treaty is set to expire in February 2021. If both sides agree, the treaty can be extended for a further period of five years without negotiations. The present indications are that the treaty may not be extended any further as both sides feel that the treaty is dated and needs to include new types of weapons. If New Start expires without being replaced by any other arms control agreement, the two sides will have no obligations to reduce their respective nuclear weapons holdings. They will be free to pursue their nuclear weapons programmes as they wish. This will increase strategic instability in the world.

Nuclear & missiles environment

The trust gap between Russia and the US, the principal holders of nuclear weapons, seems unbridgeable. The US National Security Strategy (NSS) 2017 described China and Russia as the main strategic rivals of the US. The NSS describes the threats to the US as follows:

“A central continuity in history is the contest for power. The present time period is no different. Three main sets of challengers—the revisionist powers of China and Russia, the rogue states of Iran and North Korea, and transnational threat organizations, particularly jihadist terrorist groups—are actively competing against the United States and our allies and partners”²

China’s growing footprint in the Pacific Ocean has caused concern to the US. Therefore, it is not surprising that the US would like to bring the Chinese nuclear arsenal and missiles into future arms control discussions. But China has steadfastly refused to be drawn into such discussions. It insists that Russia and the US, who possess over 90 percent of the global nuclear arsenal, bear the primary responsibility for arms reduction.

We are seeing the signs of the erosion of nuclear taboo on which the concept of nuclear deterrence is based. Reagan and Gorbachev had jointly announced in the 1980s that nuclear war cannot be fought and won. Nuclear weapons were seen primarily as political weapons and not for war-fighting. However, the views are changing. Nuclear weapons are being perceived as weapons that can be used in wars. The US Nuclear Posture Review (NPR) 2018 says, “For any President, the use of nuclear weapons is contemplated only in the most extreme circumstances to protect our vital interests and those of our allies”³. And further, “This review affirms the modernization programs initiated during the previous Administration to replace our nuclear ballistic missile submarines, strategic bombers, nuclear air-launched cruise missiles, ICBMs, and associated nuclear command and control.”⁴ The troubling thing about the NPR is that it envisages the use of nuclear weapons for fighting in certain “extreme” conditions. The NPR 2018 is a landmark document as it hints at the dropping of the nuclear taboo, i.e., the unwritten understanding that nuclear weapons are weapons of deterrence and not for war-fighting.

Since the abolition of the Anti-Ballistic Missile (ABM) Treaty in 2002, the advances in Ballistic Missile defence have undermined strategic stability. The 2019 *Missile Defence Review* (MDR) of the US takes forward the US thinking encapsulated in the NSS 2017 and NPR 2018. The 2019 Review changes the philosophy of 2010 MDR issued by the Obama administration. Earlier, missile defence was conceived to defend the US homeland against

'limited' potential threat from North Korea and Iran. The 2019 MDR expands the scope of missile defence to include Russia and China. It also talks about space based interceptors to defend against cruise and hypersonic missiles. The MDR asked the Defence Department to make plans for such defences.⁵ On the occasion of the release of the Missile Defence Review 2019, President Trump declared that the US will ensure that it "can detect and destroy any missile launched against the US – anywhere, anytime, anyplace".⁶ This greatly expands the scope of missile defence. The US National Missile Defence Review also envisages pre-launch destruction of "threatening missile".

As can be expected, the Russian reaction to the US National Missile Defence Review was quite negative. In an official press release, the Russian foreign office accused Washington of trying to achieve "undivided military supremacy" and "increasing the destabilizing potential of global missile defence". It condemned the US policy of "pre-emptive" strike which would be tantamount to "disarming" strike against the country that the US considers its "enemy". The Russian press note said that "this logic at the foundation of the large scale nuclear arms race that has taken the world to be the brink of nuclear disaster". The Russian press note expresses concern at the "space-based missile building" that the US was contemplating. Implementation of such plans, the note observes, is "bound to trigger an arms race in space, which will have most negative consequences for international security and stability". Russia proposes the resumption of a "full-scale Russian-US dialogue on all issues of arms control and consolidation of international security and stability"⁷

Russia is seeking to reclaim its place in the world as a major power. It cannot subscribe to a world order in which the US has primacy. It seeks parity with the US. The only field in which it can compete with the US is in the nuclear field. The Russians have introduced 'Avangard' hypersonic missiles into its armed forces. These missiles can travel at speeds above 25 machs and can carry multiple nuclear warheads. They can easily penetrate the US ballistic missiles defence system. Russia is also working on three other types of weapons, namely, Intercontinental Ballistic Missile Samrat RS-28, the nuclear-powered cruise missile Burevestnik, and the underwater, nuclear powered autonomous torpedo Poseidon. If New Start goes, Russia will certainly introduce new systems into its nuclear and missiles arsenal.

China, which has the ambition of emerging as a superpower, cannot accept US hegemony either. At the same time, it fears that the US can undermine China's rise. Accordingly, it is rapidly modernizing its nuclear and missiles arsenal. It has developed new intercontinental missiles like the DF 41 which has a range of 14000 km. It has made big strides in space technologies, quantum communication, and artificial intelligence. These have a dual-use. The US feels threatened by China's military, technological advances.

Pakistan has been following nuclear modernisation with good speed. It conducted four missile tests in 2019. These were done to achieve Full Spectrum Deterrence. It has reportedly more nuclear weapons than India. It is steadily improving its short-range missiles NASR/HATF which can carry low yield nuclear weapons. China is helping Pakistan set up a nuclear power plant and plutonium reactors plants. Pakistani leaders, including Imran Khan, repeatedly issue nuclear threats to India on Kashmir. Because of cross border terrorism, the engagement between India and Pakistan has come to a halt although both countries continue to exchange the list of nuclear facilities every year.

It is becoming clear that faced with geopolitical uncertainties and rising tensions, various countries are devoting considerable resources to the up-gradation of their respective nuclear arsenals and introducing new technologies to improve the delivery systems. New technologies can destabilize nuclear deterrence further. Ballistic missile defence, which was never a fool-proof system, has become more vulnerable because of the emergence of new technologies like Artificial Intelligence (AI), hypersonic glide vehicles which travel at the speeds of tens of machs, and cyber weapons.

Non-proliferation

If the future of arms-control is looking bleak, there are setbacks on the non-proliferation front as well. With the withdrawal of the US from the Joint Comprehensive Plan of Action (JCPOA) and the rise of tensions between the US and Iran, the Iranians have declared that they would be resuming uranium enrichment. Although Iran had complied with the requirements of the JCPOA even after the US withdrew from it, the US killing of an Iranian general in a drone strike, followed by the Iranian attack on US bases in Iraq where US soldiers were housed has led to the escalation of US-Iran tensions. The future of JCPOA seems uncertain. President Trump has announced a new Middle East Plan which is seen to be one-sided, favouring Israeli positions. Palestine has rejected Trump's peace plan. The rise in Israel, Palestine tensions will adversely impact the prospects of Middle East Nuclear Free Zone.

The North Korean leader has indicated that if progress is not made, there would be surprises in the future. Despite the various summit level meetings between President Trump and North Korean leader Kim Un Jong, there has been no progress on the denuclearization of the Korean peninsula. North Korea has been upset over US-ROK military exercises. Frustrated by a lack of progress in US DPRK talks, the North Korean leader Kim Jun has begun to show frustration and could spring a surprise.

In this backdrop, the success of the NPT Review Conference to be held in April 2020 cannot be taken for granted. In 2015, the NPT Review Conference could not arrive at an agreed document because of differences over the nuclear weapon-free zone in the Middle East. It remains to be seen whether the NPT Review Conference will produce any tangible results in 2020. Of the three pillars of the NPT, namely, non-proliferation, access to new technologies and disarmament, the last one is the weakest. Nuclear-have countries have shown no interest in disarmament. The disarmament machinery is in a shambles. On the contrary, nuclear-have countries are spending huge resources on the modernization of their nuclear arsenal. Vertical and horizontal proliferation is happening all the time.

The Conference of Disarmament (CD), which is the designated forum for negotiating nuclear disarmament negotiations has been deadlocked for many years. It has not been able to adopt even a work plan let alone start meaningful negotiations on a disarmament treaty. There is hardly any chance of it starting its work. The negotiations on the Fissile Material Cut-off Treaty (FMCT) have not begun. Pakistan has held up the FMCT's work on the question of existing fissile material stockpile. In the meanwhile, it is continuing to build its nuclear stocks.

Due to the lack of progress on the disarmament issue, several countries came together to champion a nuclear weapon ban treaty. In December 2016, the UN General Assembly adopted a resolution to start negotiations on a nuclear ban treaty. In 2017, a treaty text was voted in the UNGA. It was adopted in a vote in which 122 countries voted in favour, one voted against and one abstained. 69 countries, which included all the weapon states' did not vote. Eventually, a treaty on the Prohibition of Nuclear Weapons (TPNW), also known as the Nuclear Weapon Ban Treaty was adopted. It is the only legally binding agreement to prohibit nuclear weapons and work toward their total elimination. The treaty rests on the adverse humanitarian and environmental consequences of the use of nuclear weapons. TPNW has been ratified by 35 countries. Fifty ratifications are needed for the treaty to come into force. Since all the nuclear-armed countries, including India, have kept themselves out of the treaty, it is unlikely that nuclear weapons will be outlawed because of it. However, the treaty will serve as a moral benchmark.

Conclusion

The arms control agreements were designed for a bipolar era when the US and the USSR were the two superpowers locked in strategic rivalry and competition with each other. That era has ended. Since the end of the cold war, North Korea has left the NPT and tested nuclear weapons. India and Pakistan have become nuclear arms countries. Iran also has a nuclear programme. China has become in major military power with advanced

nuclear, missile and space capabilities. It is also asserting itself in the Indo-Pacific region. It has refused to be a part of any arms control agreement. The US regards both Russia and China as rivals.

The world is now a multipolar world. Multi-polarity is characterized by the diffusion of power. How to construct, implement and enforce rules in a multipolar world is a challenge. Multilateralism itself is under challenge. The UN Security Council has become ineffective in dealing with the challenges of international security. New technologies and new weapon system are eroding nuclear deterrence which has been the cornerstone of global strategic stability. There are no multilateral fora where global security issues can be resolved. The challenge today is to craft new arms control arrangements which are suitable for the 21st-century, multipolar reality. This is not proving to be an easy task. It is, therefore, no surprise that the “doomsday” clock has been moved closer to midnight. In view of the above developments, the possibility of an arms race cannot be ruled out. The erosion of the nuclear taboo will further undermine the confidence in nuclear governance. There are no easy ways to repair the nuclear order, which is already eroding.

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