DOI: https://doi.org/10.3126/ncwaj.v55i01.62977

Nuclear Aspects of the Russia-Ukraine War and its Implications for Nepal

Kamal Krishna Shrestha*

Abstract

Nearly two years old Russia-Ukraine war seems to go on for a long period. The United States and European Union are supporting Ukraine's offensive to regain their lost land. The Russian threat to use nuclear bombs at the outset has taken the world by great surprise. The use of a megaton nuclear bomb could lead to unimagined catastrophe killing a billion people, and a nuclear winter could set in leading to a worldwide famine that could kill millions more. The nuclear watchdog of the United Nations - the International Atomic Energy Agency, is keeping track of Europe's largest nuclear power plant in Ukraine. Nuclear-related international treaties are fast becoming ineffective and World War III could be possible. This war is, however, coming to a stalemate. Peace initiatives taken are ineffective so far. This war must end soon and nuclear weapons should remain as deterrence and should not and never be used to save mankind.

Keywords: Russia-Ukraine war, nuclear war, nuclear winter, Nepali mercenaries, peace

Introduction

The annexation of the Crimean Peninsula in 2014 by Russia can be taken as the harbinger of the ambition of this nuclear-powered country to launch a war in Ukraine. This war is fast approaching its second anniversary. On Aug. 24, 1991, the then still Soviet Ukrainian parliament declared Ukraine's independence (BBC, 2022). Millions of Ukrainians and thousands of Russians have fled their war-torn countries. Refugees from Ukraine have flooded the neighboring countries. Many armed forces men have lost their lives and lots of equipment and infrastructures have been destroyed. Drones have become the current tools of war both for surveillance and destruction. In the meantime, some notable changes in the political landscape

^{*}Dr. Shrestha is a Life Member of NCWA and Charter President of Nuclear Society, Nepal. He is also a Former Member Secretary of the then Royal Nepal Academy of Science and Technology.

have taken place. Russia has revoked the ratification of the Comprehensive Nuclear Test Ban Treaty (Reuters, 2022). NATO has frozen the Cold War-era security pact with Russia (Associated Press, 2023). The United States and Russia had earlier pulled out of the 1987 Intermediate-Range Nuclear Forces Treaty blaming each other. At present, the conflict between Hamas and Israel since October 2023 has taken away the focus and affected the US and even the EU aid to Ukraine. An Israeli minister was suspended from government meetings "until further notice", Prime Minister Benjamin Netanyahu's office said, after suggesting in an interview dropping a nuclear bomb on Gaza (Maghris, 2023). It is strange to find many Nepali mercenaries recruited both by Russia and Ukraine to fight this war that has led to several deaths and injuries apart from being held as Prisoners of War (The Kathmandu Post, 2023).

Russia invaded Ukraine in February 2022 to have a blitzkrieg, win over and install a puppet government, though President Vladimir Putin said it was only a "special military operation" (Nikolskaya, 2022). The support of NATO led by the US turned this into a proxy war. Strong resistance from Ukraine and an intense offensive since June 2022 too was unexpected by Russia. In the initial stage, Russian shelling of large parts of Zaporizhzhia and then capturing Europe's largest Nuclear Power Plant was the big concern raised by the IAEA (International Atomic Energy Agency, 2023). In the beginning, both nations accused each other of the use of the 'dirty bomb', which disperses radioactive materials over a large area to create terror and panic.

This war does not seem to come to an end anytime soon as per the current stalemate on the battlefield. US President Joe Biden has affirmed his country's support to Ukraine for as long as it takes and expressed readiness to commit billions of dollars in the coming years (CNN, 2023). The US has already spent 111 billion dollars defending Ukraine. Attempts for peace talks earlier brokered by China and later by other countries, so far, could not hold water. The whole world was shocked and reacted vehemently to the first utterance of the possibility of the use of a nuclear bomb. The nuclear doctrine of Russia is 'No First Use', but it seems to disappear in thin air. In December 2022, Putin claimed that Russia would not be the first to use nuclear weapons or the second, and that "Russian nuclear doctrine is premised on self-defense" (Putin, 2022). Suddenly world peace has been challenged.

Nuclear Winter

The atom bombs dropped in Hiroshima and Nagasaki in Japan during World War II were of less than 20 Kilotons of TNT in strength (Britannica, 2023). The current Russian nuclear arsenal possesses many Megatons of capacity and their destructive power is hundreds if not thousands of times more. The human deaths also could jump

from a million to even tens of millions by the use of megaton nuclear bombs. The enormous mushroom of millions of tons of black soot will be released into the atmosphere for thousands of kilometers with blinding flashes of light and awful shockwaves. The average temperature of the earth will reduce by more than one degree Celsius. A serious decrease in agricultural production would challenge the global grain stock putting food security at peril. Many countries in Asia and Africa that rely on grain imports will be malnourished. The whole world will face severe consequences of a nuclear winter. Man-made disturbances in the global climate will result in a serious reduction in agricultural products.

No country will remain unaffected irrespective of the distance from the war zone. Radioactive plumes of tens of kilometers high will rise in the atmosphere and then the dynamic stratosphere will distribute various radioisotopes throughout the world within a fortnight. The contaminated soil of the conflict area will remain radioactive and unfit to grow any food for many years. In particular, sizable global contributions to the agricultural products of Ukraine will come to an end.

Nuclear weapons are designed and developed to cause maximum devastation (Dalnoki, 2021). The size of the warhead, the height above the ground zero for the detonation to take place and the local environment at that time are the main factors for mass destruction. A megaton nuclear weapon explosion would result in an enormous fireball. The shockwaves would destroy lives and objects within a three-kilometer area; cause severe to heavy damage within three to five kilometers and notable damage beyond eight kilometers. Radiation damage to body cells will lead to instant and delayed deaths as rampant radiation sickness lingers for decades. Electromagnetic pulses and disturbances in the electronic system will be felt several kilometers from the detonation center. IAEA estimates that more than 100 countries have inadequate control and monitoring capacity to deal with radioactive fallout.

The Status of Russia-Ukraine War

The fortifications of layers of tank traps and minefields laid by the Russians hindered the counteroffensive of Ukraine. Ukrainian troops faced constant mortar and artillery shelling as well as aerial bombardments. Drone attacks and counterattacks are rampant. Both Moscow and Kiev have experienced drone attacks. Drone attacks have been launched in some other cities as well as in the battlefields and Black Sea areas. Effective destruction in the midair has been developed by both warring countries. Ukraine started to use cluster bombs supplied by the US to make advances on the battlefield though outlawed in some 120 countries (Natasha, 2023). Russia also used its stockpiles of cluster bombs. Cluster bombs explode in the air over a target dispersing smaller 'bomlets' across a wide area. Most NATO

countries are signatories to the Convention on Cluster Munition which ban the use and production but Russia, the US and Ukraine never signed it.

The Russians hoped to make tactical advances of their own on the northern and eastern fronts (Holder, 2022). Ukraine was forced to retain substantial troops that strained the operational levels to the bay in the more than 1000 km long southern and eastern fronts. Both the offensive and defensive strategies of Russia kept Ukraine from making little progress despite the superior armory, firepower and armed forces trained in Poland (The Kathmandu Post, 2023). The sizable destruction of the Russian navy in the Black Sea seemed to force Russia to massive missile and drone attacks in various cities of Ukraine. Discontent among Ukrainian soldiers is now more common and out in the open. The limited momentum of Ukraine's counteroffensive in capturing territory in the northeast and south slowed down as the harsh winter set in. The Russians are well-versed in winter warfare and better equipped in terms of strength and weaponry.

Nuclear-Related International Treaties Defied

President of Belarus Alexander Lukashenko claimed that nations who are willing to join the Union State of Russia and Belarus will be provided nuclear weapons soon after confirming the transfer of some tactical nuclear weapons from Moscow to Minsk (Knight, 2023). Russia, however, retained the tactical control of nuclear weapons like the US practice of stationing nuclear weapons in Europe under its command. Defying the latest Treaty on Prohibition of Nuclear Weapons (TPNW) and many other related treaties by Russia and Belarus is seriously threatening world peace.

In the meantime, the US has allotted millions of dollars to manufacture key components for its nuclear arsenal (Helmore, 2023). The US National Nuclear Security Administration announced that the initial cost could amount to USD four billion. Most of the US nuclear stockpile dates back to the 1970s and 1980s, and their life needs to be extended so that their deterrent power is safe, secure and reliable.

Deputy chairman of Russia's Security Council Dmitry Medvedev stated that nuclear weapons could be used in response to aggression that threatens the existence of the Russian State. He further said that Moscow would be forced to use a nuclear weapon if Ukraine's counter-offensive became successful (Osborn, 2023). The possibility of the use of nuclear weapons has now come closest since the 1962 Cuban missile crisis (Borger, 2022).

Peace Initiatives

The Russia-Ukraine war appears to have reached a stalemate with neither side able to gain meaningful territory in recent months. The Russian president indicated that the African or Chinese peace initiatives could be the basis for ending the war in Ukraine (Perkins, 2023). However, he indicated it would be hard to implement a ceasefire as the Ukrainian army is on the offensive. He has not ruled out talks with Ukraine. The African leaders had pressed to forge ahead with their plan to end the conflict during the Russia-Africa summit at St. Petersburg in late July 2023 in which 54 heads of state or government were invited as they represented some 1.3 billion people. Russia is the top supplier of arms to the African nations (Press, 2023). Putin praised Africa as a rising center of power in the world. The fate of millions of people in Asia and Africa in particular depends on undisturbed food security.

Saudi Arabia organized a peace summit in early August 2023 in which Russia was not invited (Lynch, 2023). The US and EU tried to muster international backing for peace favoring Ukraine's terms (DW, 2023). Countries like China, Brazil, Chile, Egypt, India, Indonesia, Turkey and South Africa were among the 30 countries invited. The important points raised by Ukraine for the settlement of the disputes included respect for its territorial integrity and the withdrawal of Russian troops from the occupied territories.

Nepali Mercenaries

Both Russia and Ukraine are encouraging foreign mercenaries to join their armies (Falk, 2022). So, it is not surprising that hundreds of Nepali people are fighting in this war. The Government of Nepal confirmed that twelve Nepalese have lost their lives fighting for Russia so far with hundreds missing (The Kathmandu Post, 2023). Ukraine disclosed that they have four Nepali nationals as POW. The Government of Nepal has at last started to feel the pinch as this precarious situation has been caused mainly by the awful lack of jobs in Nepal. It has taken some initiatives in this regard by requesting the governments of these countries to release the POW, provide compensation for the dead and stop further recruitment. However, so far, Russia has ignored these Nepalese request (Giri, 2023).

Conclusion

The Russia-Ukraine war, which has been ongoing for nearly two years, has become the longest conflict in Europe since World War II and there is no end in sight. Ukraine's war of attrition against Russia did not result as per the expectations of the West. Putin is obsessed with the annexation of the eastern Ukrainian territory of the Russian-speaking population. The Russian military has largely repulsed Ukraine's

counter-offensive. Currently, Russia occupies nearly one-fifth of Ukraine. The West and Ukraine reject it as a baseless pretext to attack a sovereign country. However, in this protracted war, the US-led NATO wants Ukraine to win. UN Secretary-General Antonio Guterres had said, "The prospect of nuclear conflict, once unthinkable, is now back within the realm of possibility". It may be argued that the US and its allies are soaring to their highest confrontational levels since the 1962 Cuban missile crisis and world peace is at stake all over again (Racker, 2023).

Reportedly, the war fatigue among the Ukrainian fighters and a stalemate in this war is quite apparent (Khromeychuk, 2024). No breakthrough has been reported by either of the warring countries. The winter season is advantageous for the well-equipped Russian army both for the offense and strong defense of the occupied territories. Currently, the funds from the US and NATO are drying up and this could be the game changer in this war. The government of Nepal should make result-oriented efforts to get back its citizens serving in both armies of Russia and Ukraine, demand adequate compensation for the families of the dead and ensure the release of the POW.

The world and humanity have been saved from the catastrophe of a nuclear winter and mass destruction as nuclear weapons have not been used in this war so far. Nuclear weapons should continue to remain as a deterrent. Saving humanity should be the prime concern for all parties involved so that peace shall eventually prevail in the world.

References

Associates Press. (2023, Nov 7). NATO Freezes Cold War- Era Security pact with Russia.

BBC. (2022, Aug 24). Ukraine War: Shock and Defiance on Independence Day - Round-up.

Borger, J. (2022, Oct. 27). Cuban Missile Crisis, 60 years on: New Papers Reveal how Close the World Came to Nuclear Disaster. Washington: The Guardian.

Britannica. (2023, Dec 7). Atomic Bombings of Hiroshima and Nagasaki. Retrieved from https://www.britannica.com/event/atomic-bombings-of-Hiroshima-and-Nagasaki

CNN. (2023, December 12). Biden says US will Support Ukraine "as long as we can".

Dalnoki, R. W. (2021). Nuclear Choices for the Twenty-First Century. The MIT Press.

DW. (2023, July 31). Saudi Arabia to Host Ukraine-Backed Peace Summit.

Falk, T. O. (2022, March 23). Ukraine War: Why is Russia Encouraging Foreign Fighters to Join?

Giri, A. (2023, Dec. 24). Russia Ignores Calls to Stop Hiring Nepalis to fight Against Ukraine.

Helmore, E. (2023, Nov 26). Why is the US Ramping up Production of Plutonium 'pits' for Nuclear Weapons? *Nuclear Weapons*. The Guardian.

Holder, M. H. (2022). Defenses Carved Into the Earth. *Russia is Building a Vast Network of* 42

- Trenches, Traps and Obstacles to Slow Ukraine's Momentum. Will it Work?
- International Atomic Energy Agency. (2023, May 12). IAEA Director General Statement on Situation in Ukraine. Vienna: IAEA.
- Khromeychuk, O. (2024). *Ukraine Fatigue: why I'm Fighting to Stop the World Forgetting us*. Retrieved from https://www.theguardian.com/world/2024/jan/25/ukraine-fatigue-why-im-fighting-to-stop-the-world-forgetting-us
- Knight, M. A. (2023, May 28). Lukashenko Offers Nuclear weapons to Nations Willing 'to Join the Union State of Russia and Belarus'.
- Lynch, S. (2023, Aug 4). From Pariah to Peacemaker: Saudi Arabia bid to become Ukraine War Middleman. CNN.
- Maghris, I. (2023, Nov. 5). Use Nuclear Bomb on Gaza Suggested. (K. Times, Ed.)
- Natasha, B. A. (2023). Ukraine has Started Using US Provided Cluster Munitions in Combat.
- Nikolskaya, A. O. (2022, Feb. 24). Russia's Putin Authorises 'special military operation' Against Ukraine.
- Osborn, A. (2023, July 30). Russia's Medvedev: We'd have to use a Nuclear Weapon if Ukrainian Offensive was a Success. Reuters.
- Perkins, L. (2023, July 30). Putin Suggests African or Chinese peace Initiatives could help end Ukraine War.
- Press, T. A. (2023, July 30). African leaders leave Russia Summit Without Grain Deal or Path to Peace in Ukraine.
- Putin, V. (2022). Nuclear Risk is Rising, but we are not Mad. Moscow: BBC News.
- Racker, M. (2023, Nov. 20). World War III. TIME.
- Reuters. (2022, March 27). Ukraine says Russia wants to Split the Nation. *Russia pulls out of Comprehensive Nuclear Test Ban Treaty*.
- The Kathmandu Post. (2023, December 20). Foreign Ministry Confirms Death of one more Nepali in Russia-Ukraine War.
- The Kathmandu Post. (2023, December 20). Foreign Ministry Confirms Death of One More Nepali in Russia-Ukraine War. Kathmandu.
- The Kathmandu Post. (2023, Dec. 9). Ukrainian troops train in Poland for Harsh Winter Warfare. Poland: Reuters.