GlobalResearch
Center for Research on Globalization

Nuclear Armageddon Games in Ukraine

The Nuclear "War" in Ukraine May Not Be the One We Expect

By Joshua Frank
Global Research, March 01, 2023
TomDispatch 28 February 2023

Region: Europe, Russia and FSU, USA
Theme: Intelligence
In-depth Report: Nuclear War

***

In 1946, Albert Einstein shot off a telegram to several hundred American leaders and politicians warning that the "unleashed power of the atom has changed everything save our modes of thinking and we thus drift toward unparalleled catastrophe." Einstein's forecast remains prescient. Nuclear calamity still knocks.

Even prior to **Vladimir Putin**'s bloody invasion of Ukraine, the threat of a nuclear confrontation between NATO and Russia was intensifying. After all, in August 2019, **President Donald Trump** formally withdrew the U.S. from the Intermediate-Range Nuclear Forces Treaty, long heralded as a pillar of arms control between the two superpowers.

"Russia is solely responsible for the treaty's demise," declared **Secretary of State Mike Pompeo** following the announcement. "With the full support of our NATO allies, the United States has determined Russia to be in material breach of the treaty and has subsequently suspended our obligations under the treaty." No evidence of that breach was offered, but in Trump World, no evidence was needed.

Then, on February 21st of this year, following the Biden administration's claims that Russia was no longer abiding by its obligations under the New START treaty, the last remaining nuclear arms accord between the two nations, Putin announced that he would end his country's participation.

In the year since Russia's initial assault on Ukraine, the danger of nuclear war has only inched ever closer. While President Biden's White House raised doubts that Putin would indeed use any of Russia's tactical nuclear weapons in Ukraine, the *Bulletin of Atomic Scientists* ominously reset its Doomsday Clock at 90 seconds to midnight, the closest since its creation in 1947. Those scientific experts weren't buying what the Biden administration was selling.

> "As Russia's war on Ukraine continues, the last remaining nuclear weapons treaty

> between Russia and the United States… stands in jeopardy," read a January 2023 press release from the *Bulletin* before Putin backed out of the agreement. "Unless the two parties resume negotiations and find a basis for further reductions, the treaty will expire in February 2026. This would eliminate mutual inspections, deepen mistrust, spur a nuclear arms race, and heighten the possibility of a nuclear exchange."

Of course, they were correct and, in mid-February, the Norwegian government claimed Russia had already deployed ships armed with tactical nukes in the Baltic Sea for the first time in more than 30 years.

> "Tactical nuclear weapons are a particularly serious threat in several operational scenarios in which NATO countries may be involved," claimed the report. "The ongoing tensions between Russia and the West mean that Russia will continue to pose the greatest nuclear threat to NATO, and therefore to Norway."

For its part, in October 2022, NATO ran its own nuclear bombing drills, designated "Steadfast Noon," with fighter jets in Europe's skies involved in "war games" (minus live weaponry). "It's an exercise to ensure that our nuclear deterrent remains safe, secure, and effective," claimed NATO chief **Jens Stoltenberg**, but it almost seemed as if NATO was taunting Putin to cross the line.

And yet, here's the true horror story lurking behind the war in Ukraine. While a nuclear tit-for-tat between Russia and NATO — an exchange that could easily destroy much of Eastern Europe in no time at all — is a genuine, if frightening, prospect, it isn't the most imminent radioactive peril facing the region.

Averting a Meltdown

By now, we all ought to be familiar with the worrisome Zaporizhzhia nuclear complex (ZNPP), which sits right in the middle of the Russian incursion into Ukraine. Assembled between 1980 and 1986, Zaporizhzhia is Europe's largest nuclear-power complex, with six 950-megawatt reactors. In February and March of last year, after a series of fierce battles, which caused a fire to break out at a nearby training facility, the Russians hijacked the embattled plant. Representatives of the International Atomic Energy Agency (IAEA) were later sent in to ensure that the reactors weren't at immediate risk of meltdown and issued a report stating, in part, that:

> "…further escalation affecting the six-reactor plant could lead to a severe nuclear accident with potentially grave radiological consequences for human health and the environment in Ukraine and elsewhere and that renewed shelling at or near the ZNPP was deeply troubling for nuclear safety and security at the facility."

Since then, the fighting has only intensified. Russia kidnapped some of the plant's Ukrainian employees, including its deputy director **Valery Martynyuk**. In September 2022, due to ongoing shelling in the area, Zaporizhzhia was taken offline and, after losing external power on several occasions, has since been sporadically relying on old diesel backup generators. (Once disconnected from the electrical grid, backup power is crucial to ensure the plant's reactors don't overheat, which could lead to a full-blown radioactive meltdown.)

However, relying on risk-prone backup power is a fool's game, according to electrical engineer Josh Karpoff. A member of Science for the People who previously worked for the

New York State Office of General Services where he designed electrical systems for buildings, including large standby generators, Karpoff knows how these things work in a real-world setting. He assures me that, although Zaporizhzhia is no longer getting much attention in the general rush of Ukraine news, the possibility of a major disaster there is ever more real. A backup generator, he explains, is about as reliable as a '75 Winnebago.

> "It's really not that hard to knock out these kinds of diesel generators," Karpoff adds. "If your standby generator starts up but says there's a leak in a high-pressure oil line fitting, it sprays heated, aerosolized oil all over the hot motor, starting a fire. This happens to diesel motors all the time. A similar diesel engine fire in a locomotive was partly responsible for causing the Lac Megantic Rail Disaster in Quebec back in 2013."

Sadly enough, Karpoff is on target. Just remember how the backup generators failed at the three nuclear reactors in Fukushima, Japan, in 2011. Many people believe that the 9.0 magnitude underwater earthquake caused them to melt down, but that's not exactly the case.

It was, in fact, a horrific chain of worsening events. While the earthquake itself didn't damage Fukushima's reactors, it cut the facility off from the power grid, automatically switching the plant to backup generators. So even though the fission reaction had stopped, heat was still being produced by the radioactive material inside the reactor cores. A continual water supply, relying on backup power, was needed to keep those cores from melting down. Then, 30 minutes after that huge quake, a tsunami struck, knocking out the plant's seawater pumps, which subsequently caused the generators to go down.

> "The myth of the tsunami is that the tsunami destroyed the [generators] and had that not happened, everything would have been fine," former nuclear engineer Arnie Gunderson told Amy Goodman on *Democracy Now!* "What really happened is that the tsunami destroyed the [sea] pumps right along the ocean… Without that water, the [diesel generators] will overheat, and without that water, it's impossible to cool a nuclear core."

With the sea pumps out of commission, 12 of the plant's 13 generators ended up failing. Unable to cool, the reactors began to melt, leading to three hydrogen explosions that released radioactive material, carried disastrously across the region and out to sea by prevailing winds, where much of it will continue to float around and accumulate for decades.

At Zaporizhzhia, there are several scenarios that could lead to a similar failure of the standby generators. They could be directly shelled and catch fire or clog up or just run out of fuel. It's a dicey situation, as the ongoing war edges Ukraine and the surrounding countries toward the brink of a catastrophic nuclear crisis.

> "I don't know for how long we are going to be lucky in avoiding a nuclear accident," said Rafael Grossi, director general of the IAEA in late January, calling it a "bizarre situation: a Ukrainian facility in Russian-controlled territory, managed by Russians, but operated by Ukrainians."

Bad Things Will Follow

Unfortunately, it's not just Zaporizhzhia we have to worry about. Though not much attention has been given to them, there are, in fact, 14 other nuclear power plants in the war zone

and Russia has also seized the ruined Chernobyl plant, where there is still significant hot radioactive waste that must be kept cool.

Kate Brown, author of *Plutopia*, told Science for the People last April:

> "Russians are apparently using these two captured nuclear installations like kings on a chessboard. They hold Chernobyl and the Zaporizhzhia nuclear power reactor plants, and they are stockpiling weapons and soldiers there as safe havens. This is a new military tactic we haven't seen before, where you use the vulnerability of these installations, as a defensive tactic. The Russians apparently figured that the Ukrainians wouldn't shoot. The Russians noticed that when they came to the Chernobyl zone, the Ukrainian guard of the Chernobyl plant stood down because they didn't want missiles fired at these vulnerable installations. There are twenty thousand spent nuclear fuel rods, more than half of them in basins at that plant. It's a precarious situation. This is a new scenario for us."

Of course, the hazards facing Zaporizhzhia and Chernobyl would be mitigated if Putin removed his forces tomorrow, but there's little possibility of that happening. It's worth noting as well that Ukraine is not the only place where, in the future, such a scenario could play out. Taiwan, at the center of a potential military conflict between the U.S. and China, has several nuclear power plants. Iran operates a nuclear facility. Pakistan has six reactors at two different sites. Saudi Arabia is building a new facility. The list only goes on and on.

Even more regrettably, Russia has raised the nuclear stakes in a new way, setting a distressing precedent with its illegal occupation of Zaporizhzhia and Chernobyl, turning them into tools of war. No other power-generating source operating in a war zone, even the worst of the fossil-fuel users, poses such a potentially serious and immediate threat to life as we know it on this planet.

And while hitting those Ukrainian reactors themselves is one recipe for utter disaster, there are other potentially horrific "peaceful" nuclear possibilities as well. What about a deliberate attack on nuclear-waste facilities or those unstable backup generators? You wouldn't even have to strike the reactors directly to cause a disaster. Simply take out the power-grid supply lines, hit the generators, and terrible things will follow. With nuclear power, even the purportedly "peaceful" type, the potential for catastrophe is obvious.

The Greatest of Evils

In my new book *Atomic Days: The Untold Story of the Most Toxic Place in America*, I probe the horrors of the Hanford site in Washington state, one of the locations chosen to develop the first nuclear weapons for the covert Manhattan Project during World War II. For more than 40 years, that facility churned out most of the plutonium used in the vast American arsenal of atomic weapons.

Now, however, Hanford is a radioactive wasteland, as well as the largest and most expensive environmental clean-up project in history. To say that it's a boondoggle would be an understatement. Hanford has 177 underground tanks loaded with 56 million gallons of steaming radioactive gunk. Two of those tanks are currently leaking, their waste making its way toward groundwater supplies that could eventually reach the Columbia River. High-level whistleblowers I interviewed who worked at Hanford told me they feared that a hydrogen build-up in one of those tanks, if ignited, could lead to a Chernobyl-like event here in the

United States, resulting in a tragedy unlike anything this country has ever experienced.

All of this makes me fear that those old Hanford tanks could someday be possible targets for an attack. Sabotage or a missile strike on them could cause a major release of radioactive material from coast to coast. The economy would crash. Major cities would become unlivable. And there's precedent for this: in 1957, a massive explosion occurred at Mayak, Hanford's Cold War sister facility in the then-Soviet Union that manufactured plutonium for nukes. Largely unknown, it was the second biggest peacetime radioactive disaster ever, only "bested" by the Chernobyl accident. In Mayak's case, a faulty cooling system gave out and the waste in one of the facility's tanks overheated, causing a radioactive blast equivalent to the force of 70 tons of TNT, contaminating 20,000 square miles. Countless people died and whole villages were forever vacated.

All of this is to say that nuclear waste, whether on a battlefield or not, is an inherently nasty business. Nuclear facilities around the world, containing less waste than the underground silos at Hanford, have already shown us their vulnerabilities. Last August, in fact, the Russians reported that containers housing spent fuel waste at Zaporizhzhia were shelled by Ukrainian forces. "One of the guided shells hit the ground ten meters from them (containers with nuclear waste…). Others fell down slightly further — 50 and 200 meters," alleged Vladimir Rogov, a Russian-appointed official there. "As the storage area is open, a shell or a rocket may unseal containers and kilograms, or even hundreds of kilograms of nuclear waste will be emitted into the environment and contaminate it. To put it simply, it will be a 'dirty bomb.'"

Ukraine, in turn, blamed Russia for the strike, but regardless of which side was at fault, after Chernobyl (which some researchers believe affected upwards of 1.8 million people) both the Ukrainians and the Russians understand the grave risks of atomically-charged explosions. This is undoubtedly why the Russians are apparently constructing protective coverings over Zaporizhzhia's waste storage tanks. An incident at the plant releasing radioactive particles would damage not just Ukraine but Russia, too.

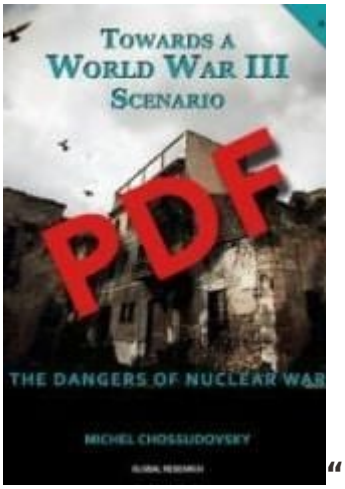
As former *New York Times* correspondent Chris Hedges so aptly put it, war is the greatest of evils and such evils rise exponentially with the prospect of a nuclear apocalypse. Worse yet, a radioactive Armageddon doesn't have to come from the actual detonation of nuclear bombs. It can take many forms. The atom, as Einstein warned us, has certainly changed everything.

*

Note to readers: Please click the share buttons above. Follow us on Instagram and Twitter and subscribe to our Telegram Channel. Feel free to repost and share widely Global Research articles.

***Joshua Frank**, a TomDispatch regular, is an award-winning California-based journalist and co-editor of CounterPunch. He is the author of the new book Atomic Days: The Untold Story of the Most Toxic Place in America (Haymarket Books).*

Featured image is from South Front



"Towards a World War III Scenario: The Dangers of Nuclear War"

by Michel Chossudovsky

Available to order from Global Research!

ISBN Number: 978-0-9737147-5-3
Year: 2012
Pages: 102

PDF Edition: $6.50 (sent directly to your email account!)

Michel Chossudovsky is Professor of Economics at the University of Ottawa and Director of the Centre for Research on Globalization (CRG), which hosts the critically acclaimed website www.globalresearch.ca . He is a contributor to the Encyclopedia Britannica. His writings have been translated into more than 20 languages.

Reviews

"This book is a 'must' resource – a richly documented and systematic diagnosis of the supremely pathological geo-strategic planning of US wars since '9-11' against non-nuclear countries to seize their oil fields and resources under cover of 'freedom and democracy'."
–***John McMurtry**, Professor of Philosophy, Guelph University*

"In a world where engineered, pre-emptive, or more fashionably "humanitarian" wars of aggression have become the norm, this challenging book may be our final wake-up call."
***-Denis Halliday**, Former Assistant Secretary General of the United Nations*

Michel Chossudovsky exposes the insanity of our privatized war machine. Iran is being targeted with nuclear weapons as part of a war agenda built on distortions and lies for the purpose of private profit. The real aims are oil, financial hegemony and global control. The price could be nuclear holocaust. When weapons become the hottest export of the world's only superpower, and diplomats work as salesmen for the defense industry, the whole world is recklessly endangered. If we must have a military, it belongs entirely in the public sector. No one should profit from mass death and destruction.
–***Ellen Brown**, author of 'Web of Debt' and president of the Public Banking Institute*

The original source of this article is TomDispatch

Articles by: **Joshua Frank**