

Russian-Ukrainian War 2022

Installment 1

By

John S Harrel,

MG (Ret), USA

Introduction

I decided to write this essay on Russia's unlawful February 24, 2022 invasion of Ukraine due to the volume of questions and concerns I have received from friends and family. I have Ukrainian military friends fighting on the front line. I have trained with the Ukrainian Army as it was established in the 1990s and 2006 and I commanded Ukrainian soldiers in 2005 while peacekeeping in Kosovo. For my nonmilitary friends, I will try to not to obfuscate with detailed technical descriptions and comparisons of military equipment. I will cover in detail new weapon systems depicted in the media and describe how they impact the situation on the ground. We should start with Putin's stated strategic goals for the invasion.

First Putin (and his supporting oligarchy) demand Ukrainian recognition of the recent Russian 'annexation' of Crimea.' Secondly, Putin demands a Ukrainian declaration stating it will not apply for NATO membership. Third, he demands the demilitarization of Ukrainian military. Finally, Putin demands that Ukraine recognize the Donetsk

Peoples Republic (formerly Donetsk Oblast) and Luhansk People's Republic (formerly Luhansk Oblast) as sovereign states with their pre-2014 borders. Putin's desired end state is a Ukraine, politically aligned with the Kremlin; militarily neutral and partnered with Russian armed forces (i.e., dependent upon Russia for defense) and most importantly transparent borders to facilitate cultural and economic integration of Ukraine into the Eurasian Economic Union (EAEU). In other words, the re-establishment of the former Soviet Empire, under the economic dictatorship of Russian oligarchy and suppression of the developing liberal democracy in Ukraine. ¹

Road To War

Two things have driven the expanding Russian state since its inception; the search for a year-round, ice-free seaport and buffer states along its borders to protect the Russian heartland from invasion. The Russian psyche contributes to a (not totally unfounded) paranoid view of the world and a belief that the west will eventually invade Mother Russia again. Their fear, while discounted by modern commentators, is based in historical fact.

From the Russian point of view, with the notable exception of the Mongols, invaders emanate from Western and Central Europe. In the

Thirteenth Century Teutonic Knights attempted to subdue the Russian and Ukrainian principalities. In the Sixteenth and Seventeenth Centuries the Polish-Lithuania Commonwealth had conquered almost all of Ukraine. In the Eighteenth Century Swedes attacked Tsar Peter the Great's Russian Empire. Perhaps most famously Napoleon invaded Russia, capturing Moscow in the very cold winter of 1812. France and Great Britain attacked Crimea in the 1850s (Crimean War 1853-1856). In World War I (1914-1918) Imperial Germany and Austria invaded Russia and occupied most of Ukraine up to the Volga River (1917-1918). In World War II (1939-1945) Germany and the Axis Powers invaded, nearly destroying the Soviet Union, killing more than 20 million Soviet citizens; this despite the Non-Aggression Pact signed by Stalin and Hitler. It is therefore not surprising that after World War II, Soviet occupied Eastern Europe was incorporated into a Soviet sphere of influence as a buffer zone to protect Mother Russia.

The disintegration of the Soviet Union in the late 1980s and early 1990s stripped Russia of its buffer zone. Western political leaders believed the Russian/Soviet Empire had disintegrated for good and the expanded economic opportunities and democratic governmental principles would restrain Russian expansionist tendencies. The dream

was short-lived and by the mid-1990s Russian oligarchies had gained control of the Russian economy and started to suppress the move toward democratic government. Even as early as the 1990s, Putin, a former KGB officer, was publicly expounding on the reunification of the Russian Empire,² and end of American global hegemony.³ Russian oligarchy and *siloviki* (politicians arising from the Russian Military Industrial Complex, FSB and full-time professional Interior Security Troops 100,000 strong), acting more like robber barons or mafia dons, gained control. With control came great wealth and influence.⁴ Former Warsaw Pact countries and Soviet Republics (i.e. Poland, Lithuania Latvia, Estonia, Bulgaria, Rumania, Slovakia, Slovenia, Hungary, Czech Republic) looked for protection against future Russian expansion and oppression by joining NATO and the EU.

Over the last thirty years expanding membership into NATO and the EU neutralized the threat of future Russian reassertion. Poland and other former Warsaw Pact members developed into liberal democracies greatly improving their standard of living and demonstrating the benefits of an open society, directly threatening the rule of the Russian oligarchy/siloviki. Ukraine's establishment of a liberal democracy (on Russia's border) and goal of joining NATO and the EU

constitutes a direct threat to Russian oligarchy/*siloviki* control.⁵ To counter this threat in the twenty-first century Putin seeks to reestablish a protective buffer.

During the mid to late 1990s the Eurasian Economic Union consisting of Russia, Armenia, Belarus, Kazakakstan and Kyrgyzstan was formed securing Russia's southern and eastern borders. Under Russian leadership all members are either dictatorships or ruled by oligarchies.⁶ Negating the perceived threat from Western Europe is a more complicated problem.

During the late Twenty and Twenty-First Centuries Western and Central Europe took the lead in developing clean and then green energy. The EU shifted from coal and nuclear power to natural gas. Europe however produces little natural gas while the Russian Caspian Oil Fields produces massive surpluses, enticing and ultimately trapping Western Europe into a dependency on Russian natural gas. Pipelines have been constructed through Eastern Europe, notably through Belarus, Ukraine, and under the Baltic Sea. As dirty and dangerous sources of energy were reduced, the EU became increasingly dependent on Russian fuel providing Putin with a perfect opportunity to test EU and NATO resolve.

Germany especially was ensnarled in this petrochemical trap and to appease their Russian partner, vetoed NATO applications by both Ukraine and Georgia in 2008.⁷ Chancellor Angela Merkel's administration stubbornly protected the German-Russian oil deal, despite its invasion of Georgia in 2008 and its annexation of Ukrainian Crimea in 2014-15. This policy of appeasement empowered Putin's misbehavior directly leading to the present invasion of Ukraine.⁸

Russian Oil and Gas Pipe Lines 2022



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Increasing conservative rhetoric across Western Europe feeds Putin's propaganda machine as he seeks to justify the invasion to suppress a claimed 'Nazification of Ukraine' echoing the threat Russia faced from Nazi Germany, not only of invasion but of ethnic cleansing.

This claim is obviously absurd. The President of Ukraine, Volodymyr Zelensky, is a Jew, obviously not a Nazi. But note; the Azov Battalion, a minority faction of the Ukrainian Territorial Militia has publicly adopted a Neo-Nazi/White Supremist ideology. This Ukrainian battalion successfully fought the separatists during the Russian invasion of the Donbas in 2014-2015 and is currently fighting in the defense of Mariupol.¹⁰

Putin evokes the horrors of World War II and Mein Kampf's reference to slaves as subhuman ("*untermenfch*"). The slaughter of 20 million Soviets is not easily forgotten nor forgiven.¹¹ As Putin evokes memories of the Great Patriotic War he harkens to an illusory threat of repeated invasion. The Neo-Nazi Azov Battalion certainly provides the kindling to his fire.

Putin Tests EU/NATO Resolve

Putin's first test of EU/NATO opposition to Russian expansion was little Georgia. There was an apparent issue over a pipeline which would have delivered non-Russian oil from the Caspian Sea to the Black Sea Coast, bypassing the Russian pipelines. Georgia was also seeking NATO membership and was a member of the Partnership for Peace Program (PfP). The PfP paired former Soviet Republics and Warsaw Pact

members with NATO members to assist future applicants in developing military institutions in compliance with NATO standards.¹²

As part of this program the United States paired various State National Guards with former Warsaw Pact members or Soviet Republics.¹³ The California National Guard formed a strong partnership with Ukraine. This close relationship has existed for over thirty years.

The Russia-Georgia War of 2008 was the first test of NATO and US resolve to protect a former Soviet Republic (which had applied for but had not yet been accepted into NATO). The Russian Army invaded and quickly defeated Georgia's army. The following negotiated peace stripped the Oblasts (districts) of Abkhazia and South Ossetia from Georgia. Russia quickly recognized them as independent counties on August 25, 2008. The invasion was condemned by the US, EU and NATO and sanctions were imposed.

The sanctions imposed were ineffective and did not alter the situation on the ground. While the Russian Army eventually withdrew from Georgia, Abkhazia and South Ossetia were not returned. EU/NATO appeasement of the Russian aggression was based on the reluctance to antagonize Russia over 'insignificant Georgia.'¹⁴ The Russian oligarchy

and Putin viewed the sanctions as a slap on the wrist. They had achieved all their military, political and economic objectives.

Meanwhile Ukraine had been making great strides in establishing a liberal democracy and a NATO acceptable military force. Oddly enough despite Ukraine's progressive tendencies, a pro-Russian President, Vikto Yanukovich was elected (in a reportedly fixed election in 2013).

President Vikto Yanukovich quickly eroded many of the democratic reforms. Ukrainians responded en-mass in the November 2013 Euromaidan protests. Yanukovich was ousted from power and fled to his masters in Russia in February 2014. With his ouster, pro-Russian unrest erupted in Eastern Ukraine instigated and organized by Russian Special Forces and FSB (formerly KGB).¹⁵ At the same time Russian Special Forces gained control of the political and strategic infrastructure in Crimea. A referendum was quickly organized and in another fixed election Crimea voted to succeed from Ukraine and formerly join Russia.

Putin made a significant blunder in annexing Crimea. The peninsula does not provide sufficient fresh water for its population and infrastructure. The water required by Crimea flows from the

Dnepr/Dnipro River through a channel originating near the city of *Kherson*.¹⁶

In April 2014, demonstrations escalated to open war in the Donbas between pro-Russian separatists and Ukrainian Security Forces. The separatists, led by Russian Special Forces, failed to achieve their objectives, even when supported by heavy artillery firing from inside Russia. Additional force was required to obtain key objectives (infrastructure) and Regular Russian troops crossed the border. Heavy fighting ensued until 2015 finally culminating in the Minsk II Agreement. Despite the Agreement a state of hostiles continued along the frontline until the current invasion. As a prelude to the current invasion, on February 21, 2022, Russia officially recognized the self-proclaimed separatist states (Donetsk People's Republic and Luhansk People's Republic) as independent countries. Following the proclamation Russian combat troops entered the new countries as 'peacekeepers.'

EU and NATO once again imposed sanctions on Russia. However, since Europe is dependent upon Russian fuel the sanctions did not affect the flow of petrochemicals. Repeated ineffective sanctions are a form of appeasement. Putin once again achieved most of his military/political/economic objectives without significant cost.

During the fighting in 2014-2015 the Russian Army put in a lack luster performance. Despite its massive army, Russia could field only 40,000 modernized troops. These troops in theory, fielded the best equipment, on par with NATO and had a higher ratio of regular (contract) to conscript soldiers, compared to the rest of the Russian Army.

Despite being pushed back by heavy artillery bombardment, Ukrainian soldiers fought well. Ukrainian mechanized paratroopers managed to conduct a ground ‘cavalry style’ raid into the Russian/separatist rear destroying their logistics. The raid presumably forced Putin to support the separatists by invading with regular Russian military units.

Ukrainian Terrain and Weather



The weather and terrain is having a major negative impact on the opening stages of Russia's February 24, 2022, invasion. The challenges are well known by the Russian general staff, but they were 'assumed away' based on their mistaken belief that Ukraine would quickly surrender.

The *Dnipro* River divides Ukraine in half, running north to south and emptying into the Black Sea west of the Crimean Peninsula. Militarily, the cities of *Kherson*, *Zaporizhzhia*, *Dnipro*, *Kremenchuk* and *Kyiv* are key to defending the *Dnipro* River Line. An invasion force moving north or south along the *Dnipro* cannot bypass these cities. The

cities are bastions from which defenders can interdict invaders' lines of communication and supply. The cities must be captured, blockaded, or besieged by an advancing army.

Attacks from the northwest must contend with the cities of Kharkiv and Sumy. These cities must be taken or at least screened to protect the flank of an attacker moving over the steppes to Kyiv. The central axis of advance begins in the Russian puppet states of Donetsk People's Republic (formerly Donetsk Oblast) and Luhansk People's Republic (formerly Luhansk Oblast) crossing the open steppes but then must contend with the Donets River. The current Russian avenue of advance is north from Crimea and then along the Black Sea coast to Odesa or Mariupol. In military terms all attack routes must contend with extreme Ukrainian weather which greatly complicates a movement of attacking ground combat units and their supply trains.

Russian leadership commenced this invasion in late winter ignoring predictable impact of the spring mud season known as the *Rasputitsa*. Historically there are two muddy *Rasputitsa* which hamper off road mechanized (tracked) movement and confine motorized (wheeled) operations to improved roads. In early spring and late fall, unpaved roads in Ukraine become bottomless mud pits with the

countryside becoming a quagmire. In the spring, the muddy condition is caused by the winter thaw and rain lasting approximately six weeks starting in April. Every Russian general is aware of this condition and Soviet/Russian tanks and track vehicles (but not wheeled vehicles) are designed accordingly.

It soon became apparent to everyone watching that ‘global warming’ has impacted the Russian invasion. The ground was not frozen on February 24, 2022, when the Russian northern offensive crossed the Ukrainian border. This resulted in heavy wheeled support and supply vehicles being confined to the limited improved road system along both sides of the *Dnipro* River resulting in a 40 kilometer/24 mile traffic jam for nearly two weeks.



The mud, plus Ukrainian control of the bridges over the *Dnipro* River have prevented Russian encirclement of Kyiv from east or west. Russian forces attacking along the steppes axis have to contend with the

mud. While wheeled supply vehicles are confined to all weather roads, tracked vehicles are conducting extensive cross county operations in the mud and have expended fuel at a higher rate. 'General Mud' caused the Russian Army to run out of fuel and supplies three days into the invasion.

Military Comparison

Before the war, the media reported on the relative strength of the combatants by comparing total manpower and various weapons systems. For simplicity's sake, let's only look at troops, tanks, artillery, and jet aircraft. Regarding personnel Russia fields a standing army of 900,000 backed up by 2,000,000 reservists. Ukraine's standing army fields 209,000 and 900,000 reservists. In tanks, Russia maintains a fleet of 12,000 main battle tanks, while Ukraine fields 2,600. In fighter jets Russia boasts 1,500, while Ukraine maintains approximately 100. In all categories, artillery, armored personnel carriers, and fighter jets, Russia could field overwhelming numbers. The media and experts fail to include in their analysis the importance of logistics.¹⁷

With all its massive military strength Russia could only deploy an invasion force of 200,000 troops, with the main maneuver force divided into 87 Battalion Tactical Groups (BTG). As the war progressed 117 BTGs were employed by March 5, 2022. Because Russia fields a

conscript army only approximately 30% of its soldiers are fully trained at any given time. Therefore, each brigade or regiment can only field one or two fully trained combined arms battalions to form BTGs in time of emergency. A BTG (Battalion Tactical Group) is a hybrid reinforced tank or motorized rifle battalion, organized with the fully trained conscripts from a regiment or brigade who ‘volunteered’ for the combat zone.

What makes this formation unique is the three-battery artillery battalion attached to each BTG. The main company-size formations of a BTG consists of one tank and two motorized rifle companies (or two tank and one or two motorized companies) with an attached artillery battalion of three self-propelled artillery batteries. In comparison, most NATO battalion size formations have the same main components but only include one artillery battery in direct support.

The BTG combat record is mixed. They were first fielded by the Russians during the 2014-2015 invasion of the Donbas. They were somewhat successful in supporting the Ukrainian separatists with artillery support. However, they were occasionally defeated by Ukrainian regular army units despite their overmatch in fire power, electronic warfare, artillery, and drones.¹⁸ Despite the mixed results Russia touted the BTG

as a success and the total number of BTGs was expanded from 40 in 2015 to 170 in 2022.¹⁹

In February 2022 it was estimated that the initial attack echelon into Ukraine consisted of 94 BTGs while the remaining 13 BTGs were held in reserve. As of February 24, 2022 the remaining 63 BTGs have not engaged in theater.²⁰

Invasion First and Second Echelons
94 Battalion Tactical Groups
Personnel Strength & Key Equipment

- 940x T-72/80/90 Tanks
 - 3,102x BMPs/BTRs (Armored Personnel Carriers)
 - 376 x ATGM Carriers
 - 564 x 152 mm 2S19 P (Field Artillery)
 - 564x BM-21 122mm MLRS (Field Artillery)
 - 56,400 troops in the BTG formations.
- The rest of the Russian invasion force of over 150,000+ is in the support forces.
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The remainder of the Russian invasion force (150,000+ troops) included supporting division and army artillery groups, logistics personnel and possibly partially trained conscripts for occupation duty. It is unclear whether the first-class paratroop and naval infantry (Marines) are included in the open source BTG totals. Command and control of the

invasion is being provided by brigade, division, and combined arms army headquarters.

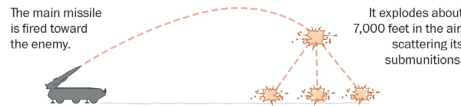
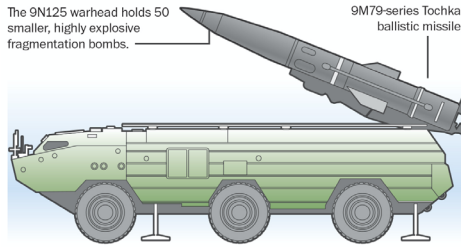
The Russian division and army artillery groups, while including standard tubed and rocket artillery, also include the notorious thermobaric weapon (TOS-1A Launch System) and cluster munition rockets. Thermobaric munitions are basically long-range flame weapons. These are not included in NATO's inventory because their use violates the law of warfare. Their employment against any target, let alone against civilian areas and protected sites, such as hospitals, churches, and schools constitute a war crime.

As the diagram below depicts cluster munitions are not new and are included in NATO's munitions inventory however Russia is bombarding civilian areas and protected targets with these munitions in violation of the generally accepted law of warfare.

Deadly on any battlefield: Weapons Russia stands accused of using in Ukraine

Some eyewitness reports have identified two particular types of weapons in the Russian arsenal in Ukraine that — especially if used in densely populated urban areas — could be as deadly to civilians as they would be to Ukrainian troops.

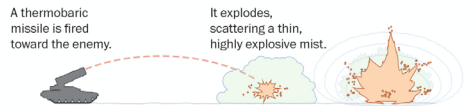
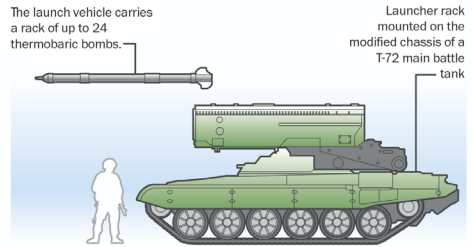
Cluster munitions: The 9N125 cluster warhead



Each of these submunitions, or smaller bombs, then detonates 3-4 pounds of explosives on impact, scattering fragments of shrapnel in a lethal spray.

Source: Armament Research Services; Military-Today.com

Thermobaric weapons: The TOS-1A launch system



A secondary explosion then ignites this spreading cloud of oxygen and chemicals, generating heat and blast waves that can penetrate buildings and shelters.

WILLIAM NEFF/THE WASHINGTON POST

The Achille's Heel of the Russian Army is logistics and lack of a professional non-commissioned officer corps (sergeants). Lack of supplies and the logistical infrastructure to move the supplies to the front line hamper the BTGs' ability to maneuver. A modern tank gets .6 miles per gallon or 1 kilometer per 3.5 liters. An armored division (the equivalent of 12 BTGs with support vehicles) burns approximately 600,000 gallons of fuel a day or 2,271,247 liters per day.²² For the invasion force, this fuel needs to be transported to the fighting lines in unarmored fuel trucks.

Before the war, it was estimated that an engaged Russian Combined Arms Army (CAA) lacked sufficient trucks to meet its logistical requirements for more than 90 miles/144 kilometers beyond its

rail head supply dumps. For example, the resupply ammunition for each multiple launched rocket system (MLRS) requires one entire truck load each time it fires. If a CAA group of 90 MRLS fired one volley per day, it would require 90 trucks to reload the launchers. That is almost a quarter of the total number of cargo trucks assigned to a Russian CAA support brigade.²³ While Putin has rail lines to his assembly areas in Russia, moving supplies from these dumps requires a massive number of trucks.²⁴ To complicate this problem, at the beginning of the war the Ukrainian military destroyed all links to the Russian rail systems along with key bridges on the routes approaching Kyiv. This forces Russian resupply of its combat units to rely on wheeled cargo vehicles.

The lack of a professional non-commissioned officer corps (NCOs) hampers the Russian ability to maintain their vehicles, ensure supplies reach the front line, enforce discipline on individual crews and ensure completion of thousands of small details required for a successful military operation. In a NATO force the ratio is one NCO to 3 - 5 soldiers. NCOs provide the initiative and leadership to get small critical combat or logistical tasks completed. Russia does have nonprofessional NCOs (nothing more than higher paid conscripts), but they are not encouraged to use initiative and most of the small tasks must be

supervised by the limited number of officers.²⁵ This lack of initiative and poor small-unit leadership during intensive fighting has resulted in senior officers being called to the front line to supervise. As of today, fourteen generals have been killed after five weeks of fighting.²⁶ A number unheard of since WWII.

Russian generals are forced to operate on the front lines because they do not trust subordinates' ability to coordinate battalions. Coupled with Russian centralized decision-making doctrine this has resulted in junior leaders being delegated less responsibility while being discouraged from taking the initiative. While the Russian military has attempted to correct this problem, the loss of so many senior leaders demonstrates that they have failed.²⁷

While the Russian Army has sufficient officers to lead their platoons, companies, and battalions these officers have been unable to perform at the level required for combat operations. The low trust in company and field grade officers breeds poor performance. Like Stalin, Putin is pressuring commanders at all levels to move faster forcing senior commanders forward to lead from the front.²⁸ Companies and battalions, with inadequate reconnaissance, are rolling into Ukrainian ambushes in

administrative columns rather than in battle formation, resulting in heavy casualties and great equipment loss.

The Russian governmental system, based upon on the oligarchy skimming billions of dollars from their government, allowed these tyrants to fund a lifestyle which would have made the arch villain Spector, from a 'James Bond' novel, envious. Billions of dollars are focused on buying private extreme luxury yachts and private jets instead of encrypted communication gear for the BTGs, precision guided munitions or simple spare parts.

Following the lead of their superiors, officers in charge of the storage fleet of reserve battle tanks have dismantled their vehicles and sold off parts for personal profit. This type of criminal activity was widespread in the Soviet system and has worsened in the new Russian military.²⁹

As the war progressed on the first day, it became surprisingly clear that the BTGs were not equipped with modern communications gear. During the 2014-2015 war, the 40 BTGs were alleged to be equipped with the latest vehicles and modern communication devices. With the expansion of the BTG formations to 170 over the last eight years it was assumed by the world that these units were equally well-

equipped. Three days into the invasion, it became clear that most of the new formations were equipped with obsolete communications gear in lieu of modern encrypted radios. Worse, many formations had a mix of modern encrypted and non-encrypted radios in individual vehicles. Mismanagement of the issuance of tactical radios and undertrained soldiers complicated the issue. Where the Ukrainians control the cellular network, such as the approach to Kyiv, invading formations like Russia's 90th Guards Tank Division had to revert to the lowest common denominator, non-encrypted radio communication.³⁰ Ukrainian intelligence units were able to listen in on Russian command and control networks and were able to effectively jam attempts at coordinated maneuver.³¹

Ukrainian Army

Before the war started, there were at least 17 regular Ukrainian combat brigades. (2 x tank, 6x motorized and 9 mechanized brigades) which is the equivalent of 118 (31 tank, 49 mech, 38 motorized, 6 naval infantry, 4 reconnaissance and 6 mountain battalions) Russian BTGs minus the artillery battalions.³² The regular army was backed up by 150 regional reserve light infantry battalions. With the initial invasion force

of 75 BTGs (including their artillery battalions), the Russians only had a ratio of 1:1 in personnel, 1.5:1 in tanks, 1.5:1 in SP (self-propelled) 152mm artillery and 1.5:1 in MRLS. Only in fighter jets did the Russians have a clear superiority, 10:1. By March 2022, 117 BTGs were committed to the invasion. These additional formations barely replaced the losses suffered by the 92 BTGs committed to combat in February 2022. The massive number of tanks and other weapons in the Russian inventory could not be supplied and are not in the invasion force. Weapons supplied by NATO and other allies have sufficiently reduced the imbalance.

**Ukrainian Regular Army 17 Maneuver Brigades
134 Maneuver Battalions**

- 630x T-72/80/90 Tanks
- 2,215x BMPs/BTRs (Armored Personnel Carriers)
- 306x 152 mm 2S19 (Field Artillery)
- 306x BM-21 122mm MLRS (Field Artillery)
- 476x MT-LB ACRV (command and control)
- 150 National Guard Regional) Light Infantry Battalions
- 40,800 soldiers in the BTG equivalents and a total of 209,000 soldiers in the Ukrainian Army.
- 150 National Guard Regional) Light Infantry Battalions, 900,000 Reserves. <https://www.thefivecoatconsultinggroup.com>

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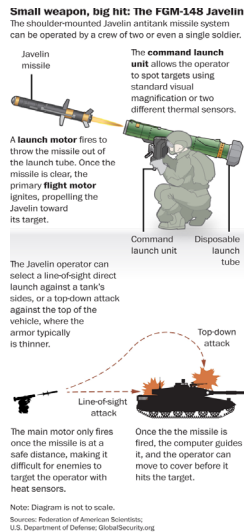
The Ukrainian Ministry of the Interior fields National Guard troops for internal security. The 4th Rapid Reaction Brigade is a well-

trained and equipped combat unit not included in the regular army's totals. The 4th Rapid Reaction Brigade adds three additional combat battalions to the regular army's 134 maneuver battalions.³⁴

Backing up the regular army and National Guard are 25 brigades of the Territorial Defense Force (150 light infantry battalions). One brigade is organized in each oblast. They train regularly and can be mobilized within 24-48 hours. These formations include combat veterans of the Donbas war of 2014-2015.³⁵

NATO Supplied Weapons

The maximum effective range of a main battle tank is 4,000 meters. Ukrainians have been equipped with American FGM-148 Javelin Anti-Tank Missiles (and related NATO systems). This is a 'fire and forget' anti-tank missile with an effective range of over 4,000 meters weighing only 49 pounds/22.3 kilograms.³⁶ This self-guided missile targets the top armor of a tank where it is the weakest. The 'fire and forget' aspect allows a soldier to fire the missile and immediately change his position finding cover before his missile hits the target. NATO allies, such as the British, have provided similar anti-tank missiles to the Ukrainians. Simple to operate, these weapons render every Ukrainian squad or section a tank hunter-killer team.



The Javelin type Anti-Tank Missiles have provided the Ukrainian Army a counter to the Russian superiority in tanks. Less sophisticated anti-tank weapons in their inventory provide the counter to all other armored and unarmored vehicles. In news' videos of Hunter-Killer Squads, Ukrainians are shown carrying a combination of anti-tank missile types.

The American FIM-92 Stinger Man Portable Air Defense System (MANPADS) (22 pounds/10 kilograms) as well as NATO and Soviet era MANPADS used by Ukraine in theater limit Russia's ability to provide close air support to its maneuver force. These 'fire and forget' weapons have a range of 5 miles/8 kilometers. with an altitude range of 11,000 feet/3 kilometers. With the Russian superiority in aircraft, the

MANPADS reduce the Russian Air Force's ability to provide close air support. Aircraft flying below 11,000 feet risk being ambushed. The lower the aircraft flies the more difficult it becomes to employ counter-measures.

While MANPADS and Anti-Tank Missiles are generally defense weapons, Turkish Drones have provided a needed offensive targeting capability to Ukrainian defenders. The Bayraktar TB2 drone has been successfully used in blowing up large numbers of Russian fuel and supply trucks along with some combat vehicles, including anti-aircraft systems. This relatively inexpensive, slow, lightweight drone has a 12-meter wingspan and can loiter over the battlefield for up to 30 hours. It carries four laser-guided missiles capable of taking out a tank.³⁷

Putin's Strategic Plan

Every wargamer knows you need a 3:1 ratio to successfully attack. Despite not having a 3:1 combat ratio against Ukraine Putin assumed the fighting would end within five days of the invasion. It is clear from hindsight that his logistical plan for the invasion was for a 'quick blitz', a 'shock and awe' and then negotiated peace with a weak NATO and leaderless Ukraine.

Putin's desired end state is a Ukraine that is politically aligned with the Kremlin, militarily neutral and partnered with Russian armed forces (i.e. dependent upon for defense) and conditionally transparent borders to facilitate culture and economic integration into the Eurasian Economic Union. (EAEU).³⁸ Putin's demands are nothing short of the end of Ukrainian democracy and incorporation into Putin's new Russian Empire.

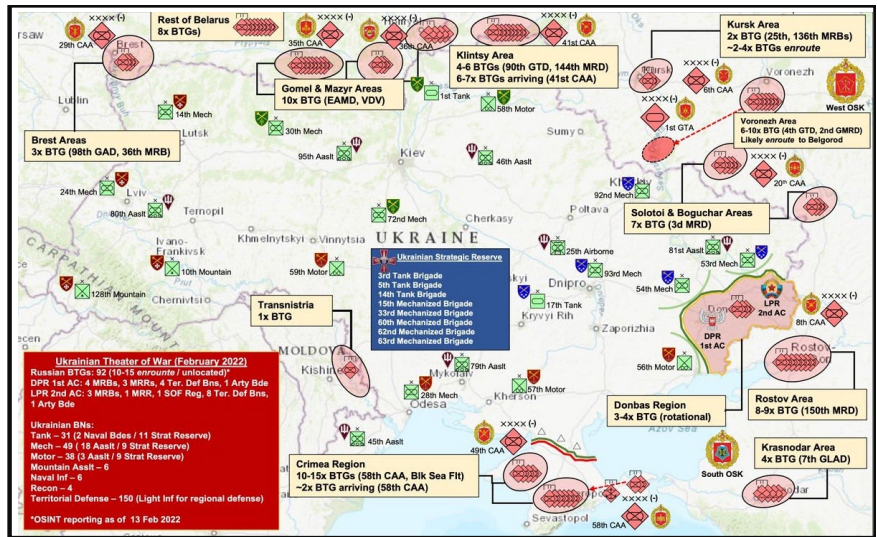
Putin's assumption of Ukraine weakness, which guided Russian planning for the invasion, is mysteriously unfounded. The *Siloviki* and Russian general staff knew or should have known of Ukrainian fighting capability. Russia has led the insurgency against the Ukrainian Army in the Donbas since 2015.³⁹ It is not surprising that while Putin's strategic political objective was the capture of Kyiv, the *Siloviki* and military's strategic objective was securing the Donbas. The Russian West Joint Strategic Command (OSK West) assigned to capture Kyiv was provided fewer BTGs, then OSK South which was assigned to occupy the Donbas.

Makes one wonder whether the Siloviki and their military goals have pre-empted the oligarchy and their political goals

Part II

Russian Initial Operational Plan A and its Failure

A



Assumptions and Invasion Preparations on the Cheap

It is difficult to understand how Russian military and political strategy, developed by the Russian Oligarchy and *Siloviki* to subdue Ukraine could be based on two simple but false assumptions: (1) the Ukrainian government could be replaced with a puppet government within five days and (2) the Ukrainian Army would not fight for its nation's liberty. With these two flawed strategic assumptions, the normally competent Russian general staff, assumed the campaign would

be over in less than a week and therefore was denied the funds, troops and supplies to insure the proper combat ratio of 3:1.

It is clear from hindsight that the Russian general staff was restrained by Putin and the *Siloviki*. Instead of massing a ratio of 3:1 in combat power favoring the invasion force, they only massed a ratio of combat power 1.5:1. While it is unclear at this point in the war, it appears that Russia lacked sufficient funds to mass 600,000 troops with equipment against the Ukrainian Army of 200,000. For whatever reason the invasion was planned on shoestring logistics.

For almost a year the Russian Army has been building military infrastructure and massing troops and supplies near the Ukrainian border. While Russia reported to the world the massing of troops was a training exercise, it appears very little training had been conducted. Training, live-fire exercises and maneuvering tank and motorized infantry battalions burns a large amount of expensive fuel and ammunition. Since Russia has accomplished this build up via railroads, it has been well-documented through western reconnaissance space platforms and civilian internet postings. This information was passed to the Ukrainian Military.⁴⁰ An invading army can be secreted only so long, but when tanks cross an international border, it is an obvious invasion. It can no longer be denied

or explained away as a mere exercise. Troops need to be informed that they are at war and no longer in an exercise. Some Russian soldiers were told they were entering Ukraine as peacekeepers and/or were going to liberate the country from Nazis.⁴¹

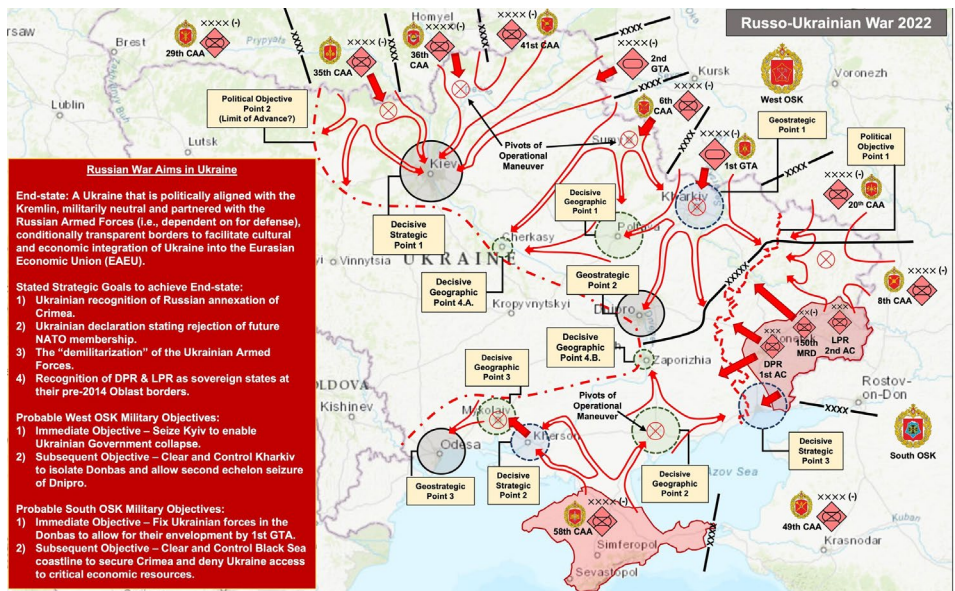
NATO and the United States started shifting reinforcing combat units into the territory of the new eastern European members shortly after the invasion began.



B

Operational Campaign Plan

This is an overview of Russia's combat operations to defeat Ukraine and incorporate it into its sphere of influence for the non-military reader. The twitter site, (<https://twitter.com/jominiw>) Jomini of the West has produced excellent detailed maps of the conflict. I direct military readers to that site for detailed daily summaries of the war.



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Russia assigned two Joint Strategic Commands (OSKs) to the invasion of Ukraine. OSK West was assigned the strategic political objective of capturing Kyiv and to cause the collapse of the Ukrainian government. Follow on objectives were to clear and control Kharkiv,

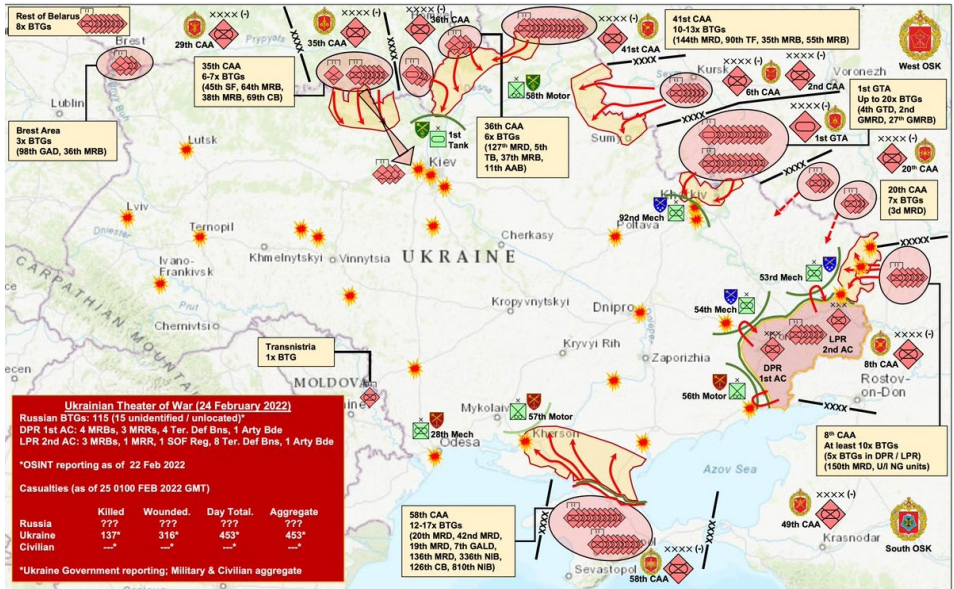
isolate the Donbas and seizure of the city of Dnipro and its bridges over the Dnipro River. Russia assumed the democratic government would quickly fall and a puppet government would order the Ukrainian Army to surrender within a week.⁴³

OSK South was the military strategic main effort. Its immediate purpose was to fix the Ukrainians in the Donbas to allow their envelopment by the 1st Guards Tank Army from the north. Subsequent objectives were to clear and control the Black Sea Coast to Crimea and deny Ukraine access to critical economic resources.^{44 45} The main attack was to follow the coast of the Sea of Azov and capture the port city of Mariupol. A supporting attack from the Crimean Peninsula would capture the bridge at Kherson and secure the North Crimean Canal that controls the water supply from the Kakhovka Reservoir (lower Dnipro River basin) to the Crimean Peninsula.⁴⁶ Follow on operations would secure the Black Sea Coast to Mariupol and conduct a land and sea assault on Odesa or an attack north to capture Zaponzhia on the Dnipro River.⁴⁷ If successful, the Ukrainian brigades east of the Dnipro River would be cut off and trapped east of the River.

C

Combat Operations

February 24- 29, 2022 (D+1 to +5)



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Putin pinned his hopes of political victory on an air-ground blitz along the Kyiv axis which began on February 24, 2022. The main operation attempted to coordinate a series of air and missile attacks across Ukraine to gain air superiority, disrupt Ukrainian military command and control and terrorize the civilian population. As the bombardment commenced, an airmobile assault was launched to capture *Hostomel* International Airport while a ground blitz rolled forward to capture key governmental infrastructure and topple the Ukrainian

government with the aim of killing or capturing President Volodymyr Zelenskyy.

At 0400 February 24, 2022, Russia commenced a short but incomplete air campaign targeting Ukrainian air defenses, supply depots, airfield and command and control nodes. While destroying property and killing people, the 100 missiles and 75 bomber aircraft participating in the strikes failed to destroy the Ukrainian Air Force, anti-air defense or disrupt military and political command and control infrastructure.⁴⁹ In comparison NATO's air campaign against Iraq in 2003 and its 15 days of 'shock and awe', Putin's one day air bombardment was a 'pop and fizzle'.

OSK West's main effort was against Kyiv, but the bulk of its BTGs were spread out in supporting attacks along the northern Ukrainian border from the Dnipro River to Kharkiv. All attacks encountered stiff resistance from Ukrainian regulars and partisan forces. Advancing without ground reconnaissance, entire battalions rolled into ambushes as if on parade. Within three days all Russian attack columns ran out of fuel and food. Russians foraged, leaving tanks and trucks unguarded. Entire company-size units dispersed looking for supplies. Partisan farmers were photographed towing unguarded Russian vehicles into the countryside.

On the first day as the short air campaign unfolded, an unsuccessful air assault on *Hostomel* International Airport served as a harbinger of things to come. As land troops and armored vehicles of the 35th and 36th Combined Arms Armies (13 BTGs) crossed the border, the 31st Guards Air Assault Brigade conducted airmobile operations against *Hostomel* International Airport.⁵⁰ The airborne operations were part of Russia's attempt to achieve air superiority by capturing critical Ukrainian airfields to use as airheads. If successful Russian paratroopers could have flown armored vehicles and supplies into the Ukrainian rear, outflanking Kyiv's defenses.

The Ukrainians did not stand by as helpless sheep. In the tradition of Cossacks of old, just before the Russian air assault and missile bombardment commenced, Ukrainian troops severed all rail lines from Russia and Belarus and destroyed three key bridges north of Kyiv, limiting southern invasion routes on the west side of the Dnipro River. The severed rail prevented Russia from utilizing trains to create forward supply dumps. The destroyed bridges restricted ground attacks toward Kyiv. Russian supply trucks were limited to the one remaining all-weather avenue of advance. (Ivankiv-Shybene-Hostomel Airport Road [PO2-T1019-T1011 Road]).

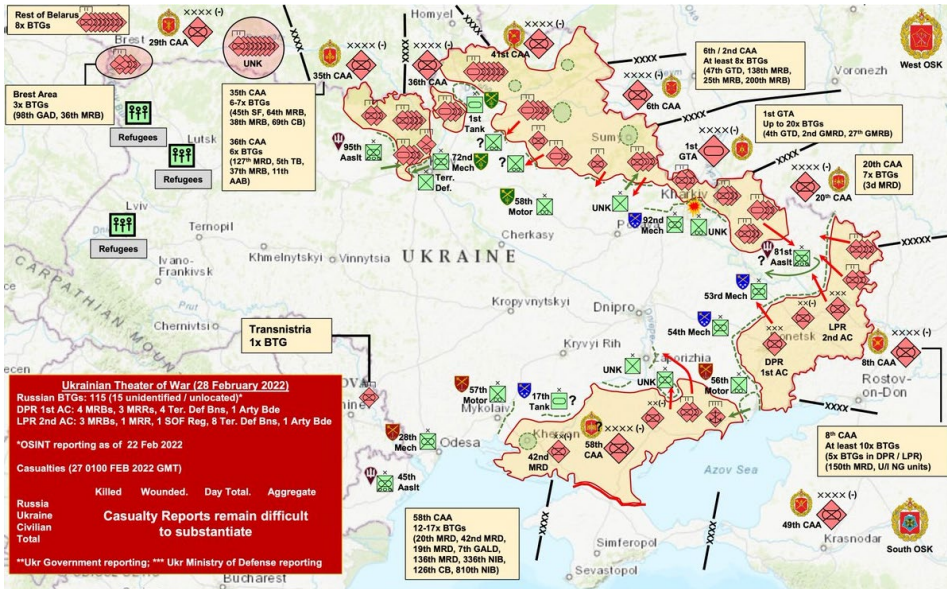
The assault on *Hostomel* was a strategic and tactical failure of Russian reconnaissance. The operation was based on the fatal belief that Russia would encounter only token Ukrainian resistance. Russian reconnaissance failed to notice a Ukrainian tank infantry force hidden in the forest nearby. The three-hour air assault temporarily succeeded in securing the airport.⁵¹ However the 4th Rapid Reaction Brigade (Ukrainian National Guard tank-infantry brigade) counterattacked, defeating the Russian paratroopers, and quickly recaptured the airfield.

Meanwhile, the 35th and 36th CAA's (13 BTGs) attacked along the Kyiv axis but was halted by Ukrainian defenders and mud. The 41st CAA attacked east toward Kyiv but was slowed by stiff resistance and mud. The 6th CAA (6 BTGs) attacked toward Sumy and made some progress against light resistance and mud. The 1st Guards Tank Army crossed the border east of the Kharkiv axis but was heavily engaged as it approached the city. The 8th CAA supporting Donetsk Peoples Republic (DPL) and Luhansk Peoples Republic (LPR) units attacked along the Donbas front but was repulsed. The 58th CAA (17 BTGs) attacked from the Kherson axis but met stiff resistance. Russia was surprised by the heavy resistance all along the axis of attack on the first day of invasion.

After five days of heavy fighting Russia failed to accomplish any of its objectives. Putin's 'Plan A' failed and there was no 'Plan B'. Russia's inability to establish air superiority plus the unexpected stiff resistance bogged down the invasion. As weeks passed, Russian attempts to capture key cities failed and its army suffered heavy casualties.⁵²

On the first day of the invasion the BTGs alone expended 3,600,000 gallons/13,680,000 liters of fuel. By the fifth day Russian combat units were out of fuel and food. Wheeled supply trucks were hampered by muddy conditions. They were subjected to ground attacks and air assault by drones. The destroyed rail lines prevented the establishment of forward supply dumps which would have eased the strain on wheeled supply routes.

Attacks from the Donetsk Peoples Republic (DPL) and Luhansk Peoples Republic (LPR) were thrown back, but Kherson was surrounded and the bridge over the Dnipro River was captured. Attacks from Crimea toward Mariupol progressed slowly.



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Media maps painted an illusion that large areas of Ukraine were being occupied by February 28, 2022. But the situation on the ground was different. Russian attack columns were confined to the few all-weather roads so they could be supplied. The Russians controlled road junctions, but the muddy countryside was not occupied. As the invaders attacked cities, like Kharkiv and Sumy, they were predictably forced onto the few remaining all weather routes and rolled into the teeth of the Ukrainian defense.

By late March 2022 Russia admitted its assault on Kyiv had failed and transitioned over to the defensive. Depleted BTGs were pulled out of

the line to replace destroyed equipment and receive partially trained conscripts to bring companies up to strength, but heavy air raids on Kyiv continue.⁵⁴ It is projected that some of these BTGs will be shifted to the Donbas Front.

March 25, 2022-May 1, 2022

Change of Political Main Effort

On March 25, 2022, the Russian general staff announced that the objective of the war was to liberate the entire oblasts of Donetsk and Luhansk. With the failure to topple the Ukrainian government by the end of March 2022 the Kremlin has revised its political objective to align with its military objective of ‘liberating’ Mariupol and the entire oblasts of Donetsk and Luhansk. As the world is aware, this is mere propaganda to cover the gross incompetence of Putin and his general staff. The Russian population is limited to state sponsored news and ‘reportedly applauds’ the invasion and Putin’s popularity at home grows.

Russia is increasingly withdrawing units from the northern CAAs to refit them and redeploy them to OJS South.⁵⁵ This does not mean that the Russian will not renew their assault along the Kyiv axis. A supporting attack toward Kyiv and Kharkiv would prevent Ukrainian brigades from

reinforcing Eastern and Southern Ukraine and especially the Mariupol-Donetsk-Luhansk.

Since neither NATO nor Russian industries are on a war footing, the issue is how much Russia is willing to reduce its ammunition stockpile before it calls for a cease fire. Russia's current goal is to reduce eastern Ukrainian cities to rubble and win the Donbas and eastern Black Sea Coast. Russia is expending massive amounts of conventional munitions and fuel. Its supply of expensive precision munitions was almost exhausted by March 15, 2022. The sanctions imposed on Russia will limit its ability to replace its conventional munition stockpile.

Possible End State

With the transition of the Russian main effort to focus on the Donbas, the capture of Donetsk and Luhansk Oblasts and Mariupol would allow Putin to claim victory to the Russian public and then negotiate a Kremlin-favorable ceasefire. This would allow Putin to gloss over his failure to topple the Ukrainian government and declare to the Russian people that he has achieved his primary objective of 'liberating' Donetsk and Luhansk Oblasts.⁵⁶ Putin may attempt to keep Kherson and close the Dnipro River to Ukrainian traffic. However the occupation and

pacification of Ukraine, east of the Dnipro would require a full-time garrison of 50,000 to 80,000 soldiers or special police, a cost that Russia can ill afford to pay.⁵⁷

Instead of occupying eastern Ukraine and committing 50,000 to 80,000 troops to long term occupation, Russia will probably try to control key choke points, like the mouth of the Dnipro River rather than the east bank of the river up to Kyiv. By capturing Mariupol, Russia secures a land corridor to Crimea and controls a deep-water port for exporting coal and grain from the Donbas.⁵⁸ Equally importantly it reduces major Ukrainian ports on the Black Sea to Odesa, making it difficult to export agricultural products from eastern Ukraine to the world market.

For the United States, NATO and the world, the Russian-Ukrainian War is the beginning of the Second Cold War. NATO countries will increase defense spending.⁵⁹ NATO will need to re-establish a large standing combat force in eastern Europe along a new defensive line stretching from the Baltic to the Black Sea.

Appendix 1

No-Fly Zone

During first days of the war, President Zelensky requested a No-Fly Zone be established by NATO. Whether NATO should establish a No-Fly Zone was hotly debated in the news. The primary argument in favor of establishing a No-Fly Zone now is that it is better to unite and oppose Putin sooner rather than later. Frustrated with his failed invasion, Putin had shifted to terror bombing of civilian targets. The fastest and most effective support NATO could provide is to establish a No-Fly Zone over Ukraine.⁶⁰ This argument assumes Putin would back down when opposed by EU, NATO, and world opposition.

The argument against implementing a No-Fly Zone, even a limited zone over western Ukraine or designated humanitarian corridors, would potentially result in a confrontation between Russia and NATO. The air space over Ukraine would be hotly contested by Russian aircraft, supported by Anti-Aircraft Missile sites in Russia. The potential of armed conflict directly between NATO and Russia could quickly escalate into nuclear confrontation and WWIII. Calling it a humanitarian mission in no way limits the risks. There is no reason to expect Putin to back

down. No-Fly Zones have historically limited success in improving humanitarian conditions on the ground.⁶¹

To be continued....

¹ 'Invasion of Ukraine, D+15, Sitrep, (#200)', *The Five Coat Consulting Group*, <https://www.thefivecoatconsultinggroup.com/the-coronavirus-crisis/ukraine-context-d15>

² 'Putin's Messianic Mission, The autocrat's Dawinian worldview was shaped by a grim childhood, the KGB and Fall of the Berlin Wall,' *The Week*, March 25, 2022, page 11, Nataliya Bugayova, *How We Got Here With Russian, The Kremlin's Worldview*, Reuters, January 17, 2018, pages 16-22.

https://www.understandingwar.org/sites/default/files/ISW%20Report_The%20Kremlin%27s%20Worldview_March%202019.pdf

³ Ibid, 20-21

⁴ Russian military and security establishment.

⁵ The Oil producing region along the Caspian Sea are within missile of eastern Ukraine.

⁶ <http://www.eaeunion.org/?lang=en#about-media>

⁷ Matthew Karnitschnig 'Putin's Useful German Idiots, *Politico*, March 28, 2022

⁸ Ibid.

⁹ <https://www.rferl.org/a/us-efforts-stop-russia-pipelines-will-nord-stream-2-be-different/30107938.html>

¹⁰ Tara John and Tim Lister, A Far-right battalion has a key role in Ukraine's resistance. Its neo-Nazi links have given Putin ammunition, *CNN* March 29 2022.

¹¹ <https://thehill.com/policy/international/596649-putins-nazi-claims-jeered-in-west-but-stoke-russian-pride>, <https://www.nbcnews.com/think/opinion/ukraine-has-nazi-problem-vladimir-putin-s-denazification-claim-war-ncna1290946>, <https://www.jta.org/2022/02/27/opinion/what-putins-talking-about-when-he-talks-about-denazification>. Confidential Note drawn up in Goring's Headquarters on June 20, 1940 (Main Commission for Investigation of Nazi War Crimes in Poland-600/40 x/VIII)

¹² https://www.nato.int/cps/en/natohq/topics_50349.htm

¹³ https://www.nato.int/cps/en/natohq/topics_50349.htm

¹⁴ Martin Malek (March 2009). "Georgia & Russia: The 'Unknown' Prelude to the 'Five Day War'". *Caucasian Review of International Affairs*. **3** (2): 227–232. Archived from the original on 15 June 2014. Retrieved 15 June 2014.

¹⁵ In the news broadcasts of the speratishists the Russian SF did not even completely change out of their uniforms.

¹⁶ One is the Russian spelling vs the Ukrainian version

¹⁷ This is just one article. Jonathan Masters and Will Merrow, 'How Do the Militaries of Russia and Ukraine Stack UP?', *Council on Foreign Relations*, February 4, 2022, <https://www.cfr.org/in-brief/how-do-militaries-russia-and-ukraine-stack>

¹⁸ Battalion Tactical Group, Global Security.

<https://www.globalsecurity.org/military/world/russia/army-btg.htm>

¹⁹ BMP (Infantry Fighting Vehicles) would have only approximately 100 dismounted infantry.

²⁰ https://www.janes.com/docs/default-source/ukraine-conflict/equipment-profile-report_280222.pdf?sfvrsn=c51c7182_1, <https://www.janes.com/defence-news/news-detail/russian-build-up-on-ukrainian-border-enters-new-stage-analysis>, <https://taskandpurpose.com/analysis/russian-military-generals-killed-ukraine/?amp>

²¹ The number of BTGs deployed in support of the invasion vary depending on the sources. I am using *The Fivecoat Consultation Group* assessment.

<https://www.thefivecoatconsultinggroup.com/the-coronavirus-crisis/ukraine-context-d15>

²² 'The World's Biggest Fuel Consumer' *Forbes* June 5, 2008

https://www.forbes.com/2008/06/05/mileage-military-vehicles-tech-logistics08-cz_ph_0605fuel.html?sh=369f3437449c

²³ Alex Vershinin, 'Feeding the Bear: A Closer Look At Russina Army Logistics and the Fait Accompli,' *War on the Roacks*, November 23,2021,

<https://warontherocks.com/2021/11/feeding-the-bear-a-closer-look-at-russian-army-logistics/>

²⁴ During the of Grozny in the Chechen wars the Russians were firing 4,000 shells or 50 truck loads a day. During the Russo-Georgian War 2008, the Russian expended their entire basic load of ammunition in 12 hours.

²⁵ <https://taskandpurpose.com/news/russia-noncomissioned-officers-us-military/?amp>

²⁶ The death of Russian generals Vitaly Gerasimov, Anfrie Koloeshniky, Oleg Mityaev and Andei Sukhovetsky were announced by Ukrainian officials. All were veterans of the Georgia, 1st Ukrainian War and Syria. William Mauldin, 'Four Russian Generals Killed in Three Weeks Show Moscow's Vulnerabilities in Ukraine.' *Wall Street Journal*, March 16, 2022, <https://taskandpurpose.com/analysis/russian-military-generals-killed-ukraine/?amp>

²⁷ <https://www.rand.org/blog/2022/03/russias-problems-with-military-professionalization.html>

²⁸ <https://taskandpurpose.com/analysis/russian-military-generals-killed-ukraine/?amp>

²⁹ It is rumored that the Russian officer responsible for canalizing his inventory, shot himself. <https://www.politico.eu/article/russia-military-corruption-quagmire/>, <https://www.businessinsider.com/ukraine-anti-corruption-minister-thanks-russian-military-for-being-corrupt-2022-3>

³⁰ https://www.rferl-org.cdn.ampproject.org/c/s/www.rferl.org/amp/communication-lapses-russia-invasion-failures/31761259.html?fbclid=IwAR2CMxAS_c0gTKHm8SqRrC1tSw_SXk4K3GyqRSmp_tWY63XTiACXL8LN6IE, file:///Users/johnharrel/Desktop/Russian-Ukrainian%20War%202022/Russian%20Army/Communication%20Breakdown:%20How%20Russia's%20Invasion%20Of%20Ukraine%20Bogged%20Down.html

³¹ <https://www.project-syndicate.org/commentary/russian-military-weaker-than-expected-ukraine-resilience-by-daniel-gros-2022-03>

³² Invasion of Ukraine, D+15, Sitrep (#200), Jomini of the West, Uk Theater of War (February 2022) <https://www.thefivecoatconsultinggroup.com/the-coronavirus-crisis/ukraine-context-d15>, Jomini of the West, Uk Theater of War (February 2022) <https://twitter.com/jominiw>

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³⁴ The 4th Rapid Reaction BDE UKNG, consists of: BDE HQ, 2 light infantry battalions, a tank battalion (T-64s), Artillery Battalion, AA Missile Battalion and support units. <http://eu.eot.su/2016/06/19/president-of-ukraine-to-send-national-guard-militants-to-donbass-for-combat-trial-run/>.

³⁵ <https://euromaidanpress.com/2021/04/07/ukraines-territorial-defense-volunteers-prepare-to-support-army-in-case-of-russian-invasion/>, <https://kyivindependent.com/national/who-can-and-cant-join-ukraines-new-territorial-defense-force/>, <https://www.politico.eu/article/ukraine-russia-military-citizen-reservist-defense/>

³⁶ Washington Post, March 12, 2022.

<https://www.washingtonpost.com/world/2022/03/12/javelins-ukraine-russia/>

³⁷ Time, March 1, 2022, *Ukraine's Secret Weapon Against Russian: Turkish Drones*. <https://time.com/6153197/ukraine-russia-turkish-drones-bayraktar/>

³⁸ 'Invasion of Ukraine, D+15, Sitrep, (#200)', *The Five Coat Consulting Group*, <https://www.thefivecoatconsultinggroup.com/the-coronavirus-crisis/ukraine-context-d15>. The Member-States of the Eurasian Economic Union are the Republic of Armenia, the Republic of Belarus, the Republic of Kazakhstan, the

Kyrgyz Republic and the Russian Federation.

<http://www.eaeunion.org/?lang=en#about>.

³⁹ <https://www.journalofdemocracy.org/wp-content/uploads/2012/03/Illarionov-20-2.pdf>. Ministries of Force, Federal Security Service (FSB), Interior Ministry, military branches and other intelligence services.

⁴⁰ Russian civilians with cell phones posted photos of deploying Russian units. Here are T-80BV tanks, tanks and self propelled mortars (Nona-S 120mm mortars) from the Pacific Fleet's 155th Naval Infantry Brigade travelling through Krasnoyarsk.

https://twitter.com/RALee85/status/1481968626701934592?s=20&t=qtNoZhriMN_F713Qvz3V9w

⁴¹ <https://euromaidanpress.com/2022/03/21/russian-soldiers-admit-heavy-losses-looting-shelling-civilians-in-phone-calls-to-wives-and-mothers/>

⁴² <https://twitter.com/jominiw>)

⁴³ <https://www.thefivecoatconsultinggroup.com/the-coronavirus-crisis/ukraine-context-d15>

⁴⁴ <https://www.thefivecoatconsultinggroup.com/the-coronavirus-crisis/ukraine-context-d15>

⁴⁵ <https://www.thefivecoatconsultinggroup.com/the-coronavirus-crisis/ukraine-context-d15>

⁴⁶ <https://euromaidanpress.com/2022/03/30/occupied-crimea-prepares-conscription-campaign-for-russias-war-gains-access-to-ukrainian-water/>

⁴⁷ <https://twitter.com/JominiW/status/1498500180089393152/photo/1>

⁴⁸ <https://twitter.com/jominiw>)

⁴⁹ 'Russian-Ukraine Warning Update: Initial Russian Offensive Campaign Assessment, February 24, 2011', *Institute of the Study of War*.

⁵⁰ <https://www.ukrinform.net/rubric-ato/3420446-ukrainian-armed-forces-take-control-of-hostomel-intelligence.html>, <https://www.criticalthreats.org/analysis/russia-ukraine-warning-update-initial-russian-offensive-campaign-assessment>

⁵¹ <https://www.aberfoylesecurity.com/?p=4812>

⁵² <https://www.aberfoylesecurity.com/?p=4812>

⁵³ <https://twitter.com/jominiw>)

⁵⁴ <https://www.defense.gov/News/News-Stories/Article/Article/2985210/some-russian-forces-disengage-from-kyiv-but-airstrikes-continue/>

⁵⁵ <https://www.defense.gov/News/News-Stories/Article/Article/2985302/russia-possibly-repositioning-forces-to-donbas/>

⁵⁶ <https://www.understandingwar.org/backgrounder/russian-offensive-campaign-assessment-april-1>, <https://tass.ru/armiya-i-opk/14188667>.

⁵⁷ Ben Connable, *Troop-to-Task: A Russian Invasion of Ukraine*, Real Clear Defense, February 3, 2022

⁵⁸ <https://www.bbc.com/news/world-europe-60825226>

⁵⁹ <https://www.defense.gov/News/News-Stories/Article/Article/2981576/general-says-nato-is-stepping-up-defense-investments/>

⁶⁰ https://www.atlanticcouncil.org/blogs/new-atlanticist/a-no-fly-zone-over-ukraine-the-case-for-nato-doing-it/?mkt_tok=NjU5LVdaWC0wNzUAAAGDPcrogntZVd7R3nDPmdUVShg2vZwrTqL8t-

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FuVnECBxBABx0YFWdNLBZNIN8Q6oJ4o19nZH2imWewy77Dg

⁶¹ <https://www.atlanticcouncil.org/blogs/new-atlanticist/a-no-fly-zone-over-ukraine-the-case-against-nato-doing->

[it/?mkt_tok=NjU5LVdaWC0wNzUAAAGDPcrogqmomdmGV12SAZPMYQ8WFMsXfcFT0wiBOCFMZTxkn37k5hpzrKgTmt4cF4VonquslXVQzGohMEBJch4sKHU8T-vk0N_TzbmuJLyDiw](https://www.atlanticcouncil.org/blogs/new-atlanticist/a-no-fly-zone-over-ukraine-the-case-against-nato-doing-it/?mkt_tok=NjU5LVdaWC0wNzUAAAGDPcrogqmomdmGV12SAZPMYQ8WFMsXfcFT0wiBOCFMZTxkn37k5hpzrKgTmt4cF4VonquslXVQzGohMEBJch4sKHU8T-vk0N_TzbmuJLyDiw)