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These are the 10 Killer Weapons Russia and NATO Would Use in a War

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Just hope we never have to find out.

Tensions between NATO and Russia continue to hold steady at the highest levels since the collapse of the old Warsaw Pact and the Soviet Union (25 years ago this month).

From the neverending crisis in Ukraine to the ongoing nightmarish civil war in Syria to lingering challenges in the Baltics and beyond, the spectre of a showdown looms over these rival camps. And massive nuclear weapons arsenals on both sides only complicates this dangerous dynamic.

But what would happen if tensions ever escalated to all out military conflict? Who would have the advantage?

Indeed, Russia has built up its military might considerably over the last decade--but would it be enough?

NATO, thanks to Washington's massive arsenal, is considered the most powerful alliance ever created. But does it have the tools it needs to win in a conflict against the dangerous Russian bear?

For your reading pleasure, we have packaged two articles that tackle this issue from our archives. Frequent contributor Robert Farley (back in 2014) and Defense Editor Dave Majumdar (earlier this year) both explored this issue in depth from opposite sides, with Farley looking at Russia, and Majumdar examining NATO.

So which side stands the tallest if war came? Let the debate begin :

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The technologies of war developed since the end of the Cold War [3] (and indeed, in the last decade of the Cold War) remain untested in high intensity combat against sophisticated, resourceful opponents. The NATO alliance (and its most powerful members, in non-alliance conflicts) have soundly beaten foes with aging air defense systems, non-existent air forces, and trivial offensive capabilities.

It remains to be seen, however, how effectively NATO would fight against a determined, well-trained opponent with relatively modern technology. Recent events in Ukraine [4] have, for the first time since the Cold War, raised the spectre of direct conflict with Russia [5]. If diplomacy fails and politics push the alliance into war, these are the weapons NATO will need to worry about the most.

Iskander Ballistic Missile:

In the final years of the Cold War, the Soviet Union developed short-range conventional ballistic missiles capable of striking, with great precision, airbases and staging areas well behind NATO lines. The American answer to this was theater missile defense, which (as experience in the Gulf War demonstrated), would not have stopped the opening Soviet volleys.

Anti-ballistic missile systems have improved since the 1980s, but so have Russian missiles. The Iskander-M has a range of 400km, can carry a 700kg warhead of several varieties, and has a circular error probability of around five meters. This makes it deadly to airfields, logistics points, and other stationary infrastructure along a broad front of conflict. Especially given the irregular and broken nature of Russia's border with NATO, the Iskander gives the Russian military the opportunity to threaten targets deep in Europe.

The Iskander has the capability to retarget in flight, making it possible to engage mobile targets (including ships). It also has a set of built-in evasive maneuver techniques designed to make targeting from missile defenses difficult. In short, the Iskander can threaten to do to NATO forces what NATO forces typically do to everyone else.

The Iskander can put pressure on NATO missile defenses, but also on NATO air forces. Jets operating from forward bases will immediately come under threat of attack, or at least immobilization. If positioned in Kaliningrad, Iskander launchers could threaten a wide array of military and political targets across NATO.

Consequently, we can expect that NATO would target mobile Iskander launchers in the first stage of any conflict. As the history of tracking and destroying mobile missile launchers has been sketchy at best, however, NATO would have to be wary of SRBM attacks deep into the war. And successful attacks against the Iskander launchers depend on the achievement of air superiority over the theater of operations.

Su-27 Flanker Family:

Designed as the USSR's answer to the F-15, the first Flankers entered service in 1985, but production troubles kept their numbers low until the early 1990s. At that point, the collapse of the Soviet Union significantly reduced the overall production run. The aircraft of the Flanker family combine size, range, speed, and wicked maneuverability into a single deadly platform. With gaunt, unforgiving lines, the Flanker is not a beautiful plane, but its appearance does suggest danger.

The Russian Air Force continues to operate several hundred Flankers in various configurations. The basic Flanker frame has proven remarkably flexible for upgrade, and has become the platform of choice for discerning fighter customers. Variants of the Flanker include the Su-30 multi-role fighter, the Su-33 carrier-based fighter, the S-34 fighter-bomber, the Su-35 air superiority fighter, and several Chinese knock-offs.

The Flanker has never met the most advanced Generation 4 and Generation 4.5 aircraft in combat, and it obviously has never engaged the F-22. Nevertheless, we can expect that it will give fits to pilots of Eagles, Vipers, and Typhoons, and may even cause problems for Raptors. The Russian Air Force has developed tactics for using Flankers to fight stealth fighters that concentrate on taking advantage of the plane's remarkable maneuverability to survive the first missile attack. Moreover, the Flanker is heavy and fast enough to hit hard and then retreat to safety before any NATO fighters can catch it.

S-400 Surface to Air Missile System:

The entire Western way of war depends on the achievement of air supremacy. NATO forces have not fought against a modern, capable air defense system in a very long time. During that time, the cost of NATO fighter-bombers has metastasized, making the loss of a single aircraft very nearly a national fiscal catastrophe.

An S-400 battery has three kinds of missiles, each intended to engage aerial targets at different ranges. The longest ranged SAM can engage at 400km, with shorter-ranged missiles compensating with enhanced capabilities for killing fast, maneuverable targets. The S-400 can also engage ballistic missiles, although it's unlikely that NATO would use such weapons. The sensor systems of the S-400 are thought to be extremely effective, especially as Russia can layer S-400 defense zones in nearly every conceivable theater of conflict. Positioning the S-400 at Kaliningrad could endanger NATO air operations deep into Europe.

In combination with the Iskander and the Flanker, these missiles would make the job of NATO air forces in the early days of a conflict very difficult, indeed. Russian sensor systems (ground and air) exceed the capabilities of any opponent that NATO countries have fought in the last twenty-five years. The SEAD (suppression of enemy air defense) mission against an integrated air defense network (Russia has a wide variety of shorter-range systems for point defense) would prove extremely treacherous.

At least in the early days of the war, the S-400 and its associated systems could neutralize NATO airpower, undermining one of the central pillars of the Western way of war.

Akula class Submarines:

NATO forces developed an extremely capable anti-submarine system during the Cold War, including aircraft, attack submarines, stationary sensors, and surface ships. The collapse of the Soviet Union dramatically reduced the Russian submarine threat, with the eventual consequence of a reduction of NATO anti-submarine warfare (ASW) capabilities. While NATO forces (and especially US forces) have continued to pursue ASW, they no longer can draw upon the resources they enjoyed during the Cold War.

And yet Russian submarines remain. In the 1980s and 1990s, the USSR and Russia built fifteen Akula (Shcuka-B) class submarines, nine of which remain in service. Extremely stealthy for Soviet subs of their period, the Russian Navy has upgraded the boats with the latest quieting technology. Perhaps most importantly, the Akulas carry a massive array of weaponry, including torpedoes and cruise missiles. The cruise missiles can strike both sea and land targets, putting much of NATO's coastline at risk.

The best NATO subs can still track and defeat the Akulas, although the latter's high speed makes catching them an iffy proposition. But even if NATO can sink the Russian subs, they can still wreak an enormous amount of havoc before they submerge for good. This could mean killing a carrier, or simply causing enormous, unexpected damage to critical infrastructure ashore.

In five years, as Russian diesel-electric technology continues to develop, the Lada class may replace the Akulas, at least in context of the narrow contours of a NATO-Russian conflict. For now, however, the enduring stealth and massive armament of the Akulas continues to present a threat, not only to NATO shipping, but also to NATO land installations.

Spetsnaz:

During the Cold War, both the United States and the Soviet Union conceived of special operations forces primarily in terms of support of conventional operations. Even at the time, however, the Soviets interpreted this mission more broadly than NATO. Spetsnaz (an umbrella term that has come to encompass special forces operators under several organizational designations) were expected to undertake offensive operations concentrating on the sabotage of communications, the preparation for conventional advance, and even the wreaking of political havoc.

As with all other elements of the Russian military, the special forces deteriorated in the wake of the collapse of the Soviet Union. However, the Russian Army took advantage of the Chechen insurgency to reconstruct and redevelop its own commando/special forces capabilities. It has built these units into a formidable military and political tool, capable of having an impact on all areas of warfare. This reconstruction took place parallel to the expansion of Western special forces under the aegis of the War on Terror; indeed, NATO and Russian special forces sometime undertook joint training exercises to improve effectiveness.

As they now exist, Russian special forces represent a major problem for the West at all levels of escalation. In the event of conflict, we could expect Russian special forces to operate at various stages of the conflict, as they have during the Ukraine crisis. If war develops over a border dispute between Russia and one of the Baltics, we will undoubtedly find Russian special operators there ahead of us. In the case of general war, special forces may deploy from submarines or other vehicles to launch attacks throughout NATO's depth.

Although not a "weapon" in the technological sense, Russian special forces represent one of the most effective tools in the Russian arsenal. They will have a major impact in any conflict with NATO, possibly even before NATO realizes the conflict has begun.

Conclusion:

There is little question that NATO weaponry remains technologically ahead of Russian. The existence of a gap was clear in the 1980s, and the size of the gulf has grown since. However, the Russian military still commands sufficient resources, and can harness enough innovative thinking, to hurt NATO if a European dispute ever came to blows.

We hope, of course, that these weapons fulfill their purpose as deterrents. Nevertheless, it behooves NATO to think hard about how to solve the problems that these weapons present, especially when used in conjunction with one another.

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Senior U.S. defense and foreign policy officials are increasingly focused on a resurgent Russia and the threat it might pose in Europe.

Over the past two years, Russia has behaved aggressively in Ukraine and stepped up its bomber and submarine patrols. Indeed, NATO officials like Royal Navy Vice Adm. Clive Johnstone [6]—commander of NATO's Maritime Command—have pointed out that Russian submarine activity in the North Atlantic is at an all time high. Meanwhile, Moscow is building up its forces in its Kaliningrad [7] enclave. But what is NATO doing in response?

Here are five NATO weapons that will be used to deter Russian aggression in Europe.

Virginia-class Submarines:

While Russia has invested in some very capable new submarines [8], the United States Navy and its fleet of Virginia-class nuclear attack submarines still dominate beneath the waves of the Atlantic. Indeed, the United States' fleet of Virginia-class boats will continue to grow and improve.

On Tuesday, U.S. defense secretary Ashton Carter said that the latest defense "budget invests over $8.1 billion in 2017, and more than $40 billion over the next five years," giving the United States the "most lethal" submarine force in the world. "And it not only buys nine of our most advanced Virginia Class attack submarines over the next five years, it also equips more of them with a versatile Virginia payloads module, which triples each submarine's platform strike capacity from twelve Tomahawk missiles to forty."

F-35 Joint Strike Fighter:

Though the Lockheed Martin F-35 Joint Strike Fighter is years behind schedule, plagued with unending technical glitches [9], incurred massive cost overruns and will likely never deliver the capabilities that were originally promised, the stealthy new jet looks likely to become a formidable weapon in time. The F-35 won't be the fastest, most maneuverable or even the best-armed aircraft on Earth—by many of those measures it's sorely outclassed by current and even previous generation warplanes—but it has some key advantages.

The Joint Strike Fighter's strengths are its stealth and sensors, which will allow it to penetrate and strike areas beyond the reach of conventional fighters while also collecting a detailed intelligence picture. The F-35 is also equipped with potent electronic warfare systems, which should prove to be useful.

With its operational requirements documents having been drawn up as the Cold War was ending, the F-35 is less than ideal for dealing with today's ultra high-end threats emanating from Russia and China. As such, the F-35 is not a perfect or even necessarily a good aircraft, but it is the jet America has chosen to invest in for better or worse. American and allied aviators will have to make it work—and make it work in Europe.

Long Range Strike Bomber:

Given Russia's prowess at developing air defenses—particularly its efforts at developing low frequency radars that are capable of tracking fighter-sized stealth aircraft—the Long Range Strike Bomber (LRS-B) that is being developed over the next decade will be critical to holding targets deep inside Moscow's heartland at risk.

While the LRS-B [10] program is extremely secretive and is currently under protest, it is known that the requirements for the new stealth bomber call for it to be able penetrate into the densest of air defenses—even those backed by low frequency radar. That means that the new bomber will almost certainly be a flying wing design and might incorporate some electronic and cyber warfare capabilities to blind the lowest frequency VHF radars that it can't evade with shaping alone.

Leopard 2:

The Leopard 2A7 is the latest in a long lineage of German tanks designs that started with the diminutive Panzerkampfwagen I—and it will continue to remain the backbone of the Bundeswehr and other NATO powers.

Though it first entered service in 1979, over the years, the Leopard 2 has been improved with a longer L55 cannon that offers far better performance against more heavily protected enemy tanks. One of the self-imposed limitations of the Leopard 2 is the fact that Germany refuses to use depleted uranium for its tank rounds—which means that the Bundeswehr has to find alternative materials. As such, German tank rounds are made out of tungsten—which does not quite offer the performance of a depleted uranium sabot round like the U.S. Army's M829A3 or future M829E4 (A4 when operational).

Because of the limitations of tungsten ammunition, the Bundeswehr has some doubts as to the ability of its penetrator rounds to punch through the armor of the latest Russian tanks. Specifically, there might be instances where German ammunition might not have enough kinetic energy to ensure a kill against the T-80, T-90 and obviously the new T-14 Armata.

One option for the Germans is to test and certify American ammunition like the M829 series or develop its own depleted uranium sabot rounds. However, there are political and technical challenges that would have to be overcome. Firstly, there is strong political resistance to developing depleted uranium ammunition in Germany. Secondly, using American ammunition might be difficult since those rounds are built to such tight tolerances—it's not clear if the M829 would be compatible with the longer L55 barrel on the newest Leopard 2 variants.

Boeing AH-64E Apache:

The Boeing AH-64A Apache helicopter gunship was first introduced in 1986 as a weapon to blunt an anticipated Soviet armored spearhead punching through the Fulda Gap in what is now central Germany. The Apache proved itself an able tank killer during the 1991 Gulf War, decimating Iraq's beleaguered forces.

Since then, the Apache has undergone many modernizations—adding ever improving sensors and weapons. But like its predecessors, the newest Apache models can carry sixteen Hellfire anti-attack weapons—or enough to wipe out a company of tanks in a single salvo.

While the Apache has mostly been used to fight insurgents in Iraq and Afghanistan in recent years, the powerful gunship retains its formidable anti-tank punch.