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Russian Armed Forces: Military Modernization and Reforms

Since Russia's invasion of Georgia in 2008, Russia has undertaken extensive efforts to modernize and upgrade its armed forces. In the years ahead, these efforts are expected to continue focusing on modernizing military equipment, as well as improving combat readiness and coordination across service branches. Command and control, electronic warfare, recruitment of professional soldiers, force structure changes, and logistics also are likely to be priorities for development. Some Members of Congress have expressed interest in understanding the extent of Russia's military modernization and reform efforts as they assess the nature of Russian threats to the United States and its allies and partners in Europe and other regions.

State Armament Plan Priorities

Russia's military modernization priorities are detailed in 10-year plans called State Armament Plans (GPVs). GPV 2020, covering the years 2011-2020, focused on funding the Navy and Aerospace forces. The plan also prioritized increasing the military's professionalization and readiness—including through recruitment campaigns and snap military exercises.

The latest plan, GPV 2027 (covering 2018-2027), prioritizes Russia's ground forces and improving its rapid reaction forces, including elite Spetsnaz, Naval Infantry, and Airborne and Air Assault Troops (VDV). In particular, strengthening mobility and command and control remains a focus, as well as implementing lessons learned from Russian interventions in Ukraine and Syria—such as the importance of reconnaissance and heavy artillery. Equipment procurement likely will continue to stress heavily upgraded legacy systems. The ability of Russia's defense industry to produce new systems is limited, and financial constraints likely will push procurement decisions toward cheaper but proven designs.

Despite low oil prices and a negative economic forecast, Russia likely will prioritize funding GPV 2027 (\$330 billion in 2018 dollars), which has more limited scope and aims than GPV 2020. Economic pressure may curtail ambitions for GPV 2027.

Precision Strike

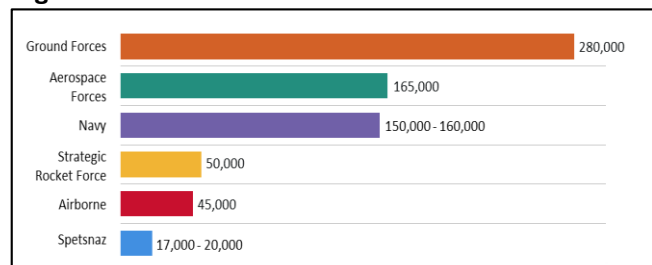
A central priority for GPV 2027 is the development of long-range and precision-strike capabilities. This includes sea and air-launched cruise missiles (3M-54 Kalibr, Kh-101/102), land-based short and intermediate-range missiles (9K720 Iskander-M, 9M729 Novator), air-launched ballistic missiles (Kh-47M2 Khinzhal), and hypersonic missiles (3M-22 Zircon, Avangard). Russia has invested resources into developing long-range precision-strike capabilities in large part because it has long viewed the U.S. advantage in this area as a serious threat. Due to cost and

technological challenges, it remains unclear whether Russia will be able to fully produce and deploy these systems.

Personnel

Russia's official authorized personnel strength is 1,013,628. The Russian Ministry of Defense in late 2019 stated the Armed Forces were 95% staffed, while experts estimate the actual number is lower. Two major goals of the reforms started in 2008 were a reduction in personnel strength and a focus on professionalization. Opposition from the military and recruiting realities meant those goals were scaled back. Subsequently, Russia has relied on a hybrid mix of draftees on one-year conscription terms and volunteers under term contracts. Professional (contract) soldiers are prioritized for front-line combat and elite units. The Navy and Aerospace Forces have higher levels of professional personnel due to technically demanding missions. Additionally, although the Russian Armed Forces have experienced some success in recruiting professional soldiers, poor retention rates mean that staffing goals remain unmet. The goal of 425,000 professional soldiers by 2017 went unfulfilled; the goal has been revised to 476,000 by 2025. Additionally, efforts to create a Western-style noncommissioned officer (NCO) corps have been abandoned, with junior officers filling NCO positions and professional soldiers instead focusing on fulfilling technically complex roles.

Figure 1. Russian Armed Forces Personnel



Source: IISS Military Balance 2020, Jane's Sentinel Security Assessment.

Rapid Reaction Forces Reforms

VDV, Spetsnaz, and Naval Infantry forces form the core of Russia's elite, rapid reaction forces and are some of the most capable and modernized units in Russia's military. They play a crucial role in Russia's power projection capabilities, with many units having gained operational experience in Ukraine and Syria. Rapid reaction forces are a focus for GPV 2027, under which they are to receive increased funding for professional troops and equipment. The VDV and Naval Infantry are expected to gain capabilities, such as tank battalions and army air support, which would increase their ability to operate independently. Additionally, since 2015 the VDV has sought to expand its personnel numbers and is likely to do so in the near future.

Ground Forces Reforms

Russian ground forces have undergone significant changes in staffing, organization, and equipment in recent years and are set to receive relatively high levels of funding under GPV 2027. Reforms started in 2008 sought to transition the ground forces away from the Soviet legacy of partially staffed divisions into fully staffed brigades that could operate independently. These modular brigades were believed to be better suited to counterinsurgency conflicts in Russia's immediate region. It was also seen as important to reduce the size of what many considered to be a bloated officer corps. Resistance from the military and lessons learned in Ukraine, however, convinced the military leadership to transition some units back into a division/regiment structure, which is better suited to large-scale conventional conflict; the result is now a mixture of divisions and brigades. These units are further organized into combined arms armies, along with brigade/division level artillery, air-defense, missile/rocket, support, and reconnaissance units.

Increasing mobility and firepower are priorities for Russia's ground forces. Russia's experience in the conflicts in Ukraine and Syria underscored the importance of artillery and tank units, as well as the importance of integrating reconnaissance and intelligence capabilities. Modernized equipment, such as tanks, has centered on heavily upgraded versions of Soviet-era weaponry that are cheaper to produce and maintain. Additionally, the ground forces are being equipped with updated missile artillery, mobile artillery, and heavy caliber artillery and mortar systems. At the same time, Russia is experimenting with certifying company or platoon size units within each division as air-mobile capable and increasing the size of reconnaissance units.

Increasing the share of professional soldiers remains a key modernization goal for the ground forces. Most combat units are composed of professional soldiers, which are crucial to improving both combat readiness and effectiveness. Conscripts, however, still make up a large percentage of the overall force, despite being excluded from combat by Russian law. Additionally, scheduled and snap exercises are increasingly important for improving the readiness of the Russian ground forces, testing new equipment and tactics, and improving coordination with other service branches.

Aerospace Forces Reforms

Since 2008, the Aerospace Forces (VKS) have introduced new fighters, helicopters, and upgraded long-range bombers. Most new systems are based on Soviet-era designs but are upgraded to include the latest technology. The first stage of the modernization effort focused on designing and accepting these new systems for service—including new multi-role and attack helicopters. Some procurement decisions appear to be aimed at boosting export markets and sustaining domestic defense sector interests. In the future, VKS is expected to strive to increase the share of modern fighters and fighter/bombers and to continue struggling to produce new fifth-generation systems.

Design issues and production flaws have delayed the introduction of new, fifth-generation fighters (Su-57) and bombers (PAK-DA). Additionally, VKS continues to suffer from a lack of transport, early warning, and air-to-air refueling planes. The separation from Ukrainian aircraft producers since 2014 has negatively affected Russia's ability to modernize its transport fleet, with domestic producer Ilyushin struggling to fulfill orders. Russia has relied upon upgrading Soviet-era bombers. Significant effort also has been put into developing new air-launched cruise, air-to-air, and air-to-ground missiles. Russia struggles to produce precision-guided bombs.

The Air Defense Forces (VKS) also have introduced new advanced air-defense systems, including new long-range and ballistic air defense (S-400), medium-range (S-350), and short-range, point-defense systems (Pantsir-S1/M). Russia also is testing a new generation S-500 air-defense system, which is to complement current systems. Observers generally consider Russia's air-defense systems to be some of the world's most capable.

Naval Reforms

The Russian Navy's modernization efforts have led to an increase in the number of ships and in certain capabilities. During GPV 2020, the Russian Navy introduced a new frigate class (Project 22350), smaller corvette class (Project 20380/85, Project 22800), and numerous smaller coastal and patrol craft (Project 21630/1, Project 22160). Additionally, new ballistic missile submarines (Project 955/A) and attack submarines (Project 885/M, Project 636.6) are being introduced into service. Russian shipbuilding has struggled to fill production gaps created by the severing of relations with Ukrainian shipbuilders and to maintain production rates of new ships and submarines. Another priority is the development of the Zircon hypersonic anti-ship missile to complement the Kalibr cruise missile for use on both ships and submarines.

With less funding under GPV 2027, the Russian Navy plans to prioritize increasing the number of new designs in the fleet, as well as modernizing certain older, Soviet-era designs (including submarines) to extend their service life. Design projects for larger ships have been put on hold, with the Navy centering its power projection capabilities on the new classes of frigates and sea-worthy corvettes. Russia's sole aircraft carrier, the Admiral Kuznetsov, is undergoing repairs, but accidents and complications have delayed its return. Russia's expeditionary capabilities also were hampered by the 2015 canceled sale of two French-built Mistral-class amphibious ships due to sanctions over Russia's occupation of Ukraine's Crimea region.

For additional background and resources, see CRS In Focus IF11589, *Russian Armed Forces: Capabilities*, by Andrew S. Bowen.

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